

UNIVERSITY OF KANSAS MEDICAL CENTER

# NEW ACADEMIC PROGRAM PROPOSAL

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MASTER OF SCIENCE &  
DOCTOR OF PHILOSOPHY  
IN BIostatISTICS

PREPARED BY: BIostatISTICS GRADUATE DEGREE  
PROGRAM DEVELOPMENT COMMITTEE

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Matthew S. Mayo, PhD, MBA (Chair)

Jo A. Wick, PhD (Co-Chair)

Wendy Anderson, MLS

Galen Cook-Wiens, MS

Byron J. Gajewski, PhD

Jonathan D. Mahnken, PhD

# PROPOSAL

## MS & PHD PROGRAMS IN BIOSTATISTICS

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**BASIC PROGRAM INFORMATION**

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***Proposing Institution:*** The University of Kansas Medical Center

***Title of Proposed Program:*** Master of Science and Doctor of Philosophy in Biostatistics

***Degrees to be Offered:*** Master of Science  
Doctor of Philosophy

***Anticipated Date of Implementation:*** Fall 2010

***Responsible Department:*** Department of Biostatistics

***CIP Code:*** 26.1102

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## SUMMARY

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The proposal herein is put forth by the University of Kansas Medical Center's Department of Biostatistics, with the full support of the Biostatistics Faculty and the Department Chair, Dr. Matthew Mayo. The proposed Master of Science and Doctor of Philosophy in Biostatistics are unique to the Kansas City metro area, the State of Kansas, and the greater region. In the following sections, we will illustrate the positive impact that a successful Biostatistics program at KUMC will have on the overall mission of the University, discuss the local, regional, and national needs for biostatisticians, provide an outline the proposed degree course plan and requirements, and summarize the resources that are both needed and currently available for the successful implementation of the proposed degree programs.

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## DEGREE PROGRAM PROPOSAL

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### *Central to the Mission and Goals of KUMC*

The mission of the Department of Biostatistics is to provide an infrastructure of biostatistical and informatics expertise to support and enhance the research, service, and educational needs of the University of Kansas Medical Center, and to:

- attract and recruit outstanding faculty biostatisticians to the Medical Center;
- attract outstanding biostatistics graduate students;
- enhance the interdisciplinary research environment on campus; and
- provide a much needed service to the state of Kansas, the greater Kansas City metropolitan area, and the Midwest.

Almost daily, new research findings are reported that relate to human health. For instance, hormone replacement therapy is determined to carry increased risk of certain types of cancer. Such results are the work of multidisciplinary teams of researchers, including physicians, public and environmental health specialists, and biostatisticians. Since the early twentieth century, biostatistics has become an indispensable tool for understanding the cause, natural history, and treatment of disease in order to improve human health. Biostatistics is the exciting and rapidly-growing field of the development and application of statistical methods to research in health-related fields, including medicine, public health, and biology. Biostatisticians play essential roles in designing the studies, analyzing data, disseminating findings, and creating new methods for addressing problems. As science progresses and new ways to measure and collect information become possible, new statistical techniques must be developed. With the breathtaking pace of science today, the skills of biostatisticians are especially in demand because of new advances in fields such as genetics and neuroimaging, and in the ability to collect, store, and manipulate vast amounts of data. The degree programs listed in this proposal address the critical shortage of biostatisticians with graduate training, and their skills are in great demand.

### *How Biostatistics Supports the Mission of KUMC*

The Department of Biostatistics supports the mission of the University of Kansas Medical Center: “to create a positive environment for instruction, research, and service.” Biostatistics has been involved in the education of health professionals since its inception by providing high quality service courses in biostatistics to a range of graduate, professional, and postdoctoral, and continuing education students. The faculty of the Department proposes to enhance the educational environment of KUMC by providing quality higher-level instruction in the field of Biostatistics to students interested in a graduate Biostatistics degree. Biostatistics currently supports the research of scientists from the University of Kansas Schools of Medicine, Nursing, and Allied Health, KUMC, KU Lawrence, KU School of Medicine Wichita, and the University of Kansas Cancer Center. By increasing the level of Biostatistical instruction, the research environment at the Medical Center will be enhanced. Not only will graduate students in the Department of Biostatistics further the independent research of the Department, they will also provide yet another resource for the collaborative research already taking place with the Department faculty.

In addition to supporting the mission of the University, the Department of Biostatistics is engaged in the focal effort of KUMC to become a leader in the advancement of medicine by achieving a top 50 ranking among national universities funded by the National Institutes of Health (NIH). Achieving such a ranking requires the application of University resources and effort to be placed on three major initiatives: (1) the attainment of a National Cancer Institute (NCI) designated comprehensive cancer center, (2) the attainment of a Clinical Translational Science Award (CTSA) from the National Institutes of Health, and (3) the development of a Public Health Institute. Biostatistics is crucial to this major effort of the University as it is a vital component of each of these three initiatives and the overall goal of increasing funding. In the following paragraphs, we address the role of Biostatistics in each of the initiatives at the University of Kansas Medical Center.

### *NIH Funding of University of Kansas School of Medicine*

The primary goal for the University of Kansas Medical Center is to increase National Institutes of Health funding of the School of Medicine. The NIH has funded superior research at universities and hospitals across the country and, based on its effective system of peer review, has produced the discoveries in basic science that have led to most current treatments. A benefit of this funding is the ability to sustain a core of highly trained scientists, enabling KUMC and the KU School of Medicine to hold a competitive national position in the life sciences. If the KU School of Medicine is to remain competitive and continue to lead in the development of preventive interventions, treatments for disease, and in the better understanding of human health overall, an increase in funding from the NIH is necessary. To do otherwise will be to regress in the NIH national rankings (Figure 1), to lose ground against competitors, and most importantly to slow the progress made at KUMC against disease for both the state and the region. According to the Fiscal Year 2007 funding data provided by the NIH<sup>1</sup>, the School of Medicine was ranked 68<sup>th</sup> overall in

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<sup>1</sup> Data retrieved 9/3/2008 from the web at <http://report.nih.gov/award/trends/AggregateData.cfm>.

NIH funding (Appendix A). Higher total NIH funding is associated with the presence of a successful Department of Biostatistics (Figures 1 and 2). Of the top 10 NIH-funded schools of medicine, 90% have a degree-offering Department of Biostatistics. For the top 20, 30, and 50 NIH-funded schools, the percentages with a degree-offering Department of Biostatistics are 75%, 80%, and 82%, respectively (Figure 2). This trend is seen consistently over at least the last decade, with those schools investing in Biostatistics rising to the top of the NIH funding rankings. Even for schools of medicine without a degree-offering Department of Biostatistics, many are currently developing or have already submitted a proposal for such a degree program, recognizing its importance not only for the success of the individual department but for the university in general. See, for example, the vision of Vanderbilt University’s Department of Biostatistics [1].

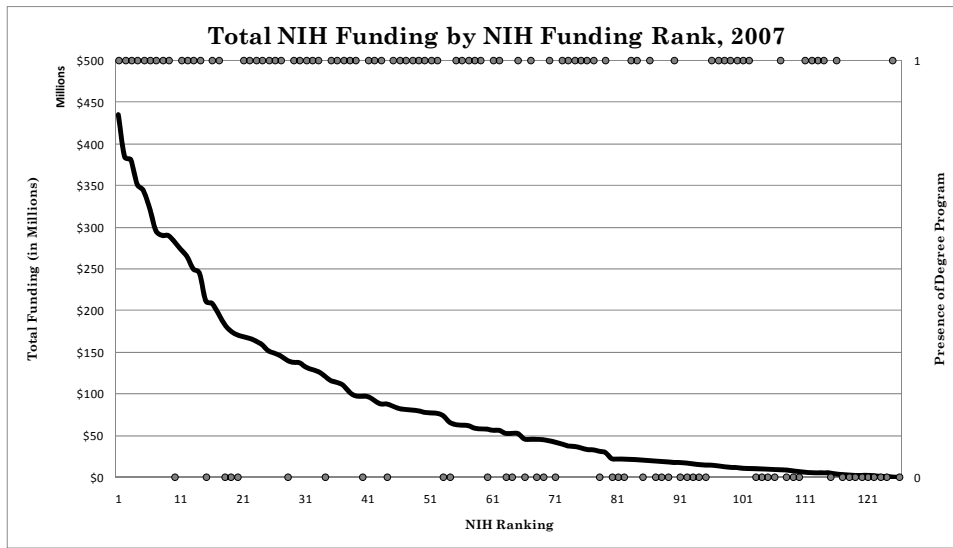


Figure 1: A plot of total NIH funding (in millions) of schools of medicine by NIH funding rank (solid line, left vertical axis) and the presence (1) or absence (0) of a Biostatistics degree program by NIH funding rank (filled circle, right vertical axis).

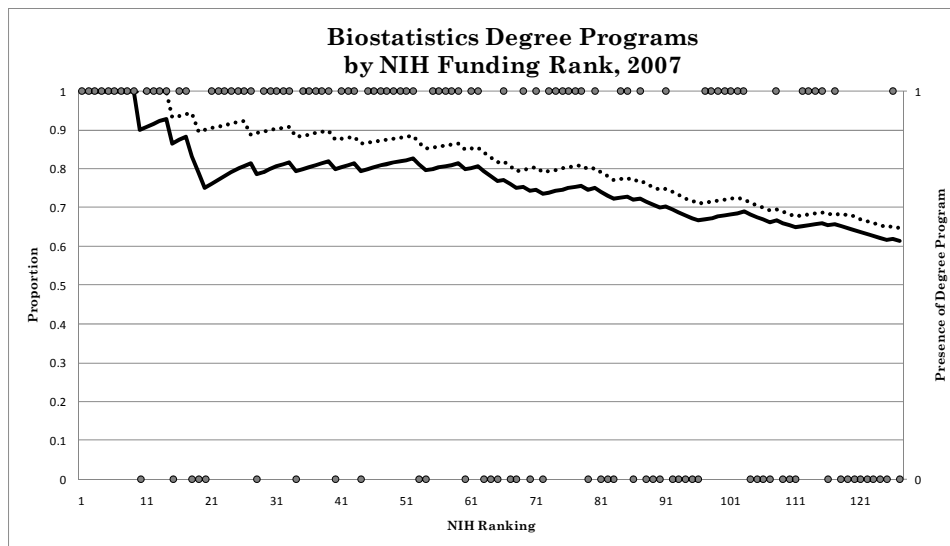
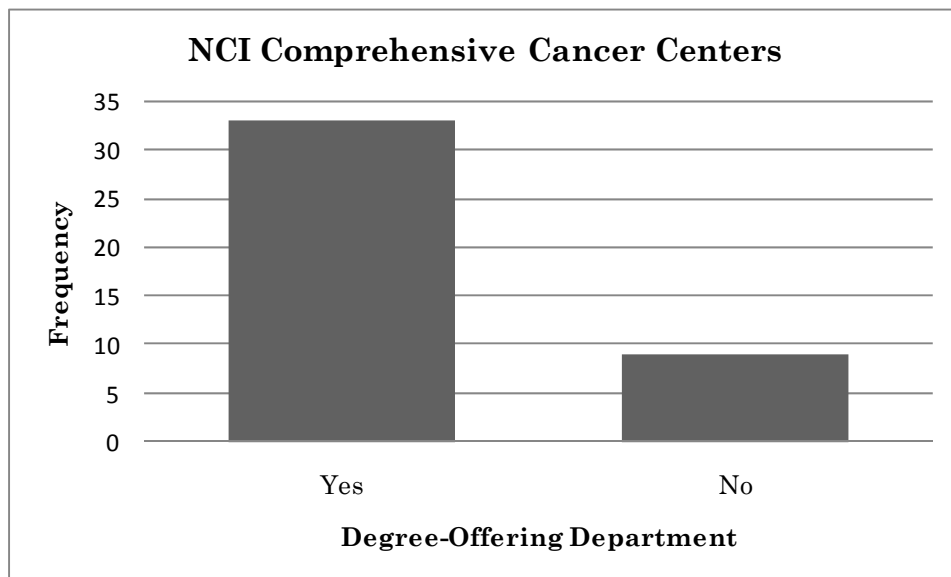


Figure 2: A plot of the proportion of schools of medicine with non-degree-offering (dotted line) and degree-offering departments of biostatistics (solid line, left vertical axis) and the presence (1) or absence (0) of a Biostatistics degree program by NIH funding rank (filled circle, right vertical axis).

## *NCI Designated Comprehensive Cancer Center*

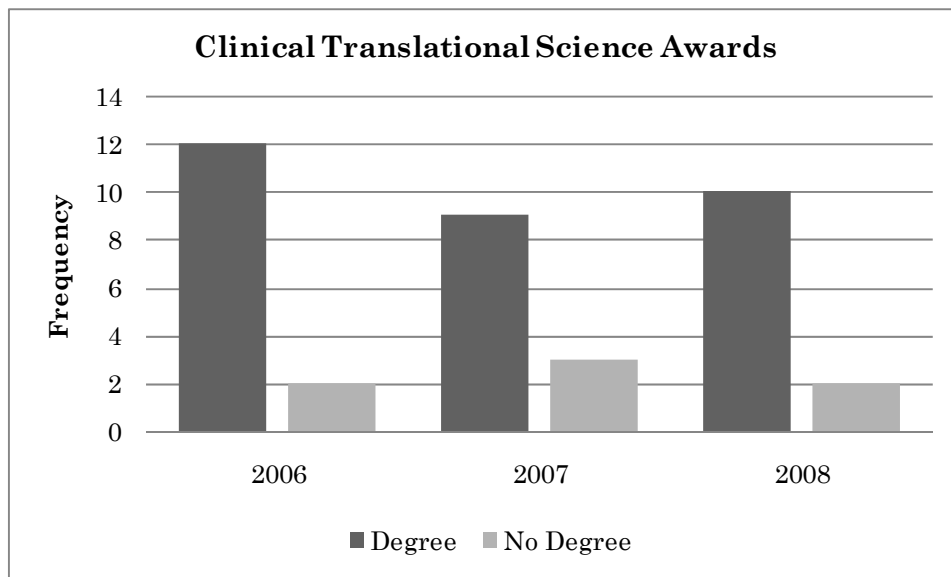
The first major initiative aimed at achieving increased funding at KUMC is to attain National Cancer Institute Comprehensive Cancer Center designation. Discussing the initiative in a statement to the press in January 2009, Governor Kathleen Sebelius stated “This opportunity [NCI designation] can provide our state with new financial resources for research that can save, extend, and enhance the lives of Kansans diagnosed with cancer.” The NCI began the Cancer Centers Program to support cancer centers nationwide that are actively engaged in transdisciplinary cancer research, with an aim to reduce cancer incidence and mortality in the United States and internationally. To attain designation as a comprehensive cancer center, the NCI requires that an institution achieve scientific excellence and have the capability of integrating diverse cancer research approaches [2]. NCI chose the term “cancer center” to underscore the close association within NCI-funded institutions of research and clinical care, education, and dissemination, and the term “comprehensive” to designate those centers with state-of-the-art care and a strong research base that broadly serves its community and region of the country. It is this intimate association which characterizes an NCI designated Cancer Center, setting it apart from other “cancer centers” which, by and large, lack a strong research base to drive development and thus tend to follow by adopting the scientific advances developed elsewhere. In addition to excellence in research, a successful center is organized and administered to maximize the potential of its research base so that the whole is much more than the sum of its parts. Biostatistics is a core part of most centers, particularly those that perform clinical or population research [2]. Of the 42 NCI designated comprehensive cancer centers (Appendix A), 76% have a degree-offering Department of Biostatistics (Figure 3) that enhances their ability to attract quality Biostatistics faculty [3].



*Figure 3: The frequency distribution of degree-offering departments of biostatistics for all NCI Comprehensive Cancer Centers.*

### *Clinical and Translational Science Award*

The second major initiative aimed at achieving increased funding at KUMC is funding through a Clinical and Translational Science Award. Funded provided by the NIH's Clinical and Translational Science Awards (CTSA) has launched a revolution in the conduct of clinical and translational research at a national collection of academic health centers. CTSA funding will ultimately enable researchers to provide new treatments to patients in a faster, more efficient manner [4]. Now comprising 38 academic health centers in 23 states (Appendix A), the consortium will eventually link about 60 institutions together to strengthen clinical and translational science. Of the 38 academic health centers funded by the CTSA since its inception in 2006, 82% have a degree-granting Department of Biostatistics with at least a Master of Science degree in Biostatistics being offered (Figure 4).



*Figure 4: The frequency distribution of degree-offering departments of biostatistics for all CTSA Awardees from 2006 – 2008.*

### *School of Public Health in the State of Kansas*

The final major initiative aimed at achieving increased funding is the establishment of a School of Public Health for the State of Kansas. Public Health is the science of protecting and improving the health of communities through education, promotion of healthy lifestyles, and research for disease and injury prevention. Biostatisticians assist public health professionals by analyzing the effect of genetics, personal choice, and the environment on health, and by developing and promoting programs that protect the health of communities. Health trends that lead to life-saving measures can be identified through the application of statistical procedures and methodology. Biostatistics also provides forecasting, explanations for biological phenomena, and assists in determining the causes of disease and injury. In regards to the School of Public Health in the State of Kansas, Biostatistics is one of five areas of concentration that has to offer MS and PhD programs to achieve accreditation as explicitly laid out by the Council on Education for Public Health. Other required degree programs are currently being developed and implemented: a PhD program in Health Policy is starting in spring 2009 with the first round of graduates in fall 2013; a PhD or DrPH

degree is being developed by the Department of Preventive Medicine and Public Health for implementation in 2011; and MPH concentrations in Social and Behavioral Health, Environmental and Occupational Health, and Epidemiology should be in place by 2012-13. The MS and PhD programs in Biostatistics provide the necessary array of educational programs to develop an accredited School of Public Health.

### ***The Demand for Biostatistics Graduate Education***

To assess the local demand for graduate education in Biostatistics we surveyed local and regional students and alumni (Appendix C). Questions relating to a Biostatistics graduate program were sent out via the MPH Survey to: all current MPH and MS in Clinical Research students at KUMC; MPH and MS alumni (past five years) of KUMC; the MPH external advisory board comprised of Public Health Practitioners in state, local, and private agencies in Kansas and Kansas City, Missouri; and to the Bureau heads at the Kansas Department of Health and Environment and local Health Departments for distribution to their staff. Three statements pertaining to a graduate program in Biostatistics were posed in the survey: (1) A Biostatistics graduate program (MS and PhD) would be a valuable resource to the University of Kansas, Kansas Residents, and the Kansas City Metro area; (2) I would have been interested in receiving a graduate degree in Biostatistics (MS and/or PhD) if it had been available at KUMC when I started my graduate work; and (3) I am currently or potentially would be interested in receiving a graduate degree in Biostatistics (MS and/or PhD) if it were available at KUMC. Each response was measured on a four-point likert-scale, with 1 corresponding to strong agreement and 4 corresponding to strong disagreement. For 264 respondents, 240 (91%) agreed or strongly agreed with the statement that a graduate program in Biostatistics would be a valuable resource to KU, Kansas residents, and Kansas City. Of the 260 responders to question (2), 58 agreed or strongly agreed that they would have been interested in a graduate degree in biostatistics if it had been available. For the 266 answering question (3), 51 agreed or strongly agreed that they are currently or will be interested in obtaining a graduate degree in Biostatistics (Appendix C). Regional survey results available included those from undergraduate actuarial science students at Pittsburg State University in Pittsburg, Kansas. Of the nine undergraduate respondents, five (56%) are currently interested in a Biostatistics graduate degree. Four (45%) are interested specifically in a PhD in Biostatistics. Other surveyed included three mathematics majors, one of which is interested in a Biostatistics graduate degree and a PhD in Biostatistics (Appendix C). Providing these degrees at KUMC will retain these promising students and scientists in the State of Kansas.

In addition to hard survey results, the Department of Biostatistics has already fielded a number of individual inquiries into the possibility of a graduate degree in biostatistics. From August to December of 2008, faculty have been approached by five current students wishing to enhance their education and job prospects by obtaining at least an MS in Biostatistics. During the same time frame, two students and one lecturer from Southeast Missouri State University's mathematics graduate program have been inquired about the implementation date of the programs, and were ready to begin coursework in fall 2009. Inquiries have also been fielded from employers of biostatisticians in the Kansas City area who express interest in furthering the education of current employees holding only bachelors or masters degrees in a biostatistics-related field. Some of these employers of

statisticians and biostatisticians in the metropolitan area include Cerner Corporation, PRA International, and Quintiles Transnational. Well-trained biostatisticians are and will continue to be crucial to the success of these companies.

### ***Demand for Biostatistics Graduates***

A gap is developing between the nation's growing need for scientists and the number trained [6]. As the generation educated in the 1960s prepares to retire, our colleges and universities are falling short of graduating enough scientific talent to step into research laboratories, software design centers, defense installations, and science policy offices. The National Science Foundation (NSF) recently commissioned a workshop entitled "Statistics: Challenges and Opportunities for the 21<sup>st</sup> Century." The workshop gathered together an international group of over 50 statisticians from academia and industry to discuss current challenges in research and education. Excerpts from the report are included below:

- Much of the excitement in science today stems from research that involves multiple disciplines. While statistics comes by this naturally, it often suffers from inclusion as an afterthought or exclusion as a minority player without a significant role.
- Graduate training in biostatistics requires striking a balance between training in the core parts of the science and preparing students for cross-disciplinary work.
- Participants pointedly repeated to shortages in the pipeline of students and unmet demand from key industries.

Because statistical models aid in decision making in academic research, private industry and government, there will always be a demand for the skills statistical modeling provides. Technological advances are expected to spur demand for biostatisticians, and ever faster computer processing allows biostatisticians to analyze greater amounts of data much more quickly and to gather and sort through large amounts of data that could not have been analyzed in the past. As these processes continue to become more efficient and less expensive, an increasing number of employers will want to employ biostatisticians to take advantage of the new information available. Biostatisticians should experience employment growth due to the booming pharmaceuticals business alone. As pharmaceutical companies and research institutions develop new treatments and medical technologies, biostatisticians will be needed as collaborators in this research and these clinical trials.

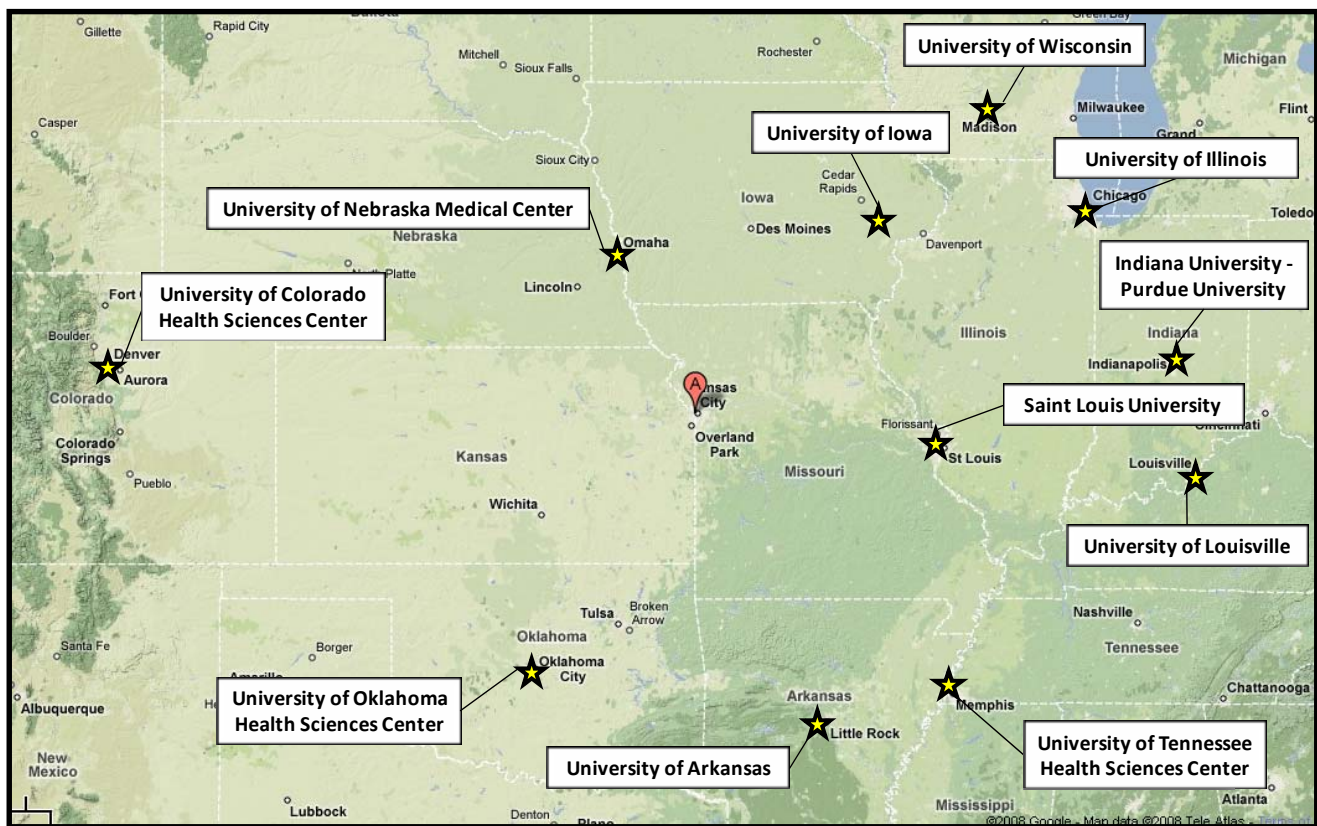
According to the Bureau of Labor Statistics, statisticians and biostatisticians held about 22,000 jobs in 2006. About 20 percent of these jobs were in the Federal Government, where statisticians and biostatisticians were concentrated in the Departments of Commerce, Agriculture, and Health and Human Services. Another 10 percent were found in state and local governments, including state colleges and universities. Most of the remaining jobs were in private industry, especially in scientific research and development services and pharmaceutical and medicine manufacturing. The demand for individuals with a background in biostatistics is expected to grow—employment of biostatisticians is projected to increase 9 percent from 2006 to 2016, as fast as or faster than the average for all occupations. For instance, pharmaceutical and medicine manufacturing employment for statisticians and biostatisticians has a projected increase of more than 26% by the year 2016. Other fields with projected hiring increases through 2016 include data processing

and related services (+36%); management, scientific, and technical consulting services (+79%), higher education (+12%); social services (+47%); hospitals (+12%); health care (+26%); social advocacy organizations (+15%); and state (+1%) and local governments (+12%), among others. As of May 2007, within the Kansas City metro area alone, over 150 individuals held the title ‘statistician’, with over 5,000 employed in statistics- and biostatistics-related positions. An additional 500 statisticians and biostatisticians are employed in the state of Kansas and western Missouri. The Kansas City metropolitan area is the second-largest employer of biostatisticians next to the Durham County, North Carolina-based Research Triangle Park [7]. A masters degree is the minimum educational requirement for most jobs as a biostatistician, but research and academic jobs generally require a PhD. In the United States, there are now 86 PhD programs in Statistics, Biostatistics, and Biometrics. They have tended to focus on graduate research, including collaboration with other disciplines, and education, as well as providing service courses [8].

### ***Locational and Comparative Advantages***

#### *Why the Program Should be Located at KUMC*

Of the 30 most populated metropolitan areas, Kansas City is currently one of only six without a formal biostatistics degree program. In fact, Kansas is one of only 15 states without a biostatistics degree program. Other states without a degree program include Wyoming, South Dakota, North Dakota, Montana, Alaska, Hawaii, and Idaho, among others. A map of regional biostatistics departments with degree programs is provided



*Figure 5: Regional degree-offering Departments of Biostatistics*

(Figure 5).

According to the report “Time to Get it Right: A Strategy for Higher Education in Kansas City,” a major weakness of Kansas City is the lack of a research university. However, recent philanthropic efforts have helped establish the Stowers Institute for Medical Research, its endowment, and its ever-expanding presence in the city with the purpose to expand basic life science research, and with the ultimate goal of positioning the city among the top 20 in basic life sciences research. In order to reach its full potential, the report asserts the need for “world-class higher education research capacity in the life sciences and in cognate areas of knowledge such as computer science and electrical engineering, mathematics and statistics, and nanoscience [9].” Enhancing KUMC through the addition of the MS and PhD programs in biostatistics will only serve to attract and create skilled human capital, the “most valuable resource today,” for KUMC, Kansas City, and the Midwest [9]. Some of the fastest growing industries—information science, nanotechnology, biotechnology—employ a great number of statisticians and biostatisticians. Thus, providing a steady stream of graduates would help boost economic growth in Kansas City and the Midwest by not only attracting these types of industries, but by supplying the employees. It was also noted in the report that the demographics of the region are changing—while Kansas City’s senior and youth populations are growing, it is losing the critical 25-34 year old age group [10]. It is this group which provides the crucial majority of workforce. While Kansas and western Missouri have the youth to educate, we are doing the region a disservice by not offering a valuable and marketable degree to keep them. Biostatistics has been an integral and indispensable tool in improving health and reducing illness, and graduates with degrees in biostatistics are employed in public health research and service organizations, university research groups, hospitals, pharmaceutical companies, health-related industries and government. The demand for biostatisticians in the job market has been consistently strong. It will only continue to grow—new high throughput technologies such as gene microarray are generating an unprecedented amount of data and present exciting new opportunities for biostatisticians with strong computational skills.

#### *Similar Programs in Other Regents Institutions*

Biostatistics programs do not exist in other regents institutions. Two programs which may incorrectly be confused with Biostatistics are Kansas State University’s Statistics program and the proposed University of Kansas Bioinformatics program.

Though a traditional Statistics program will offer similar first-year core classes, it differs greatly from the educational content and training provided by a Biostatistics program. For instance, though both types of programs offer the traditional sequence of statistical theory courses, the KUMC Biostatistics programs requires courses on topics such as categorical data analysis, clinical trials, and collaborative research experience—topics not covered in a traditional statistics program such as that at Kansas State—and provide students exposure to real medical research problems. Dr. Mayo has had conversations with Dr. Boyer at KSU and they agree that the student population interested in the Biostatistics program at KUMC will differ from the student population interested in Statistics at KSU.

The Bioinformatics program proposed at KU is in fact a program in computational biology. Computational biology is an interdisciplinary field that applies the techniques of computer science and applied mathematics to address biological problems. It encompasses the fields of computational biomodeling, computational genomics, molecular modeling, systems biology, protein structure prediction and structural genomics, and computational biophysics and biochemistry. The core courses required by the proposed Bioinformatics program include 10 hours of Bioinformatics Core and six hours of Biochemistry. Bioinformatics students must also complete a minimum of 12 credit hours of elective coursework, which generally consists of six hours of Biology and Chemistry and six hours of Analysis, Mathematics, or Statistics courses. As a result of the coursework, the students are expected to be proficient in the physicochemical and biological principles of molecular systems, applied mathematical or statistical analyses, and scientific software development. A list of the possible Analysis, Mathematics, or Statistics elective courses is provided below.

C&PE 778	Applied Optimization Methods (3)
MATH 526	Applied Mathematical Statistics I (3)
MATH 530	Mathematical Models I (3)
MATH 581	Numerical Methods (3)
MATH 590	Linear Algebra (3)
MATH 605	Applied Regression Analysis (3)
MATH 727	Probability Theory (3)
MATH 728	Statistical Theory (3)
MATH 781	Numerical Analysis I (3)
MATH 865	Introduction to Stochastic Processes (3)
EECS 638	Fundamentals of Expert Systems (3)
EECS 647	Introduction to Database Systems (3)

No overlap exists in the required courses between the proposed Bioinformatics program and this proposal, and very little overlap exists in the elective courses.

### *Similar Programs in the Region*

Biostatistics-related graduate programs exist at the University of Iowa in Iowa City, Iowa and at St. Louis University in St. Louis, Missouri. The Division of Biostatistics at the Saint Louis University School of Public Health offers a Biostatistics concentration in their MPH and PhD programs, and a joint Biostatistics and Epidemiology concentration in the MPH program. The University of Iowa offers MS and PhD degrees within the College of Public Health. The degree requirements and electives include biostatistics courses, statistics courses, and a few non-statistical courses.

### ***Student Characteristics***

The program will recruit students with bachelors or masters degrees in a variety of undergraduate majors including statistics, mathematics, computer science, engineering, biology, physics, economics, psychology, and education. A background in calculus and linear algebra and computing experience is helpful. Recruitment materials describing the programs and application procedures will be mailed to research universities and four-year colleges throughout the country and to local employers of biostatisticians. The program will also be advertised using the resources provided by the American Statistical Association and their journal JASA. Recruitment from schools in areas close to KUMC

will be accomplished by visits by faculty who will present talks on their research and distribute literature about the program. Selected graduate students will help in recruitment efforts by visiting their respective schools and giving seminars. The faculty will advertise the program at local, regional, and national conferences and other professional meetings. Sustained efforts will be made to provide information about the program to students on a continual basis through the Department of Biostatistics website <https://biostatistics.kumc.edu>. The Biostatistics website contains high-traffic biostatistics resources well known in the scientific community, which will substantially increase the range and spectrum of the program information dissemination.

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## PROGRAM REQUIREMENTS AND CURRICULUM

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### *Master of Science in Biostatistics*

The degree of Master of Science is awarded to those who have demonstrated a mastering of the basic knowledge in a scientific field. It can be entirely course-based, entirely research-based, or a mixture. The M.S. in Biostatistics proposed herein requires graduates to acquire sufficient knowledge and expertise to permit them to work at the frontier of their field. Course work, seminars, and collaborative research experiences in this proposal are designed with this purpose in mind.

### **Admission Procedures**

Admission to the MS program in Biostatistics is made by the Admissions Committee of the Department of Biostatistics with the concurrence of the faculty. Qualified students are admitted without regard to race, color, national or ethnic origin, gender, age, or disability.

### *Application Procedure*

Application for admission to the MS program is through the Department of Biostatistics. The following materials are required for admission:

1. Completed application form;
2. An official transcript bearing the official seal from each college or university in which course work had been taken;
3. Three (3) letters of recommendation;
4. Graduate Record Examination (GRE) scores;
5. Evidence of a Bachelors Degree from an accredited college or university.

These materials should be submitted directly to

**Department of Biostatistics  
University of Kansas Medical Center  
Attn: Admissions  
3901 Rainbow Blvd., Mail Stop 1026  
Kansas City, KS 66160**

### *Minimum Requirements*

To pursue the MS program, the applicant must meet the general KU requirements for admission to graduate studies. The minimum requirements for admission into the MS program are:

1. An undergraduate GPA of 3.0 or better is required for regular admission status. An applicant may be admitted under probationary status when his or her undergraduate GPA is at least 2.75 but does not meet the minimum required 3.0 for regular admission

status. Provisional status may be granted for applicants with GPAs of less than 2.75, provided they meet the academic standards of the Department without excessive deficiencies in prerequisites.

2. B average in calculus I – III (or equivalent);
3. Successful completion of a course in any computer programming language;
4. Successful completion of at least one of the following courses: linear algebra, differential equations, numerical analysis.

An applicant meeting the foregoing standards is referred to the Biostatistics admissions committee for approval or disapproval. Approval for admission is good for up to 18 months from the approved date for admission. Failure to enroll during this time will require a new application if admission is desired. A student is required upon admission to purchase a laptop meeting the minimum departmental specifications: 1.86 Ghz Intel Dual core or equivalent, Windows XP or Vista operating system, 2 GB RAM, 80 GB hard drive, wireless capabilities 802.11g.

### *Transfer of Graduate Credits*

Within the guidelines established by Graduate Studies<sup>2</sup>, six hours of graduate credit taken at a regionally accredited graduate school may be transferred and applied to the MS degree, pending approval of the Curriculum Committee.

## **Degree Requirements**

### *Course Requirements*

A minimum of 36 post-Bachelor's Degree credit hours are required with a minimum GPA of 3.0. A typical course plan is listed below.

***Fall I*** (9 credit hours)

BIOS 871: Mathematical Statistics I  
BIOS 820: Statistical Computing  
BIOS 840: Linear Regression

***Spring I*** (9 credit hours)

BIOS 872: Mathematical Statistics II  
BIOS 830: Experimental Design  
BIOS 810: Clinical Trials

***Summer I*** (6 credit hours)

Electives

***Fall II*** (9 credit hours)

BIOS 890: Linear Models  
BIOS 835: Categorical Data Analysis  
Electives

***Spring II*** (9 credit hours)

BIOS 898: Collaborative Research Experience  
Electives

The course plan consists of 27 credit hours from required Biostatistics courses which includes 3 credit hours of Collaborative Research Experience. This requirement ensures the completion of a research component through collaborative effort within or external to the Department. Elective credits include a minimum of three and a maximum of six credit hours in approved courses from outside departments and a minimum of six and maximum of nine credit hours in Biostatistics electives<sup>3</sup>.

### *Annual Evaluations*

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<sup>2</sup> See Graduate Catalog (p. 24).

<sup>3</sup> Departmental electives can be chosen from the list of elective classes and the required PhD courses (p. 22).

Students are evaluated each April by their graduate advisor and the Chair. These evaluations provide feedback to the student regarding the progress that they are making in a variety of areas: meeting program requirements, classroom performance, and research performance.

### *Graduate Examination*

To graduate with an MS in biostatistics a student must pass the Masters General Examination.

**Masters General Examination.** The Masters General Examination is given after a student's third full semester in residence, assuming the completion of the following courses: Mathematical Statistics I & II, Statistical Computing, Design and Analysis of Experiments, Regression, and Categorical Data Analysis. The examination has three purposes: to assess the student's strengths and weaknesses; to determine whether the student should be awarded the MS degree; and, if it is a degree goal, to determine whether the student is prepared to continue into the PhD program. The examination is to be administered by a committee of at least three members of the Graduate Faculty. If this examination is failed, subject to the faculty approval, a second examination may be taken no sooner than one year later. The faculty can recommend that the student leave the program following the spring semester in which the examination is taken. After two failures, no further examination is permitted and the student will not be awarded the MS degree nor be allowed to continue pursuit of the PhD, if applicable.

### *Characteristics of Graduates*

Upon completion of the MS in Biostatistics, the student should be prepared to function as a biostatistician or biostatistical consultant. Therefore the student must have an extensive understanding of biostatistical theory and practice and should be proficient in the application of statistical methods to one or more areas in the health sciences. At the completion of the MS degree in Biostatistics the graduate should be able to:

1. Demonstrate a broad knowledge and understanding of statistical theory and practice as applicable in the health sciences.
2. Function as a collaborator on a research team.
3. Take a leadership role in the design and implementation of a health science project.
4. Assume responsibility for the design and implementation of analyses for health science investigations.
5. Assist with the design and implementation of data management systems for large health science studies.
6. Prepare reports and publications resulting from health science studies.
7. Serve as an advocate for good statistical design in health science investigations.

## ***Doctor of Philosophy in Biostatistics***

The degree of Doctor of Philosophy is awarded to those who have demonstrated a high level of scholarship in a selected field and the capacity for independent research. The granting of the degree is a clear recognition that a student can complete a substantial piece of research, formally present the results of this work, and appreciate its significance in the field. PhD students are expected to acquire sufficient knowledge and expertise to permit them to work at the frontier of their field. Course work, seminars, collaborate research experiences, and a program of independent study in this proposal are designed with this purpose in mind.

### **Admission Procedures**

Admission to the PhD program in Biostatistics is made by the Admissions Committee of the Department of Biostatistics with the concurrence of the faculty. Qualified students are admitted without regard to race, color, national or ethnic origin, gender, age, or disability.

#### *Application Procedure*

Application for admission to the PhD program is through the Department of Biostatistics. The following materials are required for admission:

1. Completed application form;
2. An official transcript bearing the official seal from each college or university in which course work had been taken;
3. Three (3) letters of recommendation;
4. Graduate Record Examination (GRE) scores;
5. Evidence of a Bachelors Degree from an accredited college or university.

These materials should be submitted directly to

**Department of Biostatistics  
University of Kansas Medical Center  
Attn: Admissions  
3901 Rainbow Blvd., Mail Stop 1026  
Kansas City, KS 66160**

#### *Minimum Requirements*

To pursue the PhD program, the applicant must meet the general KU requirements for admission to graduate studies. The minimum requirements for admission into the PhD program are:

1. An undergraduate GPA of 3.0 or better is required for regular admission status. An applicant may be admitted under probationary status when his or her undergraduate GPA is at least 2.75 but does not meet the minimum required 3.0 for regular admission status. Provisional status may be granted for applicants with GPAs of less than 2.75,

provided they meet the academic standards of the Department without excessive deficiencies in prerequisites.

2. B average in calculus I – III (or equivalent);
3. Successful completion of a course in any computer programming language;
4. Successful completion of at least one of the following courses: linear algebra, differential equations, numerical analysis.

An applicant meeting the foregoing standards is referred to the Biostatistics admissions committee for approval or disapproval. Approval for admission is good for up to 18 months from the approved date for admission. Failure to enroll during this time will require a new application if admission is desired. A student is required upon admission to purchase a laptop meeting the minimum departmental specifications: 1.86 Ghz Intel Dual core or equivalent, Windows XP or Vista operating system, 2 GB RAM, 80 GB hard drive, wireless capabilities 802.11g.

### *Transfer of Graduate Credits*

Within the guidelines established by Graduate Studies, transfer of credit is inappropriate due to the lack of a minimum number of required hours<sup>4</sup>. However, relevant prior graduate work will be taken into consideration in setting up individual programs of study leading to the PhD.

## **Degree Requirements**

### *Course Requirements*

A minimum of 60 post-Bachelor's Degree credit hours are required with a minimum GPA of 3.0. A typical course plan is listed below.

***Fall I*** (9 credit hours)

BIOS871: Mathematical Statistics I  
BIOS 820: Statistical Computing  
BIOS 840: Linear Regression

***Spring I*** (9 credit hours)

BIOS 872: Mathematical Statistics II  
BIOS 830: Experimental Design  
BIOS 810: Clinical Trials

***Summer I*** (3 credit hours)

BIOS 900: Theory of Statistical  
Inference

***Fall II*** (9 credit hours)

BIOS 890: Linear Models  
BIOS 835: Categorical Data Analysis  
Electives

***Spring II*** (9 credit hours)

BIOS 845: Survival Analysis  
BIOS 910: Generalized Linear Models  
BIOS 898: Collaborative Research Experience

***Fall III*** (9 credit hours)

BIOS 825: Nonparametric Statistics  
Electives

***Spring III*** (6 credit hours)

BIOS 880: Bayesian Statistics  
Electives

***Summer III*** (3 credit hours)

Dissertation

***Fall IV*** (6 credit hours)

Dissertation

***Spring IV*** (6 credit hours)

Dissertation

The course plan consists of 42 credit hours from required Biostatistics courses, 12 credit hours of electives, and a minimum of 9 credit hours of dissertation. Elective credits include a minimum of six and a maximum of nine credit hours in approved courses from outside departments and a minimum of three and maximum of six credit hours in

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<sup>4</sup> Graduate Catalog page 19.

Biostatistics electives. For those students exhibiting prior graduate course work at KU or another accredited university for the mastery of the requirements or biostatistics electives in this degree plan, the Department of Biostatistics Curriculum Committee will determine the necessary requirements for completion of the PhD.

### *Annual Evaluations*

Students are evaluated each April by their graduate advisor and the Chair. These evaluations provide feedback to the student regarding the progress that they are making in a variety of areas: meeting program requirements, classroom performance, and research performance.

### *Graduate Examinations*

There are a total of three graduate examinations required for the PhD degree—the Qualifying Examination, the Comprehensive Examination, and the Final Oral Examination. Scheduling of the Qualifying Examination, the Comprehensive Examination, and the Final Oral Examination is coordinated through the Chair of the Graduate Program Committee.

**Qualifying Examination.** The Qualifying Examination is given after a student's third full semester in residence, ensuring the completion of the following courses: Mathematical Statistics I & II, Statistical Computing, Design and Analysis of Experiments, Regression, and Categorical Data Analysis. Passing of the Qualifying Examination as a MS requirement applies. The Qualifying Examination is to be presented publicly to a Qualifying Examination Committee consisting of a minimum of three faculty members and the Director of Graduate Studies of the Department of Biostatistics, and at least one other member from the Graduate faculty. The examination has two purposes: to assess the student's strengths and weaknesses and to determine whether the student is prepared to continue into the PhD program. If the Qualifying Examination is failed, subject to the faculty approval a second examination may be taken no sooner than one year later. The faculty can recommend that the student leave the program following the spring semester in which the examination is taken. After two failures, no further examination is permitted and the student will not be allowed to continue pursuit of the PhD.

**Comprehensive Examination.** The Comprehensive Examination is given at the end of a student's fifth full semester in residence, when a doctoral aspirant has completed the major portion of the course work at a satisfactory level and met all other program, school, and general requirements prerequisite to the comprehensive examination, including the research skills requirement<sup>5</sup>. The examination has two purposes: to assess the student's strengths and weaknesses and to determine whether the student should continue in the PhD program. The committee for the comprehensive examination must consist of at least five members, all of whom must be members of the Graduate Faculty. At least one member must be from a department other than the

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<sup>5</sup> See Graduate Catalog, p. 19.

Department of Biostatistics. This member represents Graduate Studies and must be a regular member of the Graduate Faculty. The examination may be scheduled provided that at least five months have elapsed from the time of the aspirant's first enrollment at KU. The student who successfully completes the Comprehensive Examination can apply for admission to Candidacy for the PhD once they have completed their required course work and have satisfied the residency and other departmental requirements. Students who pass the examination will be encouraged to begin research on potential dissertation topics while they complete their course work. If the Comprehensive Examination is failed, subject to the faculty approval a second examination may be taken no sooner than 90 days later. The faculty can recommend that the student leave the program following the spring semester in which the examination is taken. After two failures, no further examination is permitted and the student will not be allowed to continue pursuit of the PhD.

### *Dissertation Requirement*

Students are recognized as candidates for the PhD only after they have passed the Comprehensive Examination and completed all residency and departmental requirements. Once the student has been admitted to candidacy, he or she should seek a dissertation advisor. The student and advisor will form a dissertation committee, with the final committee to be approved by the Graduate Division of the School of Medicine. The dissertation committee shall consist of at least three members and may include members from other departments and divisions or, on occasion, members from outside the university<sup>6</sup>. All members of the committee must be chosen from the Graduate Faculty, and the chair must be authorized to chair doctoral dissertations. The chair of the dissertation committee should ensure that the examination is formally announced, fairly conducted, and open to the faculty.

The candidate must present a dissertation showing the planning, conduct, and results of original research and scholarly activity. The purpose of the dissertation is to encourage and ensure the development of broad intellectual capabilities as well as to demonstrate an intensive focus on a problem or research area.

**Final Oral Examination.** When the completed dissertation has been accepted by the committee in final draft form, and all other degree requirements have been satisfied, the chair of the committee requests (at least three weeks prior to the date of examination) the Graduate Division to schedule the final oral examination. At least five months must elapse between the successful completion of the Comprehensive Examination and the date of the Final Oral Examination. The committee for the final oral examination must consist of at least five members, including the members of the dissertation committee plus other members of the Graduate Faculty recommended by the committee chair and the department and appointed by the Graduate Division. At least one member must be from a department other than Biostatistics. Candidates who fail this examination may take a second examination on the recommendation of the Department of Biostatistics and the approval of the Graduate Division. In no case

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<sup>6</sup> See Graduate Catalog, p. 20.

will this second examination be given until an interval of at least four months has elapsed. After two failures, no further examination is permitted and the student is not permitted to continue pursuing the PhD degree in biostatistics.

Both the dissertation research and the dissertation itself are to be completed under the guidance and direction of the committee appointed as described previously. Instructions about the proper form of the dissertation may be obtained from the KU graduate web site.

### *Characteristics of Graduates*

The PhD program will produce biostatisticians who can develop biostatistical methodology that can be utilized to solve problems in public health and the biomedical sciences. In addition, graduates of the PhD program will be prepared to apply biostatistical and epidemiology methodology for the design and analysis of public health and biomedical research investigations. Finally, graduates of the PhD program will be well suited to function as collaborators or team leaders on research projects in the biomedical and public health sciences. In addition to the characteristics outlined in the MS section of this proposal, graduates of the PhD program in Biostatistics will have:

1. The ability to develop careers in academia, research institutes, government, and industry;
2. A broad understanding of current statistical methods and practices in the health sciences;
3. A solid theoretical training necessary for the development and study of new statistical methods;
4. The ability to assume all responsibilities of a statistician in collaborative health science research; in particular, the graduate will have experience in the design, data management, analysis, and interpretation of a variety of experimental and observational studies;
5. Experience in writing reports and giving oral presentations describing health science studies.

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## RESOURCES

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### ***Academic Support***

All courses listed in the curriculum do not exist on the campus, requiring full development of all course syllabi and approval of courses listed in this proposal. A start date of Fall 2010 has been requested for this reason.

Current faculty and staff resources within the Department of Biostatistics and those approved in the Chair's recruitment package and the Department's five-year plan will be sufficient to implement this program. Thus, assuming these commitments are maintained, fiscal support for this program other than a Graduate Program Senior Coordinator and Teaching/Research Assistantships will be accomplished via reallocation of committed dollars.

Adequate advising, library, audio-visual, and academic computing resources already exist.

### ***Facilities and Equipment***

Courses will be scheduled and taught in classrooms already existing on the Medical Center campus.

A student must purchase a laptop as an educational requirement upon admission. The laptop should meet departmental minimum requirements for hardware and software to be used throughout this program.

No new academic support services or library materials will be needed for this program. Current facilities and equipment are adequate to implement this program. Depending upon growth, dedicated space for teaching or research assistants may be needed at some point in the future.

### ***Program Review, Assessment, and Accreditation***

The proposed programs will be reviewed in accordance with the KU graduate school requirements. Courses will have student- and peer-reviews performed at the end of each semester which will be reviewed by the Chair and utilized in the annual review of faculty.

A database will be created to track the percentage completion, time-to-completion, retention, and employment of MS and PhD students accepted into the programs.

Assessment of the program will be overseen by the Chair, who will currently serve as Graduate Program Director, and Graduate Program Senior Coordinator. To proceed in the program, students must remain in good standing and maintain a 3.0 GPA with a grade of B or better in all required courses.

As a part of the accreditation process, the proposed program will be reviewed as an academic degree by the North Central Association of Colleges & Schools (NCACS). This program is in accordance with both KU graduate school and NCACS accreditation requirements.

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## FACULTY

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*Matthew S. Mayo, PhD, MBA, Professor and Chair*

Dr. Matthew S. Mayo is Professor and Chair of the Department of Biostatistics, Director of the Center for Biostatistics and Advanced Informatics, and was recently appointed Associate Director of Shared Resources for the University of Kansas Cancer Center. Dr. Mayo's primary research interests include linear models, experimental and clinical trial design, and bioinformatics. Dr. Mayo has extensive collaborative experience with clinical, population-based, and basic science researchers and he has over 12 years of experience handling the biostatistics and data management for centers as well as multi-center clinical trials. Dr. Mayo is a permanent member of the NCI's Cancer Biomarkers Study Section, a member of the American Joint Commission on Cancer (AJCC) Statistical Task Force, and a DSMB member for two international clinical trials.

Prior to joining KUMC in 1998, Dr. Mayo was a research assistant professor in the Medical Statistics Section, Division of Hematology/Oncology, in the Department of Medicine at the University of Alabama at Birmingham (UAB). While at UAB Dr. Mayo was a Biostatistician and Associate Scientist of Experimental Therapeutics within the Biostatistics Unit of UAB's Comprehensive Cancer Center. Dr. Mayo collaborated with basic, clinical and prevention and control scientists conducting oncology-related research and supervised the data entry and management personnel within the Biostatistics Unit, ensuring accurate, efficient, and confidential creation and maintenance of databases managed by members of the Biostatistics Unit. Dr. Mayo also served as a GCRC statistician at UAB and was a statistician for the NIAIDs Collaborative Antiviral Study Group (CASG) headquartered at UAB where he supervised all statistical, data management, and data entry personnel for the multiple pediatric clinical trials conducted at over 40 sites across North America.

Since arriving at KUMC, Dr. Mayo has aided in the development of over 50 NIH-funded grants and has authored over 90 publications. Dr. Mayo was also awarded a five-year, \$1.4 million R24 grant entitled "Biostatistics/Informatics Shared Resource" from NCI in April of 2002. The purpose of this award was to provide the biostatistics and informatics resources needed by investigators within the Kansas Masonic Cancer Research Institute. Since its inception, this shared resource has aided in the development of over 150 peer-reviewed, published collaborative manuscripts, over 25 peer-reviewed statistical methodological manuscripts, and over 75 grants. The success of this resource led to the development of the CBAI to support all of KUMC. Dr. Mayo also leads the biostatistical and clinical research informatics core for the KUMC GCRC.

*Byron J. Gajewski, PhD, Associate Professor*

Dr. Gajewski is Associate Professor in the Department of Biostatistics in the University of Kansas School of Medicine with secondary appointment in University of Kansas School of Nursing. Dr. Gajewski's primary research interests include Bayesian data analysis, Bayesian healthcare services research, Bayesian psychometrics, and Bayesian clinical trials. Dr. Gajewski has 11 years of collaborative experience in nursing, transportation, environment, medicine, and allied health. Dr. Gajewski received his MS in mathematics

from Marquette University in 1995 and PhD in statistics from Texas A&M University in 2000. He has served as an assistant professor of statistics at St. Cloud State University in Minnesota teaching undergraduate statistics courses and methodological research and as a statistical consultant to the University of Florida's School of Medicine. He joined the KUMC faculty in 2002 as an assistant professor in the School of Allied Health in the Department of Hearing and Speech and secondary appointment in School of Nursing. Since arriving at KUMC, Dr. Gajewski has aided in the development of several funded grants and has authored over 50 publications. Dr. Gajewski developed the ANOVA course and taught seven semesters and has published three papers in the area of statistics education. Dr. Gajewski has served on six MS committees and 25 PhD committees.

*Jo A. Wick, PhD, Assistant Professor*

Dr. Wick is Assistant Professor in the Department of Biostatistics at the University of Kansas School of Medicine. She received her PhD in statistics from Baylor University in Waco, Texas in 2008. Her dissertation research involved Bayesian approaches to problems in the area of drug safety. During her time at Baylor, Dr. Wick taught statistics courses in the departments of statistics, psychology, social work, and business, and collaborated with scientists from Eli Lilly and Company as a Biostatistics intern on research in the areas of Bayesian adaptive clinical trial design, pharmacokinetics and pharmacodynamics, and benefit-risk assessments. Her primary research interests include clinical trials in cancer, Bayesian methods, adaptive clinical trial design, and statistics education. Since arriving at KUMC in January 2008, Dr. Wick has been involved in collaborative research in cancer, design of pre-clinical and clinical trial experiments, the development and teaching of biostatistics graduate and service courses Clinical Trials, Analysis of Variance, and Biostatistics for Oncology Fellows, and has served as a member of the Protocol Review and Monitoring Committee of the KU Cancer Center.

*Jianghua (Wendy) He, PhD, Assistant Professor*

Dr. He is Assistant Professor in the Department of Biostatistics at the University of Kansas School of Medicine. She graduated from Florida State University (FSU) with a PhD in statistics in August 2007. Her dissertation topic was "The Bayesian Dynamic Survival Model for Longitudinal Aging Data," which was guided by her co-advisors Dr. Dan McGee and Dr. Xufeng Niu. With a strong educational background in both theoretic and applied statistics, her research area focuses on survival analysis and the application of statistics in the medical and public health fields. As a graduate student, she worked in the Department of Humanities and Social Sciences in the School of Medicine of FSU for two years on Dr. Suzanne Johnson's childhood obesity and childhood diabetes projects. They have one collaborative paper published and another one accepted by the *Journal of School Health*. Dr. He is currently teaching graduate students Applied Regression Analysis and Applied Nonparametric Statistics and doing collaborative and independent research. Currently, she is a co-investigator on an NIH grant, *Dairy Foods and Blood Pressure in Multi-Ethnic Children*, and is a biostatistician for the GCRC at KUMC, providing biostatistical support to investigators and reviewing protocols submitted to the GCRC.

*John D. Keighley, PhD, Research Assistant Professor*

Dr. Keighley is Research Assistant Professor in the Department of Biostatistics in the University of Kansas School of Medicine. He received his PhD in statistics from Kansas State University and his MS in mathematics from Emporia State University. Dr. Keighley's current research interests are in mixed models, computation statistics, and the usage of rates in cancer reporting. He has worked with the Kansas Cancer Registry and on various other oncology-related grants and studies. Dr. Keighley has worked with researchers that specialize in research areas such as engineering, smoking cessation, the genitourinary working group, and gastroenterology.

*Jonathan D. Mahnken, PhD, Assistant Professor*

Dr. Mahnken is Assistant Professor in the Department of Biostatistics in the University of Kansas School of Medicine. He completed his PhD in 2003 at the University of Texas Health Science Center at Houston. His statistical research focuses on two areas: 1) power analysis and sample size justification; and 2) maximum likelihood estimation for multivariate censored data. Dr. Mahnken has an extensive collaboration record that includes basic science and translational research in stroke, clinical trials, and health services research. He is the co-director of the Oversight Core and Director of the Biostatistics and Data Management Subcore of a large, pre-clinical U54 project to evaluate the use of cortical stimulation to enhance motor recovery after stroke. Dr. Mahnken is also PI of an R03 from the National Institute of Dental and Craniofacial Research of the NIH to evaluate the utility of Medicare claims as a means to identify incident oral and pharyngeal cancer cases. This project will serve as a basis for future research on issues such as improving baseline and trend data and investigating health trajectories among people with oral and pharyngeal cancer in the United States. Since joining the faculty at KUMC, Dr. Mahnken has taught Fundamentals of Biostatistics I, Fundamentals of Biostatistics II, and Categorical Data and Survival Analysis.

*Hung-Wen (Henry) Yeh, PhD, Assistant Professor*

Dr. Yeh is Assistant Professor in the Department of Biostatistics in the University of Kansas School of Medicine. He received his PhD from the University of Texas Health Science Center (UTHSC) in Houston, Texas. Dr. Yeh's dissertation topic was "Estimating Parameters in Markov Models for Longitudinal Studies with Missing Data or Surrogate Outcomes by EM Algorithm." During his graduate work he was a statistician in the Study Design and Clinical Research Core of the Digestive Diseases Center at UTHSC, providing analysis and consulting services for center members. His research interests include missing data, longitudinal data analysis, measurement error and/or misclassification. Since joining KUMC in 2007, Dr. Yeh has been collaborating on basic science and clinical research and on health promotion studies in alcoholism, Alzheimer's disease, brain imagining, breast feeding, smoking cessation, breast cancer, colorectal cancer, prostate cancer, and immunology. He is currently teaching Fundamentals of Biostatistics I and II, and serving as the statistician on the Institutional Animal Care and Use Committee at KUMC reviewing protocols involving animal experiments.

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## REFERENCES

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In generating this proposal we also studied information on new and established programs at the University of Buffalo (<http://sphhp.buffalo.edu>); the University of North Carolina, Chapel Hill (<http://sph.unc.edu>); and Texas A&M University (<http://tamhsc.edu>).

- [1] Vanderbilt Medical Center (2007) *Department of Biostatistics: The Department, Goals, and Vision*, retrieved from <http://biostat.mc.vanderbilt.edu>.
- [2] Cancer Centers Branch of the National Cancer Institute (2004) *Policies and Guidelines Relating to the Cancer Center Support Grant*.
- [3] Cancer Centers Branch of the National Cancer Institute (2008) *NCI-designated Comprehensive Cancer Centers*.
- [4] National Center for Research Resources/National Institutes of Health (2008) *NCCR Fact Sheet: Clinical and Translational Science Awards*.
- [5] Association of Schools of Public Health (2006) *What is Public Health?*
- [6] Report of the National Science Foundation Committee on the Future of Statistics (2004) *Statistics: Challenges and Opportunities for the Twenty-First Century*.
- [7] Bureau of Labor Statistics' Occupational Employment Statistics Program, data retrieved from <http://www.bls.gov/OES> on September 3, 2008.
- [8] The American Statistical Association, data retrieved from <http://www.amstat.org> on September 3, 2008.
- [9] Greater Kansas City Community Foundation (2006) *Time to Get it Right: A Strategy for Higher Education in Kansas City*.
- [10] Greater Kansas City Community Foundation (2007) *One Year Later: Time to Get Things Done*.

**APPENDIX A: ANTICIPATED COURSE OFFERING**

Course	2010 – 2011			2011 – 2012			2012 – 2013			2013 – 2014		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer
BIOS 810		JW			JW			JW			JW	
BIOS 820	JK			JK			JK			JK		
BIOS 821						JK						JK
BIOS 825		WH						WH				
BIOS 830		JW			JW			JW			JW	
BIOS 833						BG						BG
BIOS 835	JM			JM			JM			JM		
BIOS 840	WH			WH			WH			WH		
BIOS 845		JM						JM				
BIOS 850					WH						WH	
BIOS 871	BG			BG			BG			BG		
BIOS 872		BG			BG			BG			BG	
BIOS 880					JW						JW	
BIOS 890	JW			JW			JW			JW		
BIOS 898	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
BIOS 900						HY						HY
BIOS 905			JW						JW			
BIOS 910					BG						BG	
BIOS 911			BG						BG			
BIOS 915			HY						HY			
BIOS 920				HY						HY		
BIOS 930		JK						JK				
<i>Total</i>	6	7	4	7	7	4	6	7	4	7	7	4
<i>Service Courses</i>												
NRSG 802		JW			JW			JW			JW	
PRVM 804	JK	JK		JK	JK		JK	JK		JK	JK	
PRVM 810		JW			JW			JW			JW	
PRVM 814	HY			HY			HY			HY		
PRVM 817		HY			HY			HY			HY	
PRVM 879	JK			JK			JK			JK		
PRVM 882		WH			WH			WH			WH	
PRVM 884	JM			JM			JM			JM		
PRMV 886	WH			WH			WH			WH		
PRVM 887		BG			BG			BG			BG	

Anticipated Course Numbering

BIOS 806: Special Topics  
BIOS 810: Clinical Trials<sup>‡†</sup>  
BIOS 820: Statistical Computing I (SAS Base 1) <sup>‡†</sup>  
BIOS 821: Statistical Computing II (SAS SQL/IML)  
BIOS 825: Nonparametric Statistics<sup>†</sup>  
BIOS 830: Experimental Design<sup>‡†</sup>  
BIOS 833: Sampling Methods  
BIOS 835: Categorical Data Analysis<sup>‡†</sup>  
BIOS 840: Linear Regression<sup>‡†</sup>  
BIOS 845: Survival Analysis<sup>†</sup>  
BIOS 850: Multivariate Statistics  
BIOS 871: Mathematical Statistics I<sup>‡†</sup>  
BIOS 872: Mathematical Statistics II<sup>‡†</sup>  
BIOS 880: Bayesian Statistics<sup>†</sup>  
BIOS 890: Linear Models<sup>‡†</sup>  
BIOS 898: Collaborative Research Experience<sup>‡†</sup>  
BIOS 900: Theory of Statistical Inference<sup>†</sup>  
BIOS 905: Advanced Clinical Trial Design and Analysis  
BIOS 910: Generalized Linear Models<sup>†</sup>  
BIOS 911: Nonlinear Models  
BIOS 915: Longitudinal Data Analysis  
BIOS 920: Latent Variable Analysis  
BIOS 930: Data Mining

Prerequisites

BIOS 820  
  
  
  
  
  
  
  
  
BIOS 820, 835, 840, 871  
BIOS 820, 830, 840  
  
  
  
  
BIOS 871, 872  
BIOS 871, 872  
BIOS 820, 830, 835, 840, 871, 872, 890  
BIOS 871, 872  
BIOS 810, 820, 830, 835, 840, 845  
BIOS 840, 890  
BIOS 890  
BIOS 890  
BIOS 850, 890  
BIOS 820, 821, 850, 890

‡ Required MS Course

† Required PhD Course

APPENDIX B: TABLES

NIH Funding Rank	School of Medicine	Department of Biostatistics	M.S. in Biostatistics	Ph.D. in Biostatistics	2007 NIH Funding
1	Johns Hopkins University	Yes	Yes	Yes	\$434,694,775
2	University of California San Francisco	Yes	Yes	No	\$384,460,293
3	University of Pennsylvania	Yes	Yes	Yes	\$380,639,627
4	Washington University	Yes	Yes	Yes	\$351,634,141
5	Duke University	Yes	Yes	Yes	\$343,872,781
6	Yale University	Yes	Yes	Yes	\$323,054,976
7	UCLA	Yes	Yes	Yes	\$295,929,067
8	University of Washington	Yes	Yes	Yes	\$290,031,006
9	University of Pittsburg	Yes	Yes	Yes	\$289,898,208
10	Vanderbilt University	Yes	No	No	\$282,284,346
11	University of Michigan Ann Arbor	Yes	Yes	Yes	\$273,264,501
12	Stanford University	Yes	Yes	Yes	\$264,669,934
13	University of California San Diego	Yes	Yes	Yes	\$249,778,178
14	Columbia University Health Sciences	Yes	Yes	Yes	\$244,669,692
15	Baylor College of Medicine	No	No	No	\$211,626,818
16	University of North Carolina Chapel Hill	Yes	Yes	Yes	\$208,648,725
17	Emory University	Yes	Yes	Yes	\$196,688,785
18	University of Chicago	Yes	No	No	\$183,555,504
19	Mount Sinai School of Medicine of NYU	No	No	No	\$175,539,076
20	University of Texas Southwestern Medical Center Dallas	Yes	No	No	\$171,000,911
21	Oregon Health & Sciences Center	Yes	Yes	Yes	\$168,608,494
22	University of Colorado Denver Health Science Center	Yes	Yes	Yes	\$166,755,202
23	Harvard University Medical School	Yes	Yes	Yes	\$163,470,369
24	University of Alabama Birmingham	Yes	Yes	Yes	\$159,174,091
25	University of Rochester	Yes	Yes	Yes	\$151,866,313
26	Case Western Reserve University	Yes	Yes	Yes	\$148,926,761
27	Northwestern University	No	Yes	Yes	\$145,620,290
28	University of Virginia Charlottesville	Yes	No	No	\$140,533,551
29	University of Minnesota Twin Cities	Yes	Yes	Yes	\$137,952,493
30	University of Iowa	Yes	Yes	Yes	\$137,437,565

NIH Funding Rank	School of Medicine	Department of Biostatistics	M.S. in Biostatistics	Ph.D. in Biostatistics	2007 NIH Funding
31	Yeshiva University	Yes	Yes	No	\$132,371,345
32	University of Maryland Baltimore	Yes	Yes	Yes	\$129,282,327
33	University of Wisconsin Madison	Yes	Yes	Yes	\$126,979,219
34	New York University School of Medicine	No	No	No	\$121,835,760
35	University of Southern California	Yes	Yes	Yes	\$116,087,463
36	Weill Medical College of Cornell	Yes	Yes	No	\$113,920,848
37	University of Massachusetts Medical School Worcester	Yes	Yes	Yes	\$110,509,920
38	Indiana University-Purdue University at Indianapolis	Yes	Yes	Yes	\$102,264,083
39	Wake Forest University Health Sciences	Yes	Yes	No	\$97,733,305
40	University of Texas Medical Branch Galveston	No	No	No	\$97,337,115
41	Boston University Medical Campus	Yes	Yes	Yes	\$96,851,837
42	Medical College of Wisconsin	Yes	Yes	Yes	\$92,309,025
43	University of Cincinnati	Yes	Yes	Yes	\$88,156,120
44	University of Miami School of Medicine	No	No	No	\$88,082,069
45	University of Texas Health Science Center San Antonio	Yes	Yes	Yes	\$85,310,595
46	University of Illinois at Chicago	Yes	Yes	Yes	\$82,496,151
47	University of Utah	Yes	Yes	Yes	\$81,527,244
48	University of California Irvine	Yes	Yes	Yes	\$80,677,228
49	University of California Davis	Yes	Yes	Yes	\$80,033,183
50	Ohio State University	Yes	Yes	Yes	\$78,045,264
51	Medical University of South Carolina	Yes	Yes	Yes	\$77,405,801
52	Cleveland Clinic Lerner College of Medicine	Yes	Yes	Yes	\$76,913,798
53	Dartmouth College	No	No	No	\$74,137,561
54	Thomas Jefferson University	No	No	No	\$66,401,202
55	University of Texas Health Science Center Houston	Yes	Yes	Yes	\$63,386,975
56	University of Kentucky	Yes	Yes	Yes	\$62,707,407
57	University of Florida	Yes	Yes	Yes	\$62,200,116
58	University of Arizona	Yes	Yes	Yes	\$59,186,584
59	Georgetown University	Yes	Yes	Yes	\$58,154,755
60	University of Medicine and Dentistry of New Jersey	No	No	No	\$57,953,965
61	University of Vermont	Yes	Yes	Yes	\$56,517,206
62	Virginia Commonwealth	Yes	Yes	Yes	\$56,447,550

NIH Funding Rank	School of Medicine	Department of Biostatistics	M.S. in Biostatistics	Ph.D. in Biostatistics	2007 NIH Funding
63	Wayne State University	No	No	No	\$52,867,060
64	University of Connecticut School of Medicine	No	No	No	\$52,817,423
65	Brown University	Yes	Yes	Yes	\$52,576,636
66	State University New York Stony Brook	No	No	No	\$46,233,332
67-T	University of Arkansas Medical Sciences at Little Rock	Yes	Yes	Yes	\$45,773,954
67-T	Tufts University Boston	No	No	No	\$45,773,954
68	University of Kansas Medical Center	Yes	No	No	\$45,349,515
69	Pennsylvania State University Hershey Medical Center	Yes	Yes	Yes	\$44,008,710
70	University of New Mexico Albuquerque	No	No	No	\$42,227,202
71	University of Louisville	Yes	Yes	Yes	\$40,204,130
72	University of Oklahoma Health Science Center	Yes	Yes	Yes	\$37,819,409
73	University of Tennessee Health Science Center	Yes	Yes	Yes	\$37,160,441
74	Medical College of Georgia	Yes	Yes	Yes	\$35,698,734
75	University of Nebraska Medical Center	Yes	Yes	Yes	\$33,495,476
76	Tulane University	Yes	Yes	Yes	\$33,177,275
77	Temple University	No	No	No	\$31,480,300
78	Louisiana State University Health Science Center at New Orleans	Yes	Yes	Yes	\$29,844,767
79	Charles R. Drew University of Medicine and Science	No	No	No	\$22,574,292
80	Meharry Medical College	No	No	No	\$22,401,704
81	Rush University Medical Center	No	No	No	\$22,123,181
82	New York Medical College	Yes	Yes	Yes	\$21,443,121
83	Suny Downstate Medical Center	Yes	Yes	Yes	\$21,293,514
84	Morehouse School of Medicine	No	No	No	\$20,969,769
85	State University of New York Buffalo	Yes	Yes	Yes	\$20,244,598
86	Suny Upstate Medical University	No	No	No	\$19,874,826
87	University of Missouri-Columbia	No	No	No	\$18,918,639
88	University of Missouri-Kansas City	No	No	No	\$18,719,953
89	George Washington University	Yes	Yes	Yes	\$17,991,628
90	Louisiana State University Health Science Center at Shreveport	No	No	No	\$17,991,628
91	Loyola University	No	No	No	\$17,216,104
92	West Virginia University	No	No	No	\$16,418,875

NIH Funding Rank	School of Medicine	Department of Biostatistics	M.S. in Biostatistics	Ph.D. in Biostatistics	2007 NIH Funding
93	Saint Louis University	No	No	No	\$15,476,907
94	Howard University	No	No	No	\$14,843,837
95	University of South Florida	Yes	Yes	Yes	\$14,760,021
96	Texas A&M University Health Science Center	Yes	Yes	Yes	\$13,888,830
97	University of Hawaii at Manoa	Yes	Yes	Yes	\$12,925,467
98	University of Mississippi Medical Center	Yes	Yes	Yes	\$12,181,912
99	Loma Linda University	Yes	Yes	Yes	\$11,881,073
100	Albany Medical College	Yes	Yes	Yes	\$11,043,438
101	University of Toledo Health Science Campus	No	Yes	No	\$10,746,241
102	Rosaline Franklin University of Medicine and Science	No	No	No	\$10,639,676
103	University of South Alabama	No	No	No	\$10,302,063
104	University of Southern Illinois School of Medicine	No	No	No	\$9,865,452
105	University of Nevada Reno	No	No	No	\$9,607,436
106	Michigan State University	Yes	Yes	Yes	\$9,214,049
107	Creighton University	No	No	No	\$8,934,148
108	University of North Dakota	No	No	No	\$8,078,220
109	Wright State University	No	No	No	\$7,066,241
110	University of South Carolina at Columbia	Yes	Yes	Yes	\$6,062,060
111	University of Puerto Rico Medical Sciences	Yes	Yes	No	\$5,949,502
112	University of Illinois Urbana-Champaign	Yes	Yes	Yes	\$5,826,541
113	East Carolina University	Yes	Yes	Yes	\$5,592,209
114	Ponce School of Medicine	No	No	No	\$5,472,821
115	Texas Tech University Health Science Center	Yes	Yes	Yes	\$3,950,993
116	Eastern Virginia Medical School	No	No	No	\$3,511,446
117	University of Southern Illinois at Carbondale	Yes	No	No	\$2,995,453
118	Universidad Central Del Caribe	No	No	No	\$2,507,118
119	East Tennessee State University	No	No	No	\$2,496,740
120	University of South Dakota	No	No	No	\$2,423,143
121	Northeastern Ohio University	No	No	No	\$2,232,624
122	Marshall University	No	No	No	\$1,328,029
123	University of Minnesota Duluth	No	No	No	\$1,126,551
124	University of California Riverside	Yes	Yes	Yes	\$581,635

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NIH Funding Rank	School of Medicine	Department of Biostatistics	M.S. in Biostatistics	Ph.D. in Biostatistics	2007 NIH Funding
125	Mercer University Macon	No	No	No	\$293,096

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Clinical Translational Science Awardee	Year Awarded	Biostatistics Program
Albert Einstein College of Medicine of Yeshiva University	2008	Yes
Boston University	2008	Yes
Harvard University	2008	Yes
Indiana University School of Medicine	2008	Yes
Northwestern University	2008	Yes
Stanford University	2008	Yes
The Ohio State University	2008	Yes
The Scripps Research Institutes	2008	No
The University of Alabama at Birmingham	2008	Yes
The University of North Carolina at Chapel Hill	2008	Yes
The University of Texas Health Science Center at San Antonio	2008	Yes
The University of Utah	2008	Yes
Tufts University	2008	No
University of Colorado at Denver	2008	Yes
Case Western Research University	2007	Yes
Emory University	2007	Yes
Johns Hopkins	2007	Yes
University of Chicago	2007	No
University of Iowa	2007	Yes
University of Michigan	2007	Yes
University of Texas Southwestern Medical Center	2007	No
University of Washington	2007	Yes
University of Wisconsin	2007	Yes
Vanderbilt University	2007	No
Washington University	2007	Yes
Weill Cornell Medical College	2007	Yes
Columbia University Health Sciences	2006	Yes
Duke University	2006	Yes
Mayo Clinic College of Medicine	2006	No
Oregon Health and Science University	2006	Yes
Rockefeller University	2006	No
University of California, Davis	2006	Yes
University of California, San Francisco	2006	Yes
University of Pennsylvania	2006	Yes
University of Pittsburgh	2006	Yes
University of Rochester	2006	Yes
University of Texas Health Science Center at Houston	2006	Yes
Yale University	2006	Yes

Ranking	Metropolitan Area	Biostatistics Degree
1	New York-Northern New Jersey-Long Island, NY-NJ-PA	The State University of New York
2	Los Angeles-Long Beach-Santa Ana, CA	UCLA
3	Chicago-Anperville-Joliet, IL-IN-WI	University of Illinois Chicago
4	Dallas-Fort Worth-Arlington, TX	University of North Texas Health Science Center at Fort Worth
5	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	University of Pennsylvania
6	Houston-Sugar Land-Baytown, TX	MD Anderson
7	Miami-Fort Lauderdale-Miami Beach, FL	University of Miami
8	Washington-Arlington-Alexandria, DC-VA-MD-WV	Georgetown University
9	Atlanta-Sandy Springs-Marietta, GA	Emory University
10	Boston-Cambridge-Quincy, MA-NH	Boston University
11	Detroit-Warren-Livonia, MI	<i>None</i>
12	San Francisco-Oakland-Fremont, CA	University of California San Francisco
13	Phoenix-Mesa-Scottsdale, AZ	Arizona State University
14	Riverside-San Bernardino-Ontario, CA	University of California Riverside
15	Seattle-Tacoma-Bellevue, WA	University of Washington
16	Minneapolis-St. Paul-Bloomington, MN-WI	University of Minnesota Twin Cities
17	San Diego-Carlsbad-San Marcos, CA	University of California San Diego
18	St. Louis, MO	St. Louis University
19	Tampa-St. Petersburg-Clearwater, FL	University of South Florida
20	Baltimore-Towson, MD	Johns Hopkins University
21	Denver-Aurora, CO	University of Colorado Health Science Center
22	Pittsburgh, PA	University of Pittsburgh
23	Portland-Vancouver-Beaverton, OR-WA	Oregon Health & Science Center
24	Cincinnati-Middletton, OH-KY-IN	<i>None</i>
25	Cleveland-Elyria-Mentor, OH	Case Western University
26	Sacramento-Arden Arcade-Roseville, CA	<i>None</i>
27	Orlando-Kissimmee, FL	<i>None</i>
28	San Antonio, TX	University of Texas Health Science Center San Antonio
29	Kansas City, MO-KS	<i>None</i>
30	Las Vegas-Paradise, NV	<i>None</i>

Comprehensive Cancer Center	Biostatistics Degree
Abramson Cancer Center	Yes
Arizona Cancer Center	Yes
The Cancer Institute of New Jersey	No
Case Comprehensive Cancer Center	Yes
Chao Family Comprehensive Cancer Center	Yes
City of Hope National Medical Center	No
Dana-Farber/Harvard Cancer Center	Yes
Duke Comprehensive Cancer Center	Yes
Fox Chase Cancer Center	Yes
Fred Hutchinson/University of Washington Cancer Consortium	Yes
H. Lee Moffitt Cancer Center and Research Institute	Yes
Herbert Irving Comprehensive Cancer Center	Yes
Holden Comprehensive Cancer Center	Yes
Jonsson Comprehensive Cancer Center	Yes
The Barbara Ann Karmanos Cancer Center	No
Lombardi Comprehensive Cancer Center	Yes
Masonic Cancer Center	Yes
Mayo Clinic Cancer Center	No
M.D. Anderson Cancer Center	Yes
Memorial Sloan-Kettering Cancer Center	No
Norris Cotton Cancer Center	No
Comprehensive Cancer Center	Yes
Rebecca and John Moores UCSD Cancer Center	Yes
Robert H. Lurie Comprehensive Cancer Center	Yes
Roswell Park Cancer Institute	No
St. Jude Children's Research Hospital	No
Sidney Kimmel Comprehensive Cancer Center	Yes
Siteman Cancer Center	Yes
UAB Comprehensive Cancer Center	Yes
UCSF Helen Diller Family Comprehensive Cancer Center	Yes
UNC Lineberger Comprehensive Cancer Center	Yes
University of Chicago Cancer Research Center	Yes
University of Colorado Cancer Center	Yes
University of Michigan Comprehensive Cancer Center	Yes
University of Pittsburgh Cancer Institute	Yes
University of Nebraska Medical Center/Eppley Cancer Center	Yes
USC/Norris Comprehensive Cancer Center	Yes
UW Paul P. Carbone Comprehensive Cancer Center	Yes
Vanderbilt-Ingram Cancer Center	No
Vermont Cancer Center	Yes
Wake Forest Comprehensive Cancer Center	Yes
Yale Cancer Center	Yes

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## APPENDIX C: SURVEY RESULTS

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## MPH Survey Results

<b>Please indicate how well you agree or disagree with the following statements:</b>						
<b>Answer Options</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Rating Average</b>	<b>Response Count</b>
A Biostatistics graduate program (MS and PhD) would be a valuable resource to the University of Kansas, Kansas residents, or the Kansas City Metro area.	79	161	23	1	1.80	264
I would have been interested in receiving a graduate degree in Biostatistics (MS and/or PhD) if it had been available at KUMC when I started my graduate work.	23	35	145	57	2.91	260
I am currently or potentially would be interested in receiving a graduate degree in Biostatistics (MS and/or PhD) if it were available at KUMC.	18	33	140	75	3.02	266
<i>answered question</i>						<b>270</b>
<i>skipped question</i>						<b>5</b>

### MPH Survey Demographics

<b>Which most accurately describes your relationship to the University of Kansas Master of Public Health Program?</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
Current student	20.2%	49
KU-MPH graduate	29.3%	71
MPH graduate (other university)	5.8%	14
Public Health employee	44.6%	108
Other (please specify)		39
	<b><i>answered question</i></b>	<b>242</b>
	<b><i>skipped question</i></b>	<b>33</b>

## Pittsburg State University Survey

*Matt,*

*I asked students in my mathematical statistics, probability and statistics, loss distributions, and financial mathematics classes. Some students are in more than one class and therefore did not participate more than once.*

*My actuarial science students are the most statistically inclined bunch. Some of them already have job offers since last summer to start in May. My feeling is if we did not have an actuarial science program, I could persuade some of them to go to Biostatistics.*

*Among the 9 masters students I mentored so far 5 are in PhD programs in statistics, one is a faculty member in a technical college in Taiwan, two are actuaries (one is a fellow and the other is getting close to be a fellow), and one is a local teacher who used to be an actuary and came home to look after his parents and their property. I have sent one student every other year to a PhD program in statistics.*

*Please see attached file. Hope this is what you wanted. Please let me know if I can help any other way to achieve your goal.*

*Ananda Jayawardhana, PhD*

*Pittsburg State University*

Actuarial Science majors	Yes	No	Total
1. Would you be interested in a Biostatistics program?	////-5	///-4	9
2. Would you be interested in PhD program in Biostatistics?	////-4	////-5	9
3. Would you be interested in a graduate degree program in Biostatistics if PSU did not have the actuarial emphasis?	/////6	///-3	9
My graduate students (Actuarial Science)			
1. Would you be interested in a Biostatistics program?		//-2	2
2. Would you be interested in PhD program in Biostatistics?		//-2	2
3. Would you be interested in a graduate degree program in Biostatistics if PSU did not have the actuarial emphasis?	/-1	/-1	2
Math majors in my classes			
1. Would you be interested in a Biostatistics program?	/-1	//-2	3
2. Would you be interested in PhD program in Biostatistics?	/-1	//-2	3

3. Would you be interested in a graduate degree program in Biostatistics if PSU did not have the actuarial emphasis?	/-1	//-2	3
Math Education majors in my class			
1. Would you be interested in a Biostatistics program?	/-1	//// //--10	11
2. Would you be interested in PhD program in Biostatistics?		//// //--11	11
3. Would you be interested in a graduate degree program in Biostatistics if PSU did not have the actuarial emphasis?		//// //--11	11

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**APPENDIX D: REQUIRED COURSE SYLLABI**

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## Biostatistics 810: Clinical Trials Spring 2011

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3  
**Instructor:** Jo A. Wick, Ph.D.  
**Office:** Robinson 5028C,  
**Phone:** (913) 588-4790  
**Fax:** (913) 588-0252  
**Email:** jwick@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course introduces issues in the design, organization, implementation, analysis, and assessment of randomized controlled clinical trials. Topics include legal and ethical issues in trial design; concepts of controls, blinding, and randomization; common trial designs; sample size requirements; data collection and management; trial conduct and management; and interim monitoring of trial results. Basic biostatistical concepts and models will be emphasized. Issues of current concern to trialists will be explored.

**Prerequisites:** By permission of instructor.

**Text:** We will follow lecture notes by the instructor. Course notes will be available to the student at the beginning of the course, with any updates provided as they are made. Texts that you may wish to consult for further reading are:

Day, S. (2007) *Dictionary for Clinical Trials* (2<sup>nd</sup> ed.), Wiley.

Piantadosi, S. (2005) *Clinical Trials: A Methodological Perspective* (2<sup>nd</sup> ed.), Wiley.

Pocock, S.J. (1991) *Clinical Trials: A Practical Approach*, Wiley.

Machin, D., Day, S., and Green, S. (2004) *Textbook of Clinical Trials*, John Wiley.

Redmond, C. and Colton, T. (2001) *Biostatistics in Clinical Trials*, Wiley.

**Course Objectives:** The overall objective of this course is to provide students with foundational knowledge of the fundamentals of clinical trials, with a focus on biostatistical methods for clinical trials. This will allow (1) students to become better readers of their clinical trial literature, (2) those who are already clinical investigators to develop better clinical research skills and better collaborations with biostatisticians, and (3) those who are not currently clinical investigators to go on to become trialists. By the end of the course, students should:

- understand the fundamental vocabulary of clinical trials methodology;
- identify different clinical trial designs;
- have an appreciation for the ethical considerations of clinical trials;
- understand the basic steps of preparing for, conducting, and analyzing a clinical trial;
- be able to develop a clinical trial research protocol;
- understand the concepts involved, in order to effectively collaborate with biostatisticians in choosing the appropriate design and statistical analyses of clinical trials;
- and be able to interpret the results of these statistical analyses.

**Course Requirements and Grading:** The course will include readings, lectures, discussion sessions, guest speakers, weekly homework assignments, student presentations, and a final project. There will be no in-class exams. Grades will be calculated as follows:

Class Participation	5 points
Presentation	20 points
Homework	50 points
Final Project	25 points
<hr/>	
Total Possible Points	100 points

Any student who has a disability that compromises his or her ability to complete the requirements of this course should contact Dr. Wick within the first week of the semester to discuss class requirements and accommodations.

**Class Participation:** Each student is expected to punctually attend and participate in all classes and assignments. Active, informed involvement in class discussions as well as punctual and regular attendance will determine the participation portion of grades. Participation is worth a total of 5 points.

**Presentation:** Each student will be required to give at least one in-class presentation on a relevant article. The date for each student presentation will be determined the first day of class. The article to be discussed must be approved by Dr. Wick and a copy of the article is to be circulated to the class at least one week prior to the class in which the presentation is scheduled. The presentation(s) is worth a total of 20 points.

**Homework:** A two- to three-page type-written summary is to be turned in for each student presentation article discussed in class. The summary is due at the beginning of class for which that article is to be discussed. All homework is to be written individually. Each summary is worth 5 points. The overall homework score is calculated by adding all homework scores, dividing by the total number possible, and multiplying by 50.

**Final Project:** A fifteen-page (approximately), 12-point font, one-inch margin, single-spaced, type-written protocol detailing a clinical trial will be due on the last day of class. A three-page summary of the background and general aims, specific objectives, and trial design are due on DATE to be approved by Dr. Wick. Teams of approximately three to four will work on this as a group. Each individual will be expected to detail their own personal effort as well as that of the other team members. The final protocol will be worth 25 points.

**Schedule of Class Topics and Readings:** All readings are to be completed by the assigned class date (except Lecture 1).

Lecture 1: *Introduction: The Rationale of Clinical Trials*

“The CONSORT Statement: Revised Recommendations for Improving the Quality of Reports of Parallel-Group Randomized Trials” by Moher et al., *Annals of Internal Medicine*, 134(8), 657-662, 2001.

“The Revised CONSORT Statement for Reporting Randomized Trials: Explanation and Elaboration” by Altman et al., *Annals of Internal Medicine*, 134(8), 663-694, 2001.

Lecture 2: *The Historical Development of Clinical Trials*

“Historical and Methodological Developments in Clinical Trials at the National Cancer Institute” by Gehan and Schneiderman, *Statistics in Medicine*, 9, 871-880, 1990.

Lecture 3: *Organization and Planning*

“The Organization of the Asthma Clinical Research Network: A Multicenter, Multiprotocol Clinical Trials Team” by Kephart et al., *Controlled Clinical Trials*, 22(6S), 119S-125S, 2001.

Lecture 4: *The Justification for Randomized Controlled Trials*

“Comparison of Evidence of Treatment Effects in Randomized and Nonrandomized Studies” by Ioannidis et al., *Journal of the American Medical Association*, 286(7), 821-830, 2001.

Lecture 5: *Methods of Randomization*

“A Sensitivity Analysis for Subverting Randomization in Controlled Clinical Trials” by Marcus, *Statistics in Medicine*, 20(4), 545-555, 2001.

Lecture 6: *Blinding and Placebos*

“Comparing Like with Like: Some Historical Milestones in the Evolution of Methods to Create Unbiased Comparison Groups in Therapeutic Experiments” by Chalmers, *International Journal of Epidemiology*, 30(5), 1156-1164, 2001.

Lecture 7: *Ethical Issues*

“The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research” by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979.

Lecture 8: *Crossover Trials*

“Empirical Evidence Bias in Infertility Research: Overestimation of Treatment Effect in Crossover Trials Using Pregnancy as the Outcome Measure” by Khan et al., *Fertility and Sterility*, 65(5), 939-945, 1996.

Lecture 9: *The Size of a Clinical Trial*

“Graphical Search for Two-Stage Designs for Phase II Clinical Trials” by Jung et al., *Controlled Clinical Trials*, 22(4), 367-372, 2001.

Lecture 10: *Monitoring Trial Progress*

“Should Data and Safety Monitoring Boards Share Confidential Interim Data?” by Dixon et al., *Controlled Clinical Trials*, 21(1), 1-6, 2001.

“Relationships Between Data Monitoring Committees” by DeMets, *Controlled Clinical Trials*, 21(1), 54-55, 2001.

Lecture 11: *Forms and Data Management*

“Data Management Procedures in the Asthma Clinical Research Network” by Pogash et al., *Controlled Clinical Trials*, 22(6S), 168S-180S, 2001.

Lecture 12: *Protocol Deviations*

“Differences in Efficacy Between Intention-To-Treat and Per-Protocol Analyses for Patients with Psoriasis Vulgaris and Atopic Dermatitis: Clinical and Pharmacoeconomic Implications” by Schiffner et al., *British Journal of Dermatology*, 144, 1154-1160, 2001.

Lecture 13: *Basic Principles of Statistical Analysis*

“Random Research” by Moye, *Circulation*, 103, 3150-3153, 2001.

Lecture 14: *Further Aspects of Data Analysis*

“Subgroup Analysis and Other (Mis)uses of Baseline Data in Clinical Trials” by Assmann et al., *Lancet*, 355(9209), 1064-1069, 2000.

Lecture 15: *Publication and Interpretation of Findings*

“Writing Manuscripts Describing Clinical Trials: A Guide for Pharmacotherapeutic Researchers” by Pakes, *The Annals of Pharmacotherapy*, 35, 770-779, 2001.

**Biostatistics 820: Statistical Computing/SAS Base L1**  
**Fall 2010**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3

**Instructor:** John Keighley, Ph.D.  
**Office:** Robinson 5028F  
**Phone:** (913) 588-7391  
**Fax:** (913) 588-0252  
**Email:** jkeighle@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This is a graduate level course preparing a student for the SAS base programming certification exam. We will cover the topics required for a student to pass the SAS base programming certification exam given by SAS. To this end, topics we will study will include, referencing files and setting options, creating list reports, understanding data step processing, creating and managing variables, reading and combining SAS data sets, do loops, arrays, and reading raw data from files. After the completion of the course the student should be able to create SAS programs to read data from external files, manipulate the data into variables to be used in an analysis, generate basic reports showing the results.

**Prerequisites:** By permission of instructor.

**Text:** *SAS Certification Prep Guide: Base Programming for SAS 9*, SAS, ISBN – 978-1-59047-922-3, Published by SAS Publishing.

**Course Objectives:** The course is designed to allow students to obtain SAS base programming level 1 certification. The primary objectives are:

- To develop the ability to program using SAS;
- To give the student the knowledge needed to achieve a basic competency in SAS programming;
- To demonstrate their competency by having the knowledge required to pass the SAS base programming certification exam.

**Grading Scale:**  
Homework: 50%  
Midterm: 20%  
Final Exam: 30%

## Biostatistics 825: Nonparametric Methods Spring 2011

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3

**Instructor:** Jianghua (Wendy) He, Ph.D.  
**Office:** Robinson 5028M  
**Phone:** (913) 588-2985  
**Fax:** (913) 588-0252  
**Email:** jhe@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course is an introduction to nonparametric statistical methods for small sample or data that do not satisfy the normality assumption. We will cover most of the popular nonparametric methods used for different scenarios, such as a single sample, two independent or related samples, three or more independent or related samples, goodness-of-fit tests, rank correlation and other measures of association, simple linear regression analysis and nonparametric curve estimation.

**Prerequisites:** By permission of instructor.

**Text:** *Applied Nonparametric Statistics*, 2<sup>th</sup> Edition, 1996, Wayne W. Daniel, Duxbury. For further reference see *Applied Nonparametric Statistical Methods* (4<sup>th</sup> edition, 2006) by Peter Sprent and Nigel C. Smeeton.

**Course Objectives:** The course is designed to provide students with theories and applications of nonparametric statistics. The primary objectives are:

- 1) to develop an understanding of the theoretic foundation of nonparametric statistics.
- 2) to provide students with the tools to conduct nonparametric statistical analyses needed in clinical research and public health.
- 3) to demonstrate the role of statistical reasoning in medical research and help students differentiate nonparametric statistics from parametric statistics

SAS will be used to aid in the comprehension and use of the statistical procedures discussed in this class. Periodically, time permitting; papers from the literature will be supplied in class to illustrate the concepts.

### Grading

Homework: 35%  
Midterm: 30%  
Final Project: 35%

### Course Outline

#### *Main*

- Review of basic concepts (Chapter 1)
- Procedures that utilize data from
  - a single sample (Chapter 2)
  - two independent samples (Chapter 3)
  - two related samples (Chapter 4)
  - three or more independent samples (Chapter 6)
  - three or more related samples (Chapter 7)

Chi-square tests of independence and homogeneity (Chapter 5)  
Goodness-of-fit tests (Chapter 8)  
Rank correlation and other measures of association (Chapter 9)  
Linear Regression Analysis (Chapter 10)

**Biostatistics 830: Experimental Design  
Spring 2011**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3  
**Instructor:** Jo A. Wick, Ph.D.  
**Office:** Robinson 5028C  
**Phone:** (913) 588-4790  
**Fax:** (913) 588-0252  
**Email:** jwick@kumc.edu  
**Office Hours:** By appointment

**Course Description:** The emphasis of this course is on learning the basics of experimental design and the appropriate application and interpretation of statistical analysis of variance techniques.

**Prerequisites:** By permission of instructor; BIOS 820 recommended.

**Course Objectives:** Students will learn the art and science of obtaining, analyzing, and interpreting data with continuous outcomes and categorical covariates. Topics include two-sample t-tests, ANOVAs with fixed and/or random factors, multiple comparison procedures, diagnostics, sample size calculations, and some non-parametric approaches, all within the context of specific types of experimental designs. Computing is done in this course using SAS and R.

**Text:** The required text for this course is Dean and Voss (1999). *Design and Analysis of Experiments*. New York, NY: Springer. We will also follow lecture notes by the instructor. Course notes will be available to the student at the beginning of the course, with any updates provided as they are made. Texts that you may wish to consult for further reading are:

Kuehl (2000) *Design of Experiments: Statistical Principles of Research Design and Analysis*, Second Edition.

Oehlert (2000) *A First Course in Design and Analysis of Experiments*.

Yandell (1997) *Practical Data Analysis for Designed Experiments*.

Neter, Kutner, Nachtsheim, and Wasserman (1996) *Applied Linear Statistical Models* (3<sup>rd</sup> ed.). For review of matrix algebra and regression in matrix notation, see Chapter 5. ANOVA and experimental design are covered in Chapters 16-31.

Hocking (1996) *Methods and Applications of Linear Models*.

Box, Hunter, and Hunter (1978) *Statistics for Experimenters*.

**Course Requirements and Grading:** Class meetings will be a mixture of lecture and discussion. Students are expected to attend class, participate in class discussions, and complete all assigned homework, projects, and exams. Students are also expected to complete assigned reading from the required materials. Lectures and the reading are meant to complement each other, not to repeat each other. Please complete the assigned reading from the required text BEFORE coming to class.

Homework: 50%

Midterm Exam: 33.3%

Final project: 16.7%

A letter grade will be determined from the percentage of (300 possible) points each student receives as follows:

A 91-100%    B 81-90%    C 71-80%    D 61-70%    F 60% and below

**Homework:** There will be six homework assignments during the semester. Students are encouraged to work together in computing and discussing the problems. However, each student is expected to independently write up the submitted assignment using her or his own computing and give explanations in her or his own words. For assignments involving computing, the student should attach only relevant computer output to what is turned in. Some assignments may also include reading and writing about a related journal article.

Students will get two weeks to work on each homework assignment. The homework will be graded on a scale of 0 to 25 points, for a maximum of 150 points possible over the semester. Late homework will lose four points per day, unless arrangements for an extension have been made with the instructor PRIOR to the due date.

**Exams:** There will be two in class exams. Each exam is worth 50 points. A hand calculator with the  $\ln$  and  $e$  functions will be needed.

**Final Project:** There will be a final project towards the end of the semester instead of a final exam. The project is worth 50 points. The project could take one of two structures:

(1) Obtain a data set for analysis; using relevant background information, determine several scientific questions to be answered by the data. Carry out a full analysis which addresses these scientific questions using any appropriate modeling strategies covered in class and discuss the results. A written report is required.

(2) Carry out a simulation to demonstrate or explore a concept we covered during the course, or an extension of the concepts we covered. A written report is required.

Each student must write a <1 page project proposal (by e-mail is fine) and get approval from the instructor. We will have a few data sets available for option (1) and a few ideas available for option (2) if you do not already have something you would like to work on.

## Course Outline

### Introduction

- Course administration

- Course motivation

### Basic Principles of Experimental Design (Chapter 1)

- Experimental units and experimental factors

- Sources of errors

- Replication and randomization

- Principles of analysis

### Completely Randomized Designs: One Factor (Chapters 2-5)

- Review of two-sample t-tests

- Review of Type I and II error, power, and sample size calculations

- One-way ANOVA to compare means

- The ANOVA-regression connection

- Contrasts and multiple comparisons

- Diagnostics and remedial measures

- Sample size calculations

- One-way ANOVA to compare variances

### Completely Randomized Designs: Factorials (Chapter 6)

- Two-way ANOVA for crossed factors

- Interactions and contrasts

- Sample size calculations

- Three-way and higher ANOVAs for crossed factors

- Unbalanced ANOVAs

- Completely randomized designs without replication
- Variations on Factorial Designs (Chapter 7)
  - Nested and crossed factor designs
  - Fully nested designs
- Randomized Block Designs (Chapters 8, 17)
  - Two-way and higher ANOVAs with blocking factors
  - ANCOVA as an alternative to blocking
- Other Designs (Chapters 14-16)
  - Split plot designs
  - Repeated measures designs
  - Crossover designs

Time permitting, we will also cover Incomplete Block Designs (Chapter 9).

**Biostatistics 835: Categorical Data Analysis**  
**Fall 2010**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3

**Instructor:** Jonathan D. Mahnken, Ph.D.  
**Office:** 5028N Robinson  
**Phone:** (913) 588-2696  
**Fax:** (913) 588-0252  
**Email:** jmahnken@kumc.edu  
**Office Hours:** By appointment

**Course Description:**

This course provides an understanding of both the mathematical theory and practical applications for the analysis of data for response measures that are ordinal or nominal categorical variables. This includes univariate analysis, contingency tables, and generalized linear models for categorical response measures. Regression techniques covered for categorical response variables, such as logistic regression and Poisson regression methods, will include those with categorical and/or continuous explanatory variables, both with and without interaction effects.

**Prerequisites:** By permission of instructor; BIOS 820 and 840 are recommended.

**Text:** *Categorical Data Analysis*, 2<sup>nd</sup> ed., by A. Agresti (2002), published by John Wiley & Sons.

**Course Objectives:** Through lectures, class discussion, computer analysis and homework, the class will provide students an opportunity to: conduct statistical analyses for categorical responses that appear in research literature; understand the mathematics behind these methods; interpret the results; and test the assumptions that justify these methods.

**Assignments:** Selected problems.

**Grading Scale:**

Homework: 45%  
Mid-Term Exam: 25%  
Final Exam: 30%

90-100% = A; 80%-89% = B; 70%-79% = C; 0%-69% = F

**Course Outline:**

- I. Categorical Data
  - a. Distributions
  - b. Univariate statistical inference
- II. Two-way Contingency Tables
  - a. Describing contingency tables
  - b. Statistical inference
- III. Statistical Inference for Multi-way Contingency Tables
- IV. Generalized Linear Models

- a. Statistical theory
- b. Statistical inference
- c. Numerical methods
- V. Dichotomous Logistic Regression
  - a. Continuous explanatory variables
  - b. Categorical explanatory variables
  - c. Multivariable logistic regression
  - d. Model selection
  - e. Regression diagnostics
- VI. Polychotomous Logistic Regression
  - a. Nominal response variables
  - b. Ordinal response variables
- VII. Matched Data
  - a. Dependent proportions
  - b. Conditional logistic regression
- VIII. Repeated Measures
  - a. Generalized estimating equations
  - b. Generalized linear mixed models

**BIOS 840: Linear Regression**  
**Fall 2010**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3

**Instructor:** Jianghua (Wendy) He, Ph.D.  
**Office:** Robinson 5028M  
**Phone:** (913) 588-2985  
**Fax:** (913) 588-0252  
**Email:** jhe@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course is an introduction to model building using regression techniques. We will cover many of the popular topics in Linear Regression including: simple linear regression, multiple regression, model selection and validation, diagnostics and remedial measures. Throughout the semester, we will be utilizing primarily SAS.

**Prerequisites:** By permission of instructor.

**Required Text:** *Applied Linear Regression Models*, 4<sup>th</sup> Edition, Kutner, Nachtsheim, and Neter, New York: McGraw Hill. Data sets from the text can be accessed at the following website as well as solutions to selected exercises <http://apps.csom.umn.edu/nachtsheim/index.html>.

**Course Objectives:** The course is designed to allow students to obtain advanced training in the principles and practice of regression analysis. The primary objectives are:

- To develop an understanding of the role of regression in clinical research and public health practice;
- To provide students with the tools to conduct routine and some advanced statistical analyses needed in clinical research and public health;
- Develop sufficient understanding of the theories and applications of regression so that students are prepared for more advanced topics.

SAS will be used to aid in the comprehension and use of the statistical procedures discussed in this class. Periodically, time permitting; papers from the literature will be supplied in class to illustrate the concepts.

**Course Objectives:** After the completion of the course the student should be able to understand the full range of linear regression techniques. Furthermore, they should be able to apply the principles to health-related problems and interpret results from related methods in the literature.

**Grading:**

Homework: 35%  
Midterm: 20%  
Project: 25%  
Final Exam: 20%

**Topics:**

*Main*  
Review of basic concepts (Chapters 1-2)  
Diagnostics for simple linear regression (Chapter 3)  
Simultaneous Inferences (Chapter 4)  
Matrix Approach to Simple Linear Regression (Chapter 5)  
Multiple Regression I (Chapter 6)

Multiple Regression II (Chapter 7)/Review  
Quantitative and Qualitative Predictors (Chapter 8)  
Model Selection and Validation (Chapter 9)  
Diagnostics (i.e. Identifying Outliers and Multicollinearity) (Chapter 10)  
Remedial Measures (Chapter 11)

*Optional*

Logistic regression, Poisson Regression and GLM (Chapter 14)  
Autocorrelation in Time Series Data (Chapt12)  
Intro to Nonlinear Regression and Neural Networks (Chapter 13)

**SAS online manual:** Can be found at <http://v8doc.sas.com/sashtml/> → SAS/STAT → SAS/STAT User's Guide → The Reg Procedure → find what you want.

**Biostatistics 845: Survival Analysis**  
**Spring 2011**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3

**Instructor:** Jonathan D. Mahnken, Ph.D.  
**Office:** Robinson 5028N  
**Phone:** (913) 588-2696  
**Fax:** (913) 588-0252  
**Email:** jmahnken@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course provides an understanding of both the mathematical theory and practical applications for the analysis of time to event data with censoring. This includes univariate analysis, group comparisons, and regression techniques for survival analysis. Parametric and semi-parametric regression techniques covered will include those with categorical and/or continuous explanatory variables, both with and without interaction effects.

**Prerequisites:** BIOS 820, 835, 840, and 871, or by permission of instructor;

**Text:** *Survival Analysis*, 2<sup>nd</sup> ed., by J. P. Klein and M. L. Moeschberger (2003), published by Springer.

**Course Goals and Objectives:** Through lectures, class discussion, computer analysis and homework, the class will provide students an opportunity to: conduct statistical analyses for time to event data with censoring that appear in research literature; understand the mathematics behind these methods; interpret the results; and test the assumptions that justify these methods.

**Assignments:** Selected problems.

**Grading Scale:**

Homework: 45%  
Mid-Term Exam: 25%  
Final Exam: 30%

90-100% = A; 80%-89% = B; 70%-79% = C; 0%-69% = F

**Course Outline:**

- IX. Time to Event Data
- X. Basic Quantiles and Models
- XI. Censoring and Truncation
- XII. Nonparametric Estimation for Right-Censored Data
- XIII. Nonparametric Estimation for Left-Truncated Data
- XIV. Estimation for Other Sampling Schemes
- XV. Life Tables
- XVI. Univariate Estimation
- XVII. Hypothesis Testing and Inference
- XVIII. Cox Proportional Hazards Regression
- XIX. Additive Hazards Regression Models
- XX. Regression Diagnostics
- XXI. Parametric Regression
- XXII. Multivariate Survival Analysis

**Biostatistics 871: Mathematical Statistics I**  
**Fall 2010**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3  
**Instructor:** Byron Gajewski, Ph.D.  
**Office:** Robinson 5028H  
**Phone:** (913) 588-1603  
**Fax:** (913) 588-0252  
**Email:** bgajewski@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course introduces the fundamentals of probability theory, random variables, distribution and density functions, expectations, transformations of random variables, moment generating functions, convergence concepts, sampling distributions, and order statistics.

**Prerequisites:** By permission of instructor.

**Text:** The required text is

Casella, G. and Berger, R. (2002) *Statistical Inference* (2<sup>nd</sup> ed.), Duxbury.

We will follow lecture notes by the instructor. Course notes will be available to the student at the beginning of the course, with any updates provided as they are made. Texts that you may wish to consult for further reading are:

Hogg, R., McKean, J., and Craig, A. (2004) *Introduction to Mathematical Statistics* (6<sup>th</sup> ed.), Prentice Hall.

**Course Objectives:** The overall objective of this course is to develop the basic concepts and tools of probability and distribution theory that will provide a foundation for additional study in statistics or for applications in applied fields. By the end of the course, students should

- have a fundamental grasp of the mathematics behind the most common statistical methods required to read and write research papers in the functional areas of statistics and biostatistics.
- gain a foundational understanding of statistical methods,
- and acquire the ability to critically appraise why a theory makes a method appropriate or inappropriate.

**Course Requirements and Grading:** The course will include readings, lectures, discussion sessions, guest speakers, weekly homework assignments, student presentations, and a final project. There will be no in-class exams. Grades will be calculated as follows:

Midterm Exam	25 points
Presentation	20 points
Homework	30 points
Final Exam	25 points
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Total Possible Points	100 points

A letter grade will be determined from the percentage of (300 possible) points each student receives as follows:

A 91-100%    B 81-90%    C 71-80%    D 61-70%    F 60% and below

Any student who has a disability that compromises his or her ability to complete the requirements of this course should contact Dr. Wick within the first week of the semester to discuss class requirements and accommodations.

**Class Participation:** Active, informed involvement in class discussions as well as punctual and regular attendance is expected of each student.

**Exams:** There will be one midterm and one final examination, each including an in-class and a take-home portion. The exam scores are determined by multiplying the score percentage by 25.

**Presentation:** Each student will be required to give at least one in-class presentation on a relevant topic that interests the student but is not addressed formally in lecture. The date for each student presentation will be determined the first day of class. The topic to be discussed must be approved by Dr. Wick and a write-up accompanying the presentation is to be circulated to the class at least one class period prior to the class in which the presentation is scheduled. The presentation(s) is worth a total of 20 points.

**Homework:** Selected theoretical derivations and applied computational problems will be assigned. Group work is encouraged; copying with no attempt at understanding the assigned problem(s) is not. The homework is due at the beginning of class for which it was assigned. The overall homework score is calculated by averaging all homework scores and multiplying the percentage by 30.

**Schedule of Class Topics and Readings:** All readings are to be completed by the assigned class date.

#### Probability Theory (Chapter 1)

Topics: Set theory, Probability theory, Conditional probability and independence, Random variables, Distribution functions, Density and mass functions

#### Transformations and Expectations (Chapter 2)

Topics: Distributions of functions of a random variable, Expected values, Moments and moment generating functions

#### Common Families of Distributions (Chapter 3)

Topics: Discrete and continuous distributions, Exponential families, Location and scale families, Inequalities and identities

#### Multiple Random Variables (Chapter 4)

Topics: Joint and marginal distributions, conditional distributions and independence, Bivariate transformations, Hierarchical models and mixture distributions, Covariance and correlation, Multivariate distributions, Inequalities

#### Properties of a Random Sample (Chapter 5)

Topics: Sums of random variables, Sampling from the normal distribution, Order statistics, Convergence concepts, Generating a random sample

#### Principles of Data Reduction (Chapter 6)

Topics: The Sufficiency Principle, The Likelihood Principle, The Equivariance Principle

**Biostatistics 872: Mathematical Statistics II**  
**Spring 2011**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3  
**Instructor:** Byron J. Gajewski, Ph.D.  
**Office:** Robinson 5028H  
**Phone:** (913) 588-1603  
**Fax:** (913) 588-0252  
**Email:** bgajewski@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course introduces the fundamentals of statistical estimation and hypothesis testing, including point and interval estimation, likelihood and sufficiency principles, properties of estimators, loss functions, Bayesian analysis, and asymptotic convergence.

**Prerequisites:** BIOS 871 or by permission of instructor.

**Text:** The required text is

Casella, G. and Berger, R. (2002) *Statistical Inference* (2<sup>nd</sup> ed.), Duxbury.

We will follow lecture notes by the instructor. Course notes will be available to the student at the beginning of the course, with any updates provided as they are made. Texts that you may wish to consult for further reading are:

Hogg, R., McKean, J., and Craig, A. (2004) *Introduction to Mathematical Statistics* (6<sup>th</sup> ed.), Prentice Hall.

**Course Objectives:** The overall objective of this course is to develop the basic concepts and tools of probability and distribution theory that will provide a foundation for additional study in statistics or for applications in applied fields. By the end of the course, students should

- have a fundamental grasp of the mathematics behind the most common statistical methods required to read and write research papers in the functional areas of statistics and biostatistics.
- gain a foundational understanding of statistical methods,
- and acquire the ability to critically appraise why a theory makes a method appropriate or inappropriate.

**Course Requirements and Grading:** The course will include readings, lectures, discussion sessions, guest speakers, weekly homework assignments, student presentations, and a final project. There will be no in-class exams. Grades will be calculated as follows:

Midterm Exam	25 points
Presentation	20 points
Homework	30 points
Final Exam	25 points
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Total Possible Points	100 points

A letter grade will be determined from the percentage of (300 possible) points each student receives as follows:

A 91-100%    B 81-90%    C 71-80%    D 61-70%    F 60% and below

Any student who has a disability that compromises his or her ability to complete the requirements of this course should contact Dr. Wick within the first week of the semester to discuss class requirements and accommodations.

**Class Participation:** Active, informed involvement in class discussions as well as punctual and regular attendance is expected of each student.

**Exams:** There will be one midterm and one final examination, each including an in-class and a take-home portion. The exam scores are determined by multiplying the score percentage by 25.

**Presentation:** Each student will be required to give at least one in-class presentation on a relevant topic that interests the student but is not addressed formally in lecture. The date for each student presentation will be determined the first day of class. The topic to be discussed must be approved by Dr. Wick and a write-up accompanying the presentation is to be circulated to the class at least one class period prior to the class in which the presentation is scheduled. The presentation(s) is worth a total of 20 points.

**Homework:** Selected theoretical derivations and applied computational problems will be assigned. Group work is encouraged; copying with no attempt at understanding the assigned problem(s) is not. The homework is due at the beginning of class for which it was assigned. The overall homework score is calculated by averaging all homework scores and multiplying the percentage by 30.

**Schedule of Class Topics and Readings:** All readings are to be completed by the assigned class date.

Point Estimation (Chapter 7)

Topics: Methods of finding estimators, Methods of evaluating estimators

Hypothesis Testing (Chapter 8)

Topics: Methods of finding tests, Methods of evaluating tests

Interval Estimation (Chapter 9)

Topics: Methods of finding interval estimators, Methods of evaluating interval estimators

Asymptotic Evaluations (Chapter 10)

Topics: Point estimation, Robustness, Hypothesis testing, Interval estimation

Analysis of Variance and Regression (Chapter 11)

Topics: Oneway analysis of variance, Simple linear regression

Regression Models (Chapter 12)

Topics: Regression with errors in variables, Logistic regression, Robust regression

**Biostatistics 880: Bayesian Statistics**  
**Spring 2012**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3  
**Instructor:** Jo A. Wick, Ph.D.  
**Office:** Robinson 5028C  
**Phone:** (913) 588-4790  
**Fax:** (913) 588-0252  
**Email:** jwick@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course introduces Bayesian theory and methods for data analysis. The course includes an overview of the Bayesian approach to statistical inference, performance of Bayesian procedures, Bayesian computational issues, model criticism, and model selection. Case studies from a variety of fields are incorporated into the course. Implementation of models using Markov chain Monte Carlo methods is emphasized.

**Prerequisites:** BIOS 871 and 872 or by permission of instructor; BIOS 820 recommended.

**Text:** Required texts include

Gelman, A., Carlin, J., Stern, H., and Rubin, D.B. (2003) *Bayesian Data Analysis* (2<sup>nd</sup> ed.), Chapman & Hall/CRC.

Albert, J. (2008) *Bayesian Computation with R*, Springer-Verlag.

We will also follow lecture notes by the instructor. Course notes will be available to the student at the beginning of the course, with any updates provided as they are made. Texts that you may wish to consult for further reading are:

Lee, P. (2004) *Bayesian Statistics: An Introduction* (3<sup>rd</sup> ed.), Hodder Arnold.

Robert, C. (2001) *The Bayesian Choice: From Decision-Theoretic Foundations to Computational Implementation* (2<sup>nd</sup> ed.), Springer.

Carlin, J. and Louis, T. (2000) *Bayes and Empirical Bayes Methods for Data Analysis* (2<sup>nd</sup> ed.), Chapman & Hall/CRC.

Spiegelhalter, D.J., Abrams, K., and Myles, J. (2004) *Bayesian Approaches to Clinical Trials and Health-Care Evaluation*, Wiley.

**Course Objectives:** The overall objective of this course is to provide students with foundational knowledge of the fundamentals of Bayesian inference and data analysis, with a focus on biostatistical methods for clinical trials. By the end of the course, students should:

- understand the fundamental vocabulary of the Bayesian approach to statistical inference;
- understand the framework of Bayesian modeling and how it differs from the frequentist approach;
- understand the computational issues surrounding Bayesian methods,
- be able to correctly interpret the results of a Bayesian analysis,
- perform model criticism and model selection from a Bayesian point of view,
- and write and implement a Bayesian analysis and simulation in the statistical packages R and WinBUGS.

**Course Requirements and Grading:** The course will include readings, lectures, discussion sessions, homework assignments, student presentations, exams, and a final project. Grades will be calculated as follows:

Midterm Exam	20 points
Presentation	20 points
Homework	20 points
Final Project	20 points
<u>Final Exam</u>	<u>20 points</u>
Total Possible Points	100 points

A letter grade will be determined from the percentage of (300 possible) points each student receives as follows:

A 91-100%    B 81-90%    C 71-80%    D 61-70%    F 60% and below

Any student who has a disability that compromises his or her ability to complete the requirements of this course should contact Dr. Wick within the first week of the semester to discuss class requirements and accommodations.

**Class Participation:** Active, informed involvement in class discussions as well as punctual and regular attendance is expected of each student.

**Exams:** There will be one midterm and one final examination, each including an in-class portion and a take-home computational problem. The exam scores are determined by multiplying the score percentage by 20.

**Presentation:** Each student will be required to give at least one in-class presentation on a relevant topic that interests the student but is not addressed formally in lecture. The date for each student presentation will be determined the first day of class. The topic to be discussed must be approved by Dr. Wick and a write-up accompanying the presentation is to be circulated to the class at least one class period prior to the class in which the presentation is scheduled. The presentation(s) is worth a total of 20 points.

**Homework:** Selected theoretical derivations and applied computational problems will be assigned. Group work is encouraged; copying with no attempt at understanding the assigned problem(s) is not. The homework is due at the beginning of class for which it was assigned. The overall homework score is calculated by averaging all homework scores and multiplying the percentage by 20. The website accompanying the required text by Albert and containing the Bayes package for R “LearnBayes” can be found at <http://bayes.bgsu.edu/bcwr/>.

**Final Project:** Will involve a selection of computation problems, to be discussed.

**Schedule of Class Topics and Readings:** All readings are to be completed by the assigned class date.

Fundamentals of Bayesian Inference (Chapters 1 – 3)

    Background (Chapter 1)

    Single-Parameter Models (Chapter 2)

Introduction to Multiparameter Models (Chapter 3)

    Fundamentals of Bayesian Data Analysis

    Hierarchical Models (Chapter 5)

    Model Checking and Improvement (Chapter 6)

    Modeling Accounting for Data Collection (Chapter 7)

    Connections and Challenges and General Advice (Chapters 8 – 9)

Regression Models (Chapters 14 – 15)

    Introduction to Regression Models (Chapter 14)

    Hierarchical Linear Models (Chapter 15)

Specific Models and Problems (Chapters 21 – 22)

Models for Missing Data (Chapter 21)

Decision Analysis (Chapter 22)

Advanced Computation (Chapters 10 – 11)

Overview of Computation

Posterior Simulation

**Biostatistics 890: Linear Models**  
**Fall 2011**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3  
**Instructor:** Jo A. Wick, Ph.D.  
**Office:** Robinson 5028C  
**Phone:** (913) 588-4790  
**Fax:** (913) 588-0252  
**Email:** jwick@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course introduces the theory and methods of linear models for data analysis. The course includes the theory of general linear models including regression models, experimental design models, and variance component models. Least squares estimation, the Gauss-Markov theorem, and less than full rank hypotheses will be covered.

**Prerequisites:** BIOS 871 and 872 or by permission of instructor; BIOS 820 recommended.

**Text:** Required text is

Rencher, A. (2000) *Linear Models in Statistics*, Wiley.

We will also follow lecture notes by the instructor. Course notes will be available to the student at the beginning of the course, with any updates provided as they are made. Texts that you may wish to consult for further reading are:

Faraway, J. (2004) *Linear Models with R*, Chapman & Hall.

Kutner, M., Nachtsheim, C., Neter, J., and Li, W. (2004) *Applied Linear Statistical Models* (5<sup>th</sup> ed.), McGraw-Hill/Irwin.

Searle, S. (1971) *Linear Models*, John Wiley & Sons.

Scheffe, H. (1999) *The Analysis of Variance*, Wiley-Interscience.

**Course Objectives:** The overall objective of this course is to provide students with foundational knowledge of the fundamentals of linear models and data analysis, with a focus on biostatistical methods for clinical trials. The goal is to provide theoretical development of full rank linear statistical models, least squares and maximum likelihood estimation, interval estimation, hypothesis testing, model diagnostics, introduction to less than full rank models, and multiple comparison procedures.

**Course Requirements and Grading:** The course will include lectures, discussion sessions, homework assignments, student presentations, and three exams. Grades will be calculated as follows:

Midterm Exam I	20 points
Midterm Exam II	20 points
Homework	20 points
Presentation	20 points
Final Exam	20 points
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Total Possible Points	100 points

A letter grade will be determined from the percentage of points each student receives as follows:

A 91-100%   B 81-90%   C 71-80%   D 61-70%   F 60% and below

Any student who has a disability that compromises his or her ability to complete the requirements of this course should contact Dr. Wick within the first week of the semester to discuss class requirements and accommodations.

**Class Participation:** Active, informed involvement in class discussions as well as punctual and regular attendance is expected of each student.

**Exams:** There will be two midterm examinations and one final examination, each including an in-class portion and a take-home computational problem. The exam scores are determined by multiplying the score percentage by 20.

**Presentation:** Each student will be required to give at least one in-class presentation on a relevant topic that interests the student but is not addressed formally in lecture. The date for each student presentation will be determined the first day of class. The topic to be discussed must be approved by Dr. Wick and a write-up accompanying the presentation is to be circulated to the class at least one class period prior to the class in which the presentation is scheduled. The presentation(s) is worth a total of 20 points.

**Homework:** Selected theoretical derivations and applied computational problems will be assigned. Group work is encouraged; copying with no attempt at understanding the assigned problem(s) is not. The homework is due at the beginning of class for which it was assigned. The overall homework score is calculated by averaging all homework scores and multiplying the percentage by 20. Computation in this class will be done in both SAS and R.

**Final Project:** Will involve a selection of computation problems, to be discussed.

**Schedule of Class Topics and Readings:** All readings are to be completed by the assigned class date.

Introduction (Chapter 1)

Topics: Simple and multiple linear regression models, analysis of variance models

Matrix Algebra (Chapter 2)

Topics: Matrix and vector notation and operations, rank, positive definite matrices, generalized inverses, determinants, orthogonal vectors and matrices, trace, eigenvalues and eigenvectors, idempotent matrices

Random Vectors and Matrices (Chapter 3)

Topics: Mean vectors, covariance matrices, correlation matrices

Multivariate Normal Distribution (Chapter 4)

Topics: Univariate and multivariate normal density functions, moment-generating functions, partial correlation

Distribution of Quadratic Forms (Chapter 5)

Topics: Mean and variance of quadratic forms, noncentral chi-square distribution, noncentral  $F$ - and  $t$ -distributions, distributions of quadratic forms, independence of linear and quadratic forms

Simple Linear Regression (Chapter 6)

Topics: Estimation, hypothesis testing, confidence intervals, coefficient of determination

Multiple Regression (Chapters 7 – 10)

Topics: estimation, tests of hypotheses, confidence intervals, model validation and diagnostics, random  $x$ 's

Analysis of Variance Models (Chapters 11 – 14)

Topics: Non-full-rank models, estimation, reparameterization, hypothesis testing, full and reduced models, estimable functions, orthogonality, one-way balanced anova models, two-way balanced anova models, unbalanced anova models

#### Analysis of Covariance (Chapter 15)

Topics: Estimation and testing, one- and two-way models with one covariate, one-way model with multiple covariates, unbalanced models

#### Random Effects Models and Mixed Effects Models (Chapter 16)

Topics: Estimation and prediction, best linear unbiased estimator and best linear unbiased predictor, estimation of variance components, hypothesis testing

#### Other Models (Chapter 17)

Topics: Nonlinear, logistic, loglinear, poisson, and generalized linear regression models.

**Biostatistics 898: Collaborative Research Experience  
Spring 2011**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3  
**Instructor:** Varies  
**Office:** Robinson 5028  
**Phone:** (913) 588-4703  
**Fax:** (913) 588-0252  
**Email:** biostatistics@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course provides students with experience in collaborative research under the supervision of an experienced researcher. The student will spend one semester working under an investigator or faculty member, making independent contributions to a research project.

**Prerequisites:** BIOS 820, 830, 835, 840, 871, 872, and 890 or by permission of instructor.

**Text:** None.

**Course Objectives:** The overall objective of this course is to provide students with a collaborative research experience involving a relevant study assigned to a member of the Biostatistics faculty or worked on by an outside source.

**Course Requirements and Grading:** The course will include readings, lectures, discussion sessions, homework assignments, student presentations, exams, and a final project. Grades will be calculated as follows:

Participation	40 points
Oral Presentation	30 points
Written Defense	30 points
<hr/>	
Total Possible Points	100 points

A letter grade will be determined from the percentage of (300 possible) points each student receives as follows:

A 91-100%    B 81-90%    C 71-80%    D 61-70%    F 60% and below

Any student who has a disability that compromises his or her ability to complete the requirements of this course should contact the course instructor within the first week of the semester to discuss class requirements and accommodations.

**Class Participation:** The advisor or statistician assigned to the project will meet with the collaborative investigators to determine the participation portion of the student's grade. The student is expected to spend approximately 120 hours over the course of a semester in active collaborative research on a project assigned to them by the supervisor.

**Oral Presentation:** The presentation is considered credit for the Masters Oral Examination and consists of an oral defense of the research performed during this course, as well as part of the required assessment of the course. The Oral Examination is to be presented publicly to a Masters Examination Committee consisting of a minimum of three faculty members and the Chair of the Department of Biostatistics, and at least one other member from the Graduate faculty. The examination has three purposes: to assess the student's oral presentation skills and grasp of Biostatistical terminology, to verify the completion of the research component requirement (in conjunction with the Written Defense), and to determine whether the student should be awarded the MS degree. If the Oral Examination is failed, subject to the faculty approval a second examination may be taken no sooner than one year later. The

faculty can recommend that the student leave the program following the spring semester in which the examination is taken. After two failures, no further examination is permitted.

**Written Defense.** The Written Defense consists of a thesis containing the research performed during BIOS 898: Collaborative Research Experience, and is given as part of the required assessment of the course. The Written Examination is to be presented to a Masters Examination Committee consisting of a minimum of three faculty members and the Chair of the Department of Biostatistics, and at least one other member from the Graduate faculty. The examination has three purposes: to assess the student's scientific writing style and grasp of Biostatistical terminology, to verify the completion of the research component requirement (in conjunction with the Oral Examination), and to determine whether the student should be awarded the MS degree. If the Written Defense is failed, subject to faculty approval a second examination may be taken no sooner than 12 months later. The faculty can recommend that the student leave the program following the spring semester in which the examination is taken. After two failures, no further examination is permitted.

**Biostatistics 910: Generalized Linear Models  
Spring 2011**

**Location:** TBD  
**Time:** TBD  
**Credit Hours:** 3

**Instructor:** Byron J. Gajewski, Ph.D.  
**Office:** Robinson 5028H  
**Phone:** (913) 588-1603  
**Fax:** (913) 588-0252  
**Email:** bgajewski@kumc.edu  
**Office Hours:** By appointment

**Course Description:** This course *Generalized Linear Models (GLM)* is designed for both the applied and theoretical statistician. In this course we will emphasize the theoretical foundations as well as the algorithms used in practice so that students can better utilize GLMs.

**Prerequisites:** BIOS 840 and 890 or by permission of instructor.

**Course Goals:** The goal is to better understand GLMs; the relationships between families, links, and variations of GLMs will be demonstrated emphasizing using both theory and practice.

**Course Objectives:** The course is designed for students who have had regression and linear models. The major objectives are (i) to make students understand the motivation of GLMs (ii) to develop students' ability to relate families of distributions, links and variations of GLMs, (iii) to understand apply the numerical methods for fitting GLMs and be able to apply them correctly in practice while justifying their fit, and (iv) to understand that there are other extensions to GLMs in the literature.

**Text:** *Generalized Linear Models and Extensions*, 2nd Edition by James W. Hardin and Joseph M. Hilbe/Stata Press, 2007.

**Assignments:** Reading assignments are to be completed before the following class period. Homework will be assigned at the end of each topic and sometime during the lecture, and will be due in one week from the day it is assigned. Students are allowed and encouraged to discuss among each other, but each student should submit individual assignments.

**Exams:** There will be one midterm and one final exam.

**Grading Scale:** Thirty percent (30%) of the grade will derive from the final exam, 25% from the midterm exam, and 45% from homework assignments. The final grade assignment will be based on the following: 90%-100%=A, 80%-89%=B, 70%-79%=C, 60%-69%=D and 0%-59%=F.

**TENTATIVE SCHEDULE**

Week	Activity
1	Introduction
2	Generalized Linear Models (GLMs)
3	GLM estimation algorithms
4	Analysis of fit
5	The Gaussian family
6	The gamma family
7	The inverse Gaussian family
8	The power family and link
9	The binomial–logit family
10	The general binomial family
11	The problem of overdispersion

12	The Poisson family
13	The negative binomial family
14	Other count data models
15	The ordered-response family
16	Unordered-response family
17	Clustered data

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## APPENDIX E: ELECTIVE COURSE DESCRIPTIONS

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BIOS 821: Statistical Computing II—Students will learn to manipulate data, perform matrix operations, generate reports, etc., using Proc SQL and Proc IML. Requirements: BIOS 820.

BIOS 833: Sampling Methods—Students will be introduced to the design and analysis techniques when sampling from finite populations using simple, stratified, multistage, systematic, and complex sampling designs. Requirements: By permission of instructor.

BIOS 850: Multivariate Statistics—The course will introduce students to a collection of procedures that involve observation and analysis of multiple dependent statistical variables at the same time. Topics include Hotelling's T-square, principal components analysis, canonical correlation, cluster analysis, multivariate analysis of variance, multivariate repeated measures, and multivariate regression analysis. Requirements: BIOS 820, 830 and 840.

BIOS 905: Advanced Clinical Trial Design and Analysis—This course is designed to introduce students to recent innovations in clinical trial design and analysis. Requirements: BIOS 810, 820, 830, 835, 840, and 845. BIOS 821 recommended.

BIOS 911: Nonlinear Models—Students will be introduced to models motivated by pharmacokinetics and bioassays including individual models and hierarchical models with emphasis on parametric and semiparametric methods. Requirements: BIOS 890.

BIOS 915: Longitudinal Data Analysis—This course aims to introduce some background theory and to focus on the most common techniques for analyzing longitudinal data. Requirements: BIOS 890. BIOS 820 recommended.

BIOS 920: Latent Variable Analysis—This course is designed to introduce statistical analyses for models involving latent variables with and without measurement/classification errors. Requirements: BIOS 850, 890. BIOS 820 recommended.

BIOS 930: Data Mining—Students will be introduced to common steps used in data mining such as accessing and assaying prepared data and pattern discovery, predictive modeling using decision trees, regression, and neural networks, and model assessment methods. Requirements: BIOS 820, 821, 850, and 890.

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**APPENDIX F: FACULTY CVs**

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**CURRICULUM OUTLINE  
NEW DEGREE PROPOSALS  
Kansas Board of Regents**

**I. Identify the new degree: *Master of Science in Biostatistics***

**II. Provide courses required for each student in the major:**

	<b>Course Name &amp; Number</b>	<b>Credit Hours</b>
<b>Core</b>	<u>BIO 810: Clinical Trials</u>	<u>3</u>
	<u>BIOS 820: Statistical Computing</u>	<u>3</u>
	<u>BIOS 830: Experimental Design</u>	<u>3</u>
	<u>BIOS 835: Categorical Data Analysis</u>	<u>3</u>
	<u>BIOS 840: Linear Regression</u>	<u>3</u>
	<u>BIOS 871: Mathematical Statistics I</u>	<u>3</u>
	<u>BIOS 872: Mathematical Statistics II</u>	<u>3</u>
	<u>BIOS 890: Linear Models</u>	<u>3</u>
	<u>BIOS 898: Collaborative Research Experience</u>	<u>3</u>

**Electives** Elective credits include a minimum of three and a maximum of six credit hours in approved courses from outside departments and a minimum of six and maximum of nine credit hours in Biostatistics electives.

**Research** 3 credit hours of Collaborative Research Experience. This requirement ensures the completion of a research component through collaborative effort within or external to the Department.

**Practica** \_\_\_\_\_

**Total**

The course plan consists of 27 credit hours from required Biostatistics courses. Elective credits include a minimum of 3 and a maximum of 6 credits.

**CURRICULUM OUTLINE  
NEW DEGREE PROPOSALS  
Kansas Board of Regents**

**I. Identify the new degree: *Doctor of Philosophy in Biostatistics***

**II. Provide courses required for each student in the major:**

	<b>Course Name &amp; Number</b>	<b>Credit Hours</b>
<b>Core</b>	BIOS 810: Clinical Trials	3
	BIOS 820: Statistical Computing	3
	BIOS 825: Nonparametric Statistics	3
	BIOS 830: Experimental Design	3
	BIOS 835: Categorical Data Analysis	3
	BIOS 840: Linear Regression	3
	BIOS 845: Survival Analysis	3
	BIOS 871: Mathematical Statistics I	3
	BIOS 872: Mathematical Statistics II	3
	BIOS 880: Bayesian Statistics	3
	BIOS 890: Linear Models	3
	BIOS 898: Collaborative Research Experience	3
	BIOS 900: Theory of Statistical Inference	3

**Electives** 12 credit hours of electives. Elective credits include a minimum of six and a maximum of nine credit hours in approved courses from outside departments and a minimum of three and maximum of six credit hours in Biostatistics electives.

**Research**

Dissertation

15

**Practica**

**Total**

The course plan consists of 42 credit hours from required Biostatistics courses, 12 credit hours of electives

IMPLEMENTATION YEAR FY 2011

Fiscal Summary for Proposed Academic Programs

Institution: University of Kansas Medical Center

Proposed Program: MS and Ph.D. in  
Biostatistics

Part I. Anticipated Enrollment		Implementation Year		Year 2		Year 3	
		Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
A. Full-time, Part-time Headcount:	MS	3	4	7	10	11	15
	PhD	1	2	3	4	6	8
B. Total SCH taken by <i>all</i> students in program	MS	111		147 + 120 = 267		231 + 180 = 411	
	PhD	45		63 + 48 = 111		126 + 96 = 222	
<b>Part II. Program Cost Projection</b>							
A. In <u>implementation</u> year one, list all identifiable General Use costs to the academic unit(s) and how they will be funded. In subsequent years, please include only the additional amount budgeted.							
		Implementation Year		Year 2		Year 3	
<u>Base Budget*</u>							
Master's Program		\$271,450.00					
Ph.D. Program		\$101,376.00					
Senior Coordinator Position		\$45,000.00					
OOE		\$10,000.00		\$2,000.00		\$4,000.00	
Total		\$427,826.00		\$2,000.00		\$4,000.00	

Indicate source and amount of funds if other than internal reallocation:

\*These are estimates of the department of biostatistics institutional appropriations to conduct this program and are a reallocation of the dollars already committed to the department via the chairs recruitment package and the 5 and 10 year vision of the department of biostatistics fiscal plan.

Revised: September, 2003

Approved: \_\_\_\_\_

# The University of Kansas Medical Center

School of Medicine  
Department of Health Policy and Management

November 21, 2008

Dr. Matthew S. Mayo  
Chair, Department of Biostatistics  
The University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my full support for the M.S. and Ph.D. programs in biostatistics. The field of biostatistics is extremely important to the research carried out in the Department of Health Policy and Management and is vital to the success of the Public Health initiative taking place on the campus of KUMC. The addition of these programs will help fulfill the increasing demand for biostatisticians.

I am looking forward to the success of your program, and look forward to working with you on this exciting new venture.

Sincerely,



Glen Cox, M.D., M.B.A., M.H.S.A.  
Interim Chair, Department of Health Policy and Management  
Director, Institute for Community and Public Health



December 10, 2008

Matthew S. Mayo, PhD  
Chair, Department of Biostatistics  
University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my full support for the M.S. and Ph.D. programs in Biostatistics at the University of Kansas Medical Center. The addition of these programs will provide a much needed service to local employers such as Cerner Corporation and will help address the increasing demand for well-trained biostatisticians in the Kansas City metropolitan area.

I look forward to working with you and your faculty on this exciting development at KUMC.

Sincerely,

A handwritten signature in black ink that reads 'Douglas S. McNair'.

Douglas S. McNair, MD, PhD  
Sr. Vice President, Research  
Cerner Corporation

# The University of Kansas Medical Center

School of Medicine  
Department of Health Policy and Management

November 21, 2008

Dr. Matthew S. Mayo  
Chair, Department of Biostatistics  
The University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my full support for the M.S. and Ph.D. programs in biostatistics. The field of biostatistics is extremely important to the research carried out in the Department of Health Policy and Management and is vital to the success of the Public Health initiative taking place on the campus of KUMC. The addition of these programs will help fulfill the increasing demand for biostatisticians.

I am looking forward to the success of your program, and look forward to working with you on this exciting new venture.

Sincerely,



Glen Cox, M.D., M.B.A., M.H.S.A.  
Interim Chair, Department of Health Policy and Management  
Director, Institute for Community and Public Health

February 18, 2009

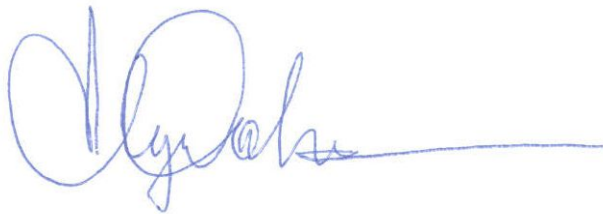
Matthew S. Mayo, PhD  
Chair, Department of Biostatistics  
University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my support for the M.S. and Ph.D. programs in Biostatistics at the University of Kansas Medical Center. After reviewing your program proposal, I found no overlap in the core requirements of your program with those of our proposed Bioinformatics program. In fact, I feel that the addition of the graduate programs in Biostatistics will provide synergistic electives for the students enrolled in our program, and that both Biostatistics and Bioinformatics students will benefit from the opportunity to be exposed to more topics.

I look forward to working with you and your faculty on this exciting development at KUMC.

Sincerely,



Ilya Vakser, PhD  
Director and Professor



December 8, 2008

Matthew S. Mayo, PhD  
Chair, Department of Biostatistics  
University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my full support for the MS and PhD programs in Biostatistics. Both degree programs are important to many initiatives, including the School of Public Health, taking place at the Medical Center campus. The courses that will be offered in your department for these degree programs will be important not only for your department but for students from other departments, including students in our MPH and MS programs who wish to gain additional training in biostatistics.

I look forward to the success of your programs and look forward to working with you and your faculty.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. Choi'.

Won S. Choi, PhD MPH  
Associate Professor and Executive Director  
KU-MPH Program

**New Degree Request – University of Kansas Medical Center**

<u>Criteria</u>	<u>Program Summary</u>
1. Program Identification  CIP	Biostatistics Master of Science Doctor of Philosophy 26.1102
2. Academic Unit	Department of Biostatistics School of Medicine

<p>3. Program Description</p>	<p><i>Master of Science in Biostatistics</i></p> <p>The degree of Master of Science in Biostatistics is awarded to those who have demonstrated a mastering of the basic knowledge in the scientific field. The M.S. in Biostatistics proposed herein requires graduates to acquire sufficient knowledge and expertise to permit them to work at the frontier of their field. Course work, seminars, and collaborative research experiences in this proposal are designed with this purpose in mind.</p> <p>Upon completion of the MS in Biostatistics, the student should be prepared to function as a biostatistician or biostatistical consultant. Therefore the student must have an extensive understanding of biostatistical theory and practice and should be proficient in the application of statistical methods to one or more areas in the health sciences. At the completion of the MS degree in Biostatistics the graduate should be able to:</p> <ol style="list-style-type: none"> <li>1. Demonstrate a broad knowledge and understanding of statistical theory and practice as applicable in the health sciences.</li> <li>2. Function as a collaborator on a research team.</li> <li>3. Take a leadership role in the design and implementation of a health science project.</li> <li>4. Assume responsibility for the design and implementation of analyses for health science investigations.</li> <li>5. Assist with the design and implementation of data management systems for large health science studies.</li> <li>6. Prepare reports and publications resulting from health science studies.</li> <li>7. Serve as an advocate for good statistical design in health science investigations.</li> </ol> <p><i>Doctor of Philosophy in Biostatistics</i></p> <p>The degree of Doctor of Philosophy in Biostatistics is awarded to those who have demonstrated a high level of scholarship in a the field and the capacity for independent research. The granting of the degree is a clear recognition that a student can complete a substantial piece of research, formally present the results of this work, and appreciate its significance in the field. PhD students are expected to acquire sufficient knowledge and expertise to permit them to work at the frontier of their field. Course work, seminars, collaborate research experiences, and a program of independent study in this proposal are designed with this purpose in mind.</p>
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<p>3. Program Description (continued)</p>	<p>The PhD program will produce biostatisticians who can develop biostatistical methodology that can be utilized to solve problems in public health and the biomedical sciences. In addition, graduates of the PhD program will be prepared to apply biostatistical and epidemiology methodology for the design and analysis of public health and biomedical research investigations. Finally, graduates of the PhD program will be well suited to function as collaborators or team leaders on research projects in the biomedical and public health sciences. In addition to the characteristics outlined in the MS section of this proposal, graduates of the PhD program in Biostatistics will have:</p> <ol style="list-style-type: none"><li>1. The ability to develop careers in academia, research institutes, government, and industry;</li><li>2. A broad understanding of current statistical methods and practices in the health sciences;</li><li>3. A solid theoretical training necessary for the development and study of new statistical methods;</li><li>4. The ability to assume all responsibilities of a statistician in collaborative health science research; in particular, the graduate will have experience in the design, data management, analysis, and interpretation of a variety of experimental and observational studies;</li><li>5. Experience in writing reports and giving oral presentations describing health science studies.</li></ol>
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<p>4. Demand/Need for the Program</p>	<p>To assess the local demand for graduate education in Biostatistics we surveyed local and regional students and alumni. Questions relating to a Biostatistics graduate program were sent out via the MPH Survey to: all current MPH and MS in Clinical Research students at KUMC; MPH and MS alumni (past five years) of KUMC; the MPH external advisory board comprised of Public Health Practitioners in state, local, and private agencies in Kansas and Kansas City, Missouri; and to the Bureau heads at the Kansas Department of Health and Environment and local Health Departments for distribution to their staff. Three statements pertaining to a graduate program in Biostatistics were posed in the survey: (1) A Biostatistics graduate program (MS and PhD) would be a valuable resource to the University of Kansas, Kansas Residents, and the Kansas City Metro area; (2) I would have been interested in receiving a graduate degree in Biostatistics (MS and/or PhD) if it had been available at KUMC when I started my graduate work; and (3) I am currently or potentially would be interested in receiving a graduate degree in Biostatistics (MS and/or PhD) if it were available at KUMC. Each response was measured on a four-point likert-scale, with 1 corresponding to strong agreement and 4 corresponding to strong disagreement. For 128 respondents, the average rating for question (1) was 1.70, indicating a moderate to strong agreement with the value of a graduate program in Biostatistics at KUMC. In total, 118 of the 128 responders agreed with the statement. Of the 129 responders to question (2), 35 agreed or strongly agreed that they would have been interested in a graduate degree, with a neutral average rating of 2.81. For the 131 answering question (3), 36 agreed or strongly agreed that they are currently or will be interested in obtaining a graduate degree in Biostatistics, with an average neutral rating of 2.88 (Appendix C). Regional survey results available included those from students at Pittsburg State University in Pittsburg, Kansas majoring in mathematics, mathematics education, and undergraduate and graduate students in actuarial science. The actuarial science degree is most related to biostatistics, and of the nine undergraduate respondents, five (56%) are currently interested in a Biostatistics graduate degree. Four (45%) are interested specifically in a PhD in Biostatistics. One of the three math majors is interested in a Biostatistics graduate degree and a PhD in Biostatistics, and another mathematics education major is interested in a graduate degree in Biostatistics. Providing these degrees at KUMC will retain these promising students and scientists in the State of Kansas.</p>
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<p>4. Demand/Need for the Program (continued)</p>	<p>In addition to hard survey results, the Department of Biostatistics has already fielded a number of individual inquiries into the possibility of a graduate degree in biostatistics. From August to December of 2008, faculty have been approached by # current students wishing to enhance their education and job prospects by obtaining at least an MS in Biostatistics. During the same time frame, two students and one lecturer from Southeast Missouri State University's mathematics graduate program have been inquired about the implementation date of the programs, and were ready to begin coursework in fall 2009. Inquiries have also been fielded from employers of biostatisticians in the Kansas City area who express interest in furthering the education of current employees holding only bachelors or masters degrees in a biostatistics-related field. Some of these employers of statisticians and biostatisticians in the metropolitan area include Cerner Corporation, PRA International, and Quintiles Transnational. Well-trained biostatisticians are and will continue to be crucial to the success of these companies.</p>
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<p>5. Comparative /Locational Advantage</p>	<p><i>Why the Program Should be Located at KUMC</i></p> <p>Of the 30 most populated metropolitan areas, Kansas City is currently one of only six without a formal biostatistics degree program. In fact, Kansas is one of only 15 states without a biostatistics degree program. Other states without a degree program include Wyoming, South Dakota, North Dakota, Montana, Alaska, Hawaii, and Idaho, among others. A map of regional biostatistics departments with degree programs is provided (Figure 5). According to the report “Time to Get it Right: A Strategy for Higher Education in Kansas City,” a major weakness of Kansas City is the lack of a research university. However, recent philanthropic efforts have helped establish the Stowers Institute for Medical Research, its endowment, and its ever-expanding presence in the city with the purpose to expand basic life science research, and with the ultimate goal of positioning the city among the top 20 in basic life sciences research. In order to reach its full potential, the report asserts the need for “world-class higher education research capacity in the life sciences and in cognate areas of knowledge such as computer science and electrical engineering, mathematics and statistics, and nanoscience [9].” Enhancing KUMC through the addition of the MS and PhD programs in biostatistics will only serve to attract and create skilled human capital, the “most valuable resource today,” for KUMC, Kansas City, and the Midwest [9]. Some of the fastest growing industries—information science, nanotechnology, biotechnology—employ a great number of statisticians and biostatisticians. Thus, providing a steady stream of graduates would help boost economic growth in Kansas City and the Midwest by not only attracting these types of industries, but by supplying the employees. It was also noted in the report that the demographics of the region are changing—while Kansas City’s senior and youth populations are growing, it is losing the critical 25-34 year old age group [10]. It is this group which provides the crucial majority of workforce. While Kansas and western Missouri have the youth to educate, we are doing the region a disservice by not offering a valuable and marketable degree to keep them. Biostatistics has been an integral and indispensable tool in improving health and reducing illness, and graduates with degrees in biostatistics are employed in public health research and service organizations, university research groups, hospitals, pharmaceutical companies, health-related industries and government. The demand for biostatisticians in the job market has been consistently strong.</p>
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5. Comparative  
/Locational  
Advantage  
(continued)

It will only continue to grow—new high throughput technologies such as gene microarray are generating an unprecedented amount of data and present exciting new opportunities for biostatisticians with strong computational skills.

*Similar Programs in Other Regents Institutions*

Similar programs do not exist in other regents institutions. Two programs which may incorrectly be confused with Biostatistics are Kansas State University's Statistics program and the proposed University of Kansas Bioinformatics program. Though a traditional Statistics program will offer similar first-year core classes, it differs greatly from the educational content and training provided by a Biostatistics program. For instance, though both types of programs offer the traditional sequence of statistical theory courses, the KUMC Biostatistics programs offer courses on topics such as survival analysis, bioinformatics, and clinical trials—topics not covered in a traditional statistics program such as that at Kansas State—and provide students exposure to real medical research problems. The Bioinformatics program proposed at KU is in fact a program in computational biology. Computational biology is an interdisciplinary field that applies the techniques of computer science and applied mathematics to address biological problems. It encompasses the fields of computational biomodeling, computational genomics, molecular modeling, systems biology, protein structure prediction and structural genomics, and computational biophysics and biochemistry. The core courses required by the proposed Bioinformatics program include 10 hours of Bioinformatics Core and six hours of Biochemistry. Bioinformatics students must also complete a minimum of 12 credit hours of elective coursework, which generally consists of six hours of Biology and Chemistry and six hours of Analysis, Mathematics, or Statistics courses. As a result of the coursework, the students are expected to be proficient in the physicochemical and biological principles of molecular systems, applied mathematical or statistical analyses, and scientific software development. A list of the possible Analysis, Mathematics, or Statistics elective courses is provided below.

C&PE 778	Applied Optimization Methods (3)
MATH 526	Applied Mathematical Statistics I (3)
MATH 530	Mathematical Models I (3)
MATH 581	Numerical Methods (3)
MATH 590	Linear Algebra (3)
MATH 605	Applied Regression Analysis (3)
MATH 727	Probability Theory (3)

MATH 728	Statistical Theory (3)
MATH 781	Numerical Analysis I (3)
MATH 865	Introduction to Stochastic Processes (3)
EECS 638	Fundamentals of Expert Systems (3)
EECS 647	Introduction to Database Systems (3)

No overlap exists between the proposed Bioinformatics program and this proposal, even in the elective courses.

*Similar Programs in the Region*

Biostatistics-related graduate programs exist at the University of Iowa in Iowa City, Iowa and at St. Louis University in St. Louis, Missouri. The Division of Biostatistics at the Saint Louis University School of Public Health offers a Biostatistics concentration in their MPH and PhD programs, and a joint Biostatistics and Epidemiology concentration in the MPH program. The University of Iowa offers MS and PhD degrees within the College of Public Health. The degree requirements and electives include biostatistics courses, statistics courses, and a few non-statistical courses.

## 6. Curriculum

### *Masters Degree*

A minimum of 36 post-Bachelor's Degree credit hours are required with a minimum GPA of 3.0. A typical course plan is listed below.

**Fall I** (9 credit hours)

BIOS 871: Mathematical Statistics I  
BIOS 820: Statistical Computing  
BIOS 840: Linear Regression

**Spring I** (9 credit hours)

BIOS 872: Mathematical Statistics II  
BIOS 830: Experimental Design  
BIOS 810: Clinical Trials

**Fall II** (9 credit hours)

BIOS 890: Linear Models  
Experience  
BIOS 835: Categorical Data Analysis  
Electives

**Spring II** (9 credit hours)

BIOS 898: Collaborative Research  
Electives

The course plan consists of 27 credit hours from required Biostatistics courses which includes 3 credit hours of Collaborative Research Experience. This requirement ensures the completion of a research component through collaborative effort within or external to the Department. Elective credits include a minimum of three and a maximum of six credit hours in approved courses from outside departments and a minimum of six and maximum of nine credit hours in Biostatistics electives.

### *Doctor of Philosophy Degree*

A minimum of 60 post-Bachelor's Degree credit hours are required with a minimum GPA of 3.0. A typical course plan is listed below.

**Fall I** (9 credit hours)

BIOS871: Mathematical Statistics I  
BIOS 820: Statistical Computing  
BIOS 840: Linear Regression

**Spring I** (9 credit hours)

BIOS 872: Mathematical Statistics II  
BIOS 830: Experimental Design  
BIOS 810: Clinical Trials

**Fall II** (9 credit hours)

BIOS 890: Linear Models  
BIOS 835: Categorical Data Analysis  
Electives

**Spring II** (9 credit hours)

BIOS 845: Survival Analysis  
BIOS 910: Generalized Linear Models  
BIOS 898: Collaborative Research  
Experience

**Fall III** (9 credit hours)

BIOS 825: Nonparametric Statistics  
Electives

**Spring III** (6 credit hours)

BIOS 880: Bayesian Statistics  
Electives

**Fall IV** (6 credit hours)

Dissertation

**Spring IV** (6 credit hours)

Dissertation

The course plan consists of 42 credit hours from required Biostatistics courses, 12 credit hours of electives, and a minimum of 9 credit hours of dissertation. Elective credits include a minimum of six and a maximum of nine credit hours in approved courses from outside departments and a minimum of three and maximum of six credit hours in Biostatistics electives. For those students exhibiting prior graduate course work at KU or another accredited university for the mastery of the requirements or biostatistics electives in this degree plan, the Department of Biostatistics Curriculum Committee will determine the necessary requirements for completion of the PhD.

7. Faculty Profile	Matthew S. Mayo, PhD, MBA, Professor and Chair Byron J. Gajewski, PhD, Associate Professor Wendy He, PhD, Assistant Professor John Keighley, PhD, Research Assistant Professor Jonathan Mahnken, PhD, Assistant Professor Jo A. Wick, PhD, Assistant Professor Henry Yeh, PhD, Assistant Professor
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<p>8. Student Profile</p>	<p>The program will recruit students with bachelors or masters degrees in a variety of undergraduate majors including statistics, mathematics, computer science, engineering, biology, physics, economics, psychology, and education. A background in calculus and linear algebra and computing experience is helpful.</p> <p>To pursue the MS program, the applicant must meet the general KU requirements for admission to graduate studies. The minimum requirements for admission into the MS program are:</p> <ol style="list-style-type: none"> <li>1. An undergraduate GPA of 3.0 or better is required for regular admission status. An applicant may be admitted under probationary status when his or her undergraduate GPA is at least 2.75 but does not meet the minimum required 3.0 for regular admission status. Provisional status may be granted for applicants with GPAs of less than 2.75, provided they meet the academic standards of the Department without excessive deficiencies in prerequisites.</li> <li>2. B average in calculus I – III (or equivalent);</li> <li>3. Successful completion of a course in any computer programming language;</li> <li>4. Successful completion of at least one of the following courses: linear algebra, differential equations, numerical analysis.</li> </ol> <p>To pursue the PhD program, the applicant must meet the general KU requirements for admission to graduate studies. The minimum requirements for admission into the PhD program are:</p> <ol style="list-style-type: none"> <li>1. An undergraduate GPA of 3.0 or better is required for regular admission status. An applicant may be admitted under probationary status when his or her undergraduate GPA is at least 2.75 but does not meet the minimum required 3.0 for regular admission status. Provisional status may be granted for applicants with GPAs of less than 2.75, provided they meet the academic standards of the Department without excessive deficiencies in prerequisites.</li> <li>2. B average in calculus I – III (or equivalent);</li> <li>3. Successful completion of a course in any computer programming language;</li> <li>4. Successful completion of at least one of the following courses: linear algebra, differential equations, numerical analysis.</li> </ol>
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<p>9. Academic Support</p>	<p>All courses listed in the curriculum do not exist on the campus, requiring full development of all course syllabi and approval of courses listed in this proposal. A start date of Fall 2010 has been requested for this reason. Current faculty and staff resources within the Department of Biostatistics and those approved in the Chair's recruitment package and the Department's five-year plan will be sufficient to implement this program. Thus, assuming these commitments are maintained, fiscal support for this program other than a Graduate Program Senior Coordinator and Teaching/Research Assistantships will be accomplished via reallocation of committed dollars. Adequate advising, library, audio-visual, and academic computing resources exist. The number of current library acquisitions is adequate, no new or enhanced academic support is necessary.</p>
<p>10. Facilities and Equipment</p>	<p>Courses will be scheduled and taught in classrooms already existing on the Medical Center campus. A student must purchase a laptop as an educational requirement upon admission. The laptop should meet departmental minimum requirements for hardware and software to be used throughout this program. No new academic support services or library materials will be needed for this program. Current facilities and equipment are adequate to implement this program. Depending upon growth, dedicated space for teaching or research assistants may be needed at some point in the future.</p>
<p>11. Program Review, Assessment, Accreditation</p>	<p>The proposed programs will be reviewed in accordance with the KU graduate school requirements. Courses will have student- and peer-reviews performed at the end of each semester which will be reviewed by the Chair and utilized in the annual review of faculty. A database will be created to track the percentage completion, time-to-completion, retention, and employment of MS and PhD students accepted into the programs. Assessment of the program will be overseen by the Chair, who will currently serve as Graduate Program Director, and Graduate Program Senior Coordinator. To proceed in the program, students must remain in good standing and maintain a 3.0 GPA with a grade of B or better in all required courses. As a part of the accreditation process, the proposed program will be reviewed as an academic degree by the North Central Association of Colleges &amp; Schools (NCACS). This program is in accordance with both KU graduate school and NCACS accreditation requirements.</p>

12. Costs, Financing	Fiscal support for this program other than a Graduate Program Senior Coordinator and Teaching/Research Assistantships will be accomplished via reallocation of committed dollars.
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## CURRICULUM VITAE

MATTHEW STUART MAYO, Ph.D.

### HOME ADDRESS / PHONE:

4440 W. 131<sup>st</sup> Terrace  
Leawood, Kansas 66209  
(913) 851-8777

### BUSINESS ADDRESS / PHONE:

University of Kansas Medical Center  
3901 Rainbow Boulevard  
Kansas City, Kansas 66160-7312  
(913) 588-4735 (tel)/4790 (fax)

### EDUCATION:

Baker University, Baldwin, KS

MBA - 2004

University of Alabama, Tuscaloosa, Alabama

Ph.D. - 1995 - Applied Statistics

University of Missouri, Columbia, Missouri

M.A. - 1990 - Statistics

University of Missouri, Columbia, Missouri

B.A. - 1986 - Statistics

### POSITIONS HELD (Current positions in bold):

***Professor and Chair, Department of Biostatistics***, University of Kansas Medical Center, Kansas City, KS  
(February 2007 – present)

- Establish new department within the School of Medicine
- Ensure that the research, teaching and service needs related to biostatistics are met at the Medical Center which includes the Schools of Allied Health, Medicine and Nursing
- Consolidate faculty across the three schools into a single department
- Lead the development of a graduate degree program in biostatistics

***Director, Center for Biostatistics and Advanced Informatics***, University of Kansas Medical Center, Kansas City, KS (July 2004 – present)

- Provide a leadership role in all biostatistical and bioinformatics research initiatives across the medical center
- Provide the infrastructure and expertise for centralized and project specific database development, management, and analysis
- Consolidate resources pertaining to biostatistics and bioinformatics
- Provide the ability to establish biostatistics and bioinformatics cores
- Ensure that researchers have ready access to biostatistical and bioinformatics resources and support

***Associate Director, Shared Resources, University of Kansas Cancer Center***, University of Kansas Medical Center, Kansas City, Kansas (August 2008 – present)

- Provide oversight, coordination, and strategic guidance to Shared Resources
- Provide guidance on Shared Resources' scope of services, utilization, performance, and cost effectiveness

- Oversee us of KUCC funds by reviewing annual budgets and business plans for each Shared Resource and making recommendations to the KUCC Director, Associate Director of Administration, and Leadership Council
- Advise on adherence to the National Cancer Institute Cancer Cents Support Grant guidelines for Shared Resources and development of the Shared Resource sections of the application
- Work with the Shared Resources Scientific Directors to establish the following: annual business plan and budget, charge-back system, measures and metrics to track utilization and improve performance, and Internal and External Advisory Boards that meet periodically during the year
- Conduct annual review of Shared Resources and Scientific Directors and provide recommendations to the KUCC Director

**Director, Biostatistics/Informatics Core, Kansas Masonic Cancer Research Institute, University of Kansas Medical Center, Kansas City, Kansas (August 1998 – August 2008)**

- Responsible for building a biostatistics core within the Cancer Institute to aid in attainment of eventual comprehensive status, recently received notification of award for over 1.4 million in total costs from NCI for Biostatistics/Informatics Shared Resource
- Collaborate with oncology investigators in Cancer Institute on study design, database design, statistical analysis, along with grant and manuscript writing
- Review and approve oncology-related studies conducted within the Institute via Protocol Review and Monitoring Committee
- Member of Executive, Internal Advisory and Program Directors committees which provide guidance to direction and conduct of Institute
- Provide statistical training for clinical investigators
- Member of Multidisciplinary Cancer Committee

**Director, Clinical Trials Office, Kansas Masonic Cancer Research Institute, University of Kansas Medical Center, Kansas City, Kansas (February 2001 – May 2006)**

- Responsible for operations of research clinical trials conducted within the Kansas Masonic Cancer Research Institute in collaboration with oncology investigators
- Chair Institutes Protocol Review and Monitoring Committee
- Supervise project director, research nurses, study coordinators and recruiters

**Director, Medical Statistics and Research Design Unit, Department of Preventive Medicine and Public Health, University of Kansas Medical Center, Kansas City, Kansas (November 2002 – July 2004)**

**Professor, Department of Preventive Medicine and Public Health, University of Kansas Medical Center, Kansas City, Kansas (July 2006 – January 2007)**

**Associate Professor with tenure, Department of Preventive Medicine and Public Health, University of Kansas Medical Center, Kansas City, Kansas (July 2003 – June 2006)**

**Assistant Professor, Department of Preventive Medicine and Public Health, University of Kansas Medical Center, Kansas City, Kansas (August 1998 – June 2003)**

- Developed and coordinate biostatistics journal club to enhance statistical methodologic research and knowledge within the department
- Collaborate with investigators in department on study design, database design, statistical analysis, along with grant and manuscript writing

- Provide statistical training for clinical investigators and public health students
- Develop advanced statistical coursework for Masters in Public Health (MPH) program
- Co-Director MS in Clinical Research Degree Program
- Elected Member of Faculty Council
- Member of University Data and Safety Monitoring Board
- Member of Admissions and Strategic Planning Committee for MPH Program
- Member and Chair search committees
- Mentor other statistical faculty and support personnel
- Advisor for MPH students and member on research committees
- Perform statistical methodological research

*Research Assistant Professor, Medical Statistics Section, Division of Hematology/Oncology, Department of Medicine, University of Alabama at Birmingham, Birmingham, Alabama (January 1996 - August 1998)*

- Collaborated primarily with oncology and infectious diseases investigators on study design, database design, statistical analysis, along with grant and manuscript writing
- Supervised data entry and data management personnel within the section
- Co-Chair of data management and quality committee
- Member and chair of search committees
- Reorganized charge-back system within section
- Train clinical investigators in statistical methodology
- Perform statistical methodological research

*Associate Scientist, Experimental Therapeutics, Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, Alabama (November 1996 - August 1998)*

*Biostatistician, Biostatistics Unit, Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, Alabama (January 1996 - August 1998)*

*Post-Doctoral Fellow, Biostatistics Unit, Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, Alabama (July 1995 - December 1995)*

*Instructor, Department of Management Science and Statistics, University of Alabama, Tuscaloosa, Alabama (August 1991 - July 1995)*

*Director of Undergraduate Statistics Tutors, Department of Management Science and Statistics, University of Alabama, Tuscaloosa, Alabama (August 1991 - May 1993)*

*Instructor, Statistics Department, University of Missouri, Columbia, Missouri (January 1987 - May 1991)*

*Researcher, USDA Crop and Livestock Reporting Office, Columbia, Missouri (June 1989 - August 1989)*

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93. **Mayo MS** and Gajewski BJ: "Incorporating Investigator Confidence in the Design of Bayesian Phase II Clinical Trials". International Society for Clinical Biostatistics and Society for Clinical Trials 3<sup>rd</sup> Joint Meeting, London, UK, July 20-24, 2003. **Controlled Clinical Trials**, **24**(2S), 104-105S, 2003.
94. **Mayo MS**, Reed G, McDowd J, and Hurwitz A: "Effects of Ginseng and Gingko on Drug Disposition in Man: Design and Analysis Plan". International Society for Clinical Biostatistics and Society for Clinical Trials 3<sup>rd</sup> Joint Meeting, London, UK, July 20-24, 2003. **Controlled Clinical Trials**, **24**(2S), 150S, 2003.
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99. Hall M and **Mayo M**: "Robust Regression with Neural Networks Using Iterative Learning Trimmed Elemental Estimators". Joint Statistical Meetings, Toronto, Ontario, Aug. 8-12, 2004.
100. Hall S, Ahluwalia J and **Mayo M**: "A Method for Imputing Missing Correlated Binary Responses". Joint Statistical Meetings, Toronto, Ontario, Aug. 8-12, 2004.
101. Divecha V, Krishnan L, Smith HJ, and **Mayo MS**: "Prediction of Axillary Nodal Metastasis in Breast Cancer by Patient and Tumor Characteristics, Including Biomarkers". American Society of Therapeutic Radiology and Oncology, Atlanta, GA, Oct. 3-7, 2004.
102. Ahluwalia JS, Nollen NL, Okuyemi KS, Resnicow K, and **Mayo MS**: "Pathways to Health: A Randomized Trial of Dietary Change and Smoking Cessation Among Smokers in Public Housing". North American Association for the Study of Obesity, Las Vegas, NV, Nov. 14-18, 2004. **Obesity Research**, **12**, A239, 2004.
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104. Thomas JL, Ahluwalia JS, Choi WS, Nollen NL, Okuyemi K, Haire-Joshu D, and **Mayo MS**: "Smoking Cessation in African Americans with Diabetes: Secondary Analyses of Three Randomized Trials". Society for Research on Nicotine and Tobacco 11<sup>th</sup> Annual Meeting and the 7<sup>th</sup> Annual SRNT European Conference, Prague, Czech Republic, March 20-23, 2005.
105. Nollen N, Ahluwalia J, Okuyemi K, Choi W, Kaur H, and **Mayo M**: "Kick it at Swope II (KIS II): Baseline Data from a Smoking Cessation Trial Among African American (AA) Light Smokers". Society for Research on Nicotine and Tobacco 11<sup>th</sup> Annual Meeting and the 7<sup>th</sup> Annual SRNT European Conference, Prague, Czech Republic, March 20-23, 2005.
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107. Fabian CJ, Kimler BF, Anderson JR, Chamberlain CS, **Mayo MS**, Khan SA, Dooley WC, Krontiras H, Browne D: "Comparison of Random Periareolar Fine Needle Aspiration vs. Ductal Lavage for Acquisition of Breast Tissue in Meeting Eligibility Requirements for a Phase II Chemoprevention Study". Fourth Annual AACR International Conference on Frontiers in Cancer Prevention Research, p. 83 (abstract A56), Baltimore, MD, October 30 – November 2, 2005.
108. Ahluwalia JS, Okuyemi KS, Nollen N, Choi WS, Kaur H, Pulvers K, and **Mayo MS**: "The Effects of Nicotine Gum and Counseling Among African-American Light Smokers". Society for Research on Nicotine and Tobacco 12 Annual Meeting, Orlando, FL, February 15-18, 2006.
109. Bronars CA, Cox LS, Thomas JL, Okuyemi KS, King G, **Mayo MS**, and Ahluwalia JS: "Correlates of Consenting to Genetic Testing Among African American Smokers". Society for Research on Nicotine and Tobacco 12 Annual Meeting, Orlando, FL, February 15-18, 2006.
110. Okuyemi KS, Pulvers KM, Cox LS, Thomas JL, Kaur H, **Mayo MS**, Nazir N, Etter J-F, and Ahluwalia JS: "Nicotine Dependence Among African American Light Smokers". Society for Research on Nicotine and Tobacco 12 Annual Meeting, Orlando, FL, February 15-18, 2006.
111. Fabian CJ, Kimler BF, Anderson JR, Chamberlain C, **Mayo MS**, Zalles CM, O'Shaughnessy JA, Lynch HT, Johnson KA, and Browne D: "Phase II Breast Cancer Chemoprevention Trial of the Third Generation Selective Estrogen Receptor Modulator Arzoxifene". American Society of Clinical Oncology Annual Meeting, Atlanta, GA, June 2 – June 6, 2006.
112. Kimler BF, Ursin G, Fabian CJ, Anderson JR, Chamberlain C, **Mayo MS**, O'Shaughnessy JA, Lynch HT, Johnson KA, Browne D: "Effect of the Third Generation Selective Estrogen Receptor Modulator Arzoxifene on Mammographic Breast Density". American Society of Clinical Oncology Annual Meeting, Atlanta, GA, June 2 – June 6, 2006.
113. Simmons AR, Likert BP, Fox KC, **Mayo MS**, and Graves L: "Osteoporosis in Men, a Similar Prevalence to Women but at a Younger Mean Age, Supporting the Need for Screening Guidelines". American Society for Bone and Mineral Research, Philadelphia, PA, September 15, 2006. **Journal of Bone and Mineral Research**, 21(S1), 2006.

## TECHNICAL REPORTS

1. **Mayo MS** and Turk A: "The Effects of a Juice on Blood Cholesterol", Statistical Report for Third Option Laboratories, May 6, 1996.
2. **Mayo MS**, Soong S-j, and Austin LP: NIAID CASG DSMB Open Report, "A Phase III Study to Evaluate the Safety and Efficacy of Ganciclovir (Dihydroxypropoxymethyl guanine [DHPG]) Treatment of Symptomatic Central Nervous System (CNS) Congenital Cytomegalovirus (CMV) Infections". #DAB-AL-55-8607 Open Session, September 23, 1996.
3. **Mayo MS**, Soong S-j, and Austin LP: NIAID CASG DSMB Closed Report, "A Phase III Study to Evaluate the Safety and Efficacy of Ganciclovir (Dihydroxypropoxymethyl guanine [DHPG]) Treatment of Symptomatic Central Nervous System (CNS) Congenital Cytomegalovirus (CMV) Infections". #DAB-AL-55-8607 Closed Session, September 23, 1996.
4. **Mayo MS** and Soong S-j: "An investigator blinded interim analysis of 'Perceived Risk in Rural Minorities'". Study Advisory Committee Report, March 1997.
5. **Mayo MS**: "A Laboratory and Adverse Event Summary for Protocol CV123-137: Comparison of Pravastatin and Niacin in Hypertriglycerdemic Patients with Elevated Plasma Cholesterol". Statistical Report for Bristol-Myers Squibb, September 30, 1997.
6. **Mayo MS** and Slaughter M: "An Efficacy, Safety and Adverse Event Summary for Protocol CV123-157: The Comparative Effects of Pravastatin and Lovastatin on Psychomotor Performance". Statistical Report for Bristol-Myers Squibb, March 25, 1998.
7. **Mayo MS** and Harrison RA: "Perceived Risk and Cancer Control in Rural Minorities". Final Analysis Report, 1998.
8. **Mayo MS**: "An investigator blinded preliminary analysis of 'A Phase II Clinical Trial of the Chemopreventive Agent Difluoromethylornithine (DFMO) in Breast Dysplasia with Biomarker Abnormalities'". Review Committee Report, December 14, 1999.
9. **Mayo MS** and Schmelzle K: "An Investigator Blinded Data and Safety Monitoring Report of 'A Phase II Clinical Trial of a Selective Estrogen Receptor Modulator (LY353381•HCl) in High Risk Women with Fine Needle Aspiration Cytologic Evidence of Hyperplasia'". Data and Safety Monitoring Board Report, August 31, 2001.
10. **Mayo MS**, Nazir N, and Ge B: "The Second Investigator Blinded Data and Safety Monitoring Report of 'A Phase II Clinical Trial of a Selective Estrogen Receptor Modulator (LY353381•HCl) in High Risk Women with Fine Needle Aspiration Cytologic Evidence of Hyperplasia'". Data and Safety Monitoring Report, October 16, 2002.
11. **Mayo MS**, Nazir N, and Smith HJ: "Data and Safety Monitoring Report for WS-76: 'A study to Identify Biomarker Modulation by a Cyclooxygenase-2 (COX-2) Inhibitor in Breast Tissue of Premenopausal Women at High Risk for Estrogen Receptor Negative (ERN) Breast Cancer'". Data and Safety Monitoring Report, March 24, 2005.

## PRESENTATIONS

1. "Elemental Subsets: The Building Blocks of Regression", *Colloquim*, Department of Mathematics, James Madison University, March 18, 1995. (*Invited Speaker*)
2. "The Leverage-Residual Weighted Elemental (LRWE) Class of Regression Estimators", Joint Statistical Meetings, Orlando, FL, August 15, 1995.
3. "Power and Sample Size", General Clinical Research Center, CAP/MCAP Education Seminar, University of Alabama at Birmingham, May 1, 1996. (*Invited Speaker*)
4. "The Role of a Biostatistician in a Comprehensive Cancer Center", The Alabama Quantitative Literacy Workshop, July 16, 1996. (*Invited Speaker*)
5. "A Phase III Study to Evaluate the Safety and Efficacy of Ganciclovir (Dihydroxypropoxymethyl guanine [DHPG]) Treatment of Symptomatic Central Nervous System (CNS) Congenital Cytomegalovirus (CMV) Infections", #DAB-AL-55-8607 Open Session, Birmingham, AL, September 23, 1996.
6. "A Phase III Study to Evaluate the Safety and Efficacy of Ganciclovir (Dihydroxypropoxymethyl guanine [DHPG]) Treatment of Symptomatic Central Nervous System (CNS) Congenital Cytomegalovirus (CMV) Infections", #DAB-AL-55-8607 Closed Session, Birmingham, AL, September 23, 1996.
7. "Probability Distributions and Statistical Tests", Hematology/Oncology Grand Rounds, University of Alabama at Birmingham, Birmingham, AL, February 7, 1997. (*Invited Speaker*)
8. "An investigator blinded interim analysis of 'Perceived Risk in Rural Minorities'". Study Advisory Committee Report, Birmingham, AL, March 1997.
9. "Reproducibility of Treadmill Assessments in Prepubertal Girls measured 6 Weeks Apart", FASEB Annual Meeting, New Orleans, LA, April 8, 1997.
10. "Regression and Correlation", General Clinical Research Center, CAP/MCAP Education Seminar, University of Alabama at Birmingham, July 16, 1997. (*Invited Speaker*)
11. "The Necessity of Statistics in Pre-clinical and Clinical Studies", The Alabama Quantitative Literacy Workshop, Tuscaloosa, AL, July 22, 1997. (*Invited Speaker*)
12. "The Effect of Multiple F-Tests on the Overall Significance Level", Joint Statistical Meetings, Anaheim, CA, August 12, 1997.
13. "Disjoint Individual Confidence Intervals and Two-Sample Tests for Means / Evaluating Overall Significance Levels in Multi-Factor ANOVA Problems", Biostatistics Unit Seminar, Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, AL, September 23, 1997. (*Invited Speaker*)
14. "General Concept and Use of Statistics in Clinical Investigations", Clinical Investigator Training Course, University of Alabama at Birmingham Department of Medicine, Birmingham, AL, October 6, 1997. (*Invited Speaker*)

15. "Comparison of Modeling the Median Versus the Average Concentration in Tissue Specific Pharmacokinetics", 1997 Annual Research Retreat, University of Alabama at Birmingham, Comprehensive Cancer Center, Birmingham, AL, October 27, 1997. (*Invited Speaker*)
16. "B Lymphocyte Migration to the Bone Marrow in Humans is Not Random". *Seminar*, University of Kansas Medical Center, Department of Preventive Medicine, Kansas City, Kansas, May 7, 1998. (*Invited Speaker*)
17. "A Simulation Study of the Robustness and Efficiency of LRWE Estimators", Joint Statistical Meetings, Dallas, TX, August 9, 1998.
18. "Role of Biostatistics in a Cancer Center", Kansas Cancer Institute Research Round Table, University of Kansas Medical Center, Kansas City, Kansas, October 6, 1998. (*Invited Speaker*)
19. "Utilizing Time to Event Endpoints in Smoking Cessation Studies: An Introduction", Tobacco Control Projects Seminar, Department of Preventive Medicine, University of Kansas Medical Center, Kansas City, Kansas, December 8, 1998. (*Invited Speaker*)
20. "Biostatistics Seminar: Clinical Trials", Oncology Didactics, Kansas Cancer Institute and University of Kansas Medical Center, Kansas City, Kansas, January 8, 1999. (*Invited Speaker*)
21. "Biostatistics Seminar: Epidemiologic Issues", Oncology Didactics, Kansas Cancer Institute and University of Kansas Medical Center, Kansas City, Kansas, January 15, 1999. (*Invited Speaker*)
22. "Statistical Power and Sample Size", Community Health Seminar, University of Kansas Medical Center, Kansas City, Kansas, January 22, 1999. (*Invited Speaker*)
23. "A Randomized Two-Arm Phase II Clinical Trial Design Using Constrained Optimization", International Biometric Society Eastern North American Spring Meeting, Atlanta, Georgia, March 31, 1999.
24. "Disjoint Individual Confidence Intervals and Two-Sample Hypothesis Tests for Means", Joint Statistical Meetings, Baltimore, MD, August 9, 1999.
25. "Modifications of Gail Risk Assessment Utilizing Fine Needle Aspirations for Prediction of Breast Cancer Development in Women at High Risk of Breast Cancer", 20<sup>th</sup> Annual Conference of the International Society for Clinical Biostatistics, Heidelberg, Germany, September 15-16, 1999.
26. "A Comparison of Power Calculation Techniques for Group Randomized Trials with Dichotomous Outcomes", Medical Statistics Section, *Seminar*, University of Alabama at Birmingham, Birmingham, AL, September 30, 1999. (*Invited Speaker*)
27. "A Comparison of Power Calculation Techniques for Group Randomized Trials with Dichotomous Outcomes", Department of Statistics, *Statistics Colloquium*, University of Missouri-Columbia, Columbia, MO, October 12, 1999. (*Invited Speaker*)
28. "An investigator blinded preliminary analysis of 'A Phase II Clinical Trial of the Chemopreventive Agent Difluoromethylornithine (DFMO) in Breast Dysplasia with Biomarker Abnormalities'". Review Committee Report, Kansas City, KS, December 14, 1999.

29. "Biostatistics Seminar: An Introduction", Oncology Didactics, Kansas Cancer Institute and University of Kansas Medical Center, Kansas City, Kansas, March 31, 2000. (*Invited Speaker*)
30. "Kansas Cancer Institute Biostatistics Core", Greater Kansas City Cancer Research Group, Kansas City Area Life Sciences Institute, Inc., Stowers Institute, Kansas City, Missouri, April 7, 2000. (*Invited Speaker*)
31. "A Comparison of Power Calculations Techniques for Group Randomized Trials with Dichotomous Outcomes." 21<sup>st</sup> Annual Meeting of the Society for Clinical Trials, Toronto, Canada, April 17, 2000.
32. "Research Synthesis and Meta-Analysis: An Overview", Kansas Cancer Institute Research Roundtable, University of Kansas Medical Center, Kansas City, Kansas, May 16, 2000. (*Invited Speaker*)
33. "The Robustness and Efficiency of Trimmed Elemental Estimation (TEE) in Regression Analysis: A Monte Carlo Simulation Study", International Conference on Monte Carlo Simulation, Monte Carlo, Monaco, June 20, 2000.
34. "Developing and Teaching a Second Level Biostatistics Course in a Masters in Public Health (MPH) Program". Joint Statistical Meetings, Indianapolis, IN, August 15, 2000.
35. "Biostatistics: Handling Repeated Measures Over Time". Central States Chapter / American College of Sports Medicine Annual Meeting, Kansas City, MO, October 20, 2000. (*Invited Speaker*)
36. "Review of Phase IA Results". Breast Cancer Prevention Consortium, Orlando, FL, January 13, 2001. (*Invited Speaker*) with Bruce Kimler, Ph.D.
37. "Appropriate Methods for Analyzing the Results of Clinical Trials". Kansas Medical Education Foundation Combined Grand Rounds, Topeka, KS, January 27, 2001. (*Invited Speaker*)
38. "Design of a Cluster Randomized Smoking Cessation Trial in Kansas City Metropolitan Area Housing Developments". 22<sup>nd</sup> Annual Meeting of the Society for Clinical Trials, Denver, CO, May 21, 2001.
39. "Statistics Worksession". Department of Pharmacology, Toxicology & Therapeutics, University of Kansas Medical Center, Kansas City, KS, June 27, 2001. (*Invited Speaker*)
40. "An Investigator Blinded Data and Safety Monitoring Report of 'A Phase II Clinical Trial of a Selective Estrogen Receptor Modulator (LY353381•HCl) in High Risk Women with Fine Needle Aspiration Cytologic Evidence of Hyperplasia'". Data and Safety Monitoring Board Report, Kansas City, KS, August 31, 2001.
41. "Introduction to Biostatistics". Department of Pathology, University of Kansas Medical Center, Kansas City, KS, October 24, 2001. (*Invited Speaker*)
42. "How to Handle Uncertainty". Department of Pathology, University of Kansas Medical Center, Kansas City, KS, October 31, 2001. (*Invited Speaker*)
43. "Clinical Trials Office Protocol Review and Monitoring Committee". Kansas Cancer Institute External Advisory Committee Meeting, Kansas City, KS, August 23, 2002.

44. "The Role of a Clinical Trials Office in a Cancer Center". Kansas Cancer Institute Mason's Day, Kansas City, KS, September 21, 2002. (*Invited Speaker*)
45. "Introduction to Biostatistics and Probability". Department of Pathology, University of Kansas Medical Center, Kansas City, KS, October 2, 2002. (*Invited Speaker*)
46. "Hypothesis Testing". Department of Pathology, University of Kansas Medical Center, Kansas City, KS, October 9, 2002. (*Invited Speaker*)
47. "The Second Investigator Blinded Data and Safety Monitoring Report of 'A Phase II Clinical Trial of a Selective Estrogen Receptor Modulator (LY353381•HCl) in High Risk Women with Fine Needle Aspiration Cytologic Evidence of Hyperplasia'". Data and Safety Monitoring Report, Boston, MA, October 16, 2002.
48. "Biostatistics". Division of Dermatology, Department of Internal Medicine, University of Kansas Medical Center, Kansas City, KS, May 22, 2003. (*Invited Speaker*)
49. "Current and Future Directions of the Clinical Trials Office". Kansas Cancer Institute Research Roundtable, University of Kansas Medical Center, Kansas City, Kansas, September 9, 2003. (*Invited Speaker*)
50. "A Randomized Two-Arm Phase II Clinical Trial Design Using Multiple Constraints". *Colloquium*, Department of Statistics, Southern Methodist University, Dallas, TX, September 19, 2003. (*Invited Speaker*)
51. "Current and Future Objectives in Obtaining NIH Designation as a Comprehensive Cancer Center". Clinical Trials Education Lecture Series, KUMC Research Institute, Kansas City, KS, October 13, 2003. (*Invited Speaker*) with Holly Smith, BA.
52. "Methods of Randomization". Gastroenterology Grand Rounds, University of Kansas Medical Center, Kansas City, KS, December 16, 2003. (*Invited Speaker*)
53. "Statistical Issues Important to the Interpretation of Clinical Trials". Surgery Grand Rounds, University of Kansas Medical Center, Kansas City, KS, September 14, 2004. (*Invited Speaker*)
54. "A Method for Imputing Missing Correlated Binary Responses". Stochastic Adaptive Control Seminar, Department of Mathematics, University of Kansas, Lawrence, KS, October 4, 2004. (*Invited Speaker*)
55. "Clinical Trials Overview". American Cancer Society Heartland Division Board Meeting, Kansas City, MO, October 22, 2004. (*Invited Speaker*)
56. "Clinical Trials Issues Important for Interpreting Emerging Data". School of Breast Oncology, Atlanta, GA, November 12, 2004. (*Invited Speaker*)
57. "Bayesian Sample Size Calculations in Phase II Clinical Trials Using a Mixture of Informative Priors". Medical Statistics Section Seminar Series, University of Alabama at Birmingham, Birmingham, AL, January 13, 2005. (*Invited Speaker*)

58. "Biostatistics at KUMC", Health Policy and Management Research Seminar, University of Kansas Medical Center, Kansas City, KS, February 11, 2005. (*Invited Speaker*)
59. "Biomarkers: What do they Contribute to Breast Cancer Risk Assessment and Prevention?" Frontiers in Cancer Prevention Research, Fourth Annual American Association for Cancer Research International Conference, Baltimore, MD, November 1, 2005. (*Invited Speaker*)
60. "Biostatistics", Rockhurst University, Division of Sciences, Kansas City, MO, November 3, 2005. (*Invited Speaker*)
61. "Clinical Trials Issues Important for Interpreting Emerging Data". School of Breast Oncology, Atlanta, GA, November 11, 2005. (*Invited Speaker*)
62. "Handling Multiplicity and Discerning if Subset Analyses are Appropriate in Clinical Trials", Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, Kansas City, KS, August 22, 2006.
63. "Clinical Trials Issues Important for Interpreting Emerging Data". School of Breast Oncology, Atlanta, GA, October 27, 2006. (*Invited Speaker*)
64. "Biostatistics in Medical Research", Missouri Section of the Mathematical Association of America Annual Meeting, Branson, MO, March 20, 2007. (*Invited Speaker*)
65. "The Comprehensive Clinical Trials Management Initiative of the University of Kansas Cancer Center", Medical Statistics Section, University of Alabama at Birmingham, Birmingham, AL, August 29, 2007. (*Invited Speaker*)
66. "Clinical Trials Issues Important for Interpreting Emerging Data". School of Breast Oncology, Atlanta, GA, November 8, 2007. (*Invited Speaker*)
67. "What is CRIS and What are its Benefits", Heartland Institute of Clinical and Translational Research Meeting, University of Kansas Medical Center, Kansas City, KS, February 13, 2008.
68. "Teaching Biostatistics to Non-statisticians: Podcasts & Student Groups", KU Teaching Summit, University of Kansas, Lawrence, KS, August 19, 2008.

### **GRANT SUPPORT (KUMC):**

Does Bupropion Help African American Quit Smoking?, P.I. Jasjit Ahluwalia, M.D., NIH/NCI, \$251,582  
September 1998-June 2001 10% effort and support

Chemoprevention by Selective Estrogen Receptor Modulator, P.I. Carol J. Fabian, M.D. and Bruce F. Kimler, Ph.D.,  
NIH/NCI, \$1,162,315  
October 1998-December 1999 5% effort and 0% support

Investigation of Brain Cancer Incidence and Mortality In and Around Sugar Creek, MO, P.I. John Neuberger, Ph.D.,  
Jackson County, MO, \$29,884  
January 1999-July 1999 10% effort and support

Phase II Clinical Trial of Difluoromethylornithine (DFMO) in Breast Dysplasia with Biomarkers Abnormalities, P.I. Carol J. Fabian, M.D. and Bruce F. Kimler, Ph.D., NIH/NCI, \$506,185  
October 1998-January 2000 5% effort and 0% support

Chemoprevention for Women at High Risk of Breast Cancer, P.I. Carol J. Fabian, M.D. and Bruce F. Kimler, Ph.D.,  
NIH/NCI, \$517,633  
October 1998-December 1999 5% effort and support  
January 2000- December 2002 10% effort and support  
January 2003- June 2003 8% effort and support

Phase I Non-Randomized Study of an Antiestrogen in Women with Newly Diagnosed Breast Cancer, P.I. Carol J. Fabian, M.D. and Bruce F. Kimler, Ph.D.,  
NIH/NCI, \$1,162,315  
October 1998-December 1999 5% effort and 0% support  
January 2000-December 2002 5% effort and support

Addressing Nicotine Addiction in Drug Abuse Patients, P.I. Kimber Richter, Ph.D., NIH/NIDA, \$568,479  
February 2000-December 2002 2% effort and support  
Due to overfunding support shifted to another statistician

Psychological, Cognitive, & Physical Effects of a Selective Estrogen Receptor Modulator: A Randomized, Controlled Trial with Women at Risk, P.I. Annette Stanton, Ph.D.,  
DOD, \$259,087  
July 2000-June 2002 2% effort and support

Health Behaviors of Smokers in Public Housing Developments, P.I. Jasjit Ahluwalia, M.D., NIH/NCI, \$1,299,449  
April 2000-March 2005 10% effort and support

Prevention of Obesity by Alteration of Dietary Fat, P.I. Joseph Donnelly, Ed.D., NIH/NIDDK, \$2,158,002  
January 2001-December 2002 12% effort and support  
January 2003-December 2006 9% effort and support

Effects of Ginseng and Ginkgo on Drug Disposition in Man, P.I. Aryeh Hurwitz, MD, NIH/NCAM, \$1,634,967  
September 2001- July 2002 15% effort and support  
August 2002 - August 2004 10% effort and support

A Study to Identify Biomarker Modulation by Cyclooxygenase-2 (COX-2) Inhibitors in Breast Tissue of Premenopausal Women at High Risk for Estrogen Receptor Negative (ERN) Breast Cancer, P.I. Carol Fabian, MD,  
NIH/NCI, \$2,993,736  
September 2001-September 2004 4% effort and support

Prevalence of COX-2 Expression in Breast FNA and Modulation with Celecoxib, P.I. Carol Fabian, M.D.,  
 Susan B Komen Breast Cancer Foundation, \$246,339  
 October 2001-September 2003 5% effort and support

Diaphragm Fatigue: Mechanisms of Treatment by Dopamine, P.I. Janet Pierce, Ph.D., NIH/NINR, \$982,552  
 Funded with 10% effort and support which was shifted to another statistician due to overfunding

Biostatistics/Informatics Shared Resource, P.I. **Matthew S. Mayo, Ph.D.**,  
 NIH/NCI, \$1,400,000  
 April 2002 - December 2002 40% effort and support  
 January 2003 - July 2003 27% effort and support  
 August 2003 - March 2007 22% effort and support  
 Currently in no-cost extension

The Role of Mammography Facilities in Mammography Service Satisfaction, P.I. Kimberly Engelman,  
 Ph.D.,  
 ACS, \$200,615  
 June 2002 - June 2006 5% effort and support

Dopamine Alleviation of ROS Medicated Diaphragm Fatigue, P.I. Janet Pierce, Ph.D.,  
 DOD, \$299,980  
 Funded with 5% effort and support which was shifted to another statistician due to overfunding

Physical Activity Across the Curriculum, P.I. Joseph Donnelly, Ed.D.,  
 NIH, \$450,000  
 September 2002 - present 10% effort and support

Promoting and Supporting Breast Feeding in Adolescents, P.I. Karen Wambach, Ph.D., NINR, \$1,101,264  
 April 2003 - December 2006 5% effort and support

Phase I Ascending Single Dose and Pharmacokinetic Study of Di-indolylmethane (DIM), P.I. Aryeh  
 Hurwitz, M.D.,  
 NCI/NIH, \$596,031  
 April 2003 - March 2005 5% effort and support

Kansas Mental Retardation Research Center, P.I. Steven Warren, Ph.D.,  
 NICHD/NIH, \$6,810,352  
 July 2003 - February 2007 10% effort and support

Kansas Native American Breast and Cervical Cancer Outreach, P.I. **Matthew S. Mayo, Ph.D.**,  
 Kansas Department of Health and Environment (KDHE), \$24,293  
 July 2004 - June 2005, 2% effort and 0% support  
 July 2005 - June 2006, \$10,818 renewal

Motor Performance and Cortical Changes, P.I. Barbara Quaney, Ph.D.,  
 NIH, \$103,400  
 December 2004 - November 2009  
 Scientific Advisor/Mentor no effort or support

Enhancing Nutrition and Activity of Rural Children, P.I. Ann McGrath Davis, Ph.D.,  
NIH, \$108, 200  
April 2005 – March 2010  
Scientific Advisor/Mentor no effort of support

Effects of Menthol on Bupropion, P.I. Kola Okuyemi, MD,  
NIH, \$150, 000  
May 2005 – March 2007, 10% effort and support

The Effects of Dairy Intake on Weight Maintenance and Metabolic Profile, P.I. Joseph Donnelly, DrEd  
Dairy Mgt. \$297,071  
March 2005 – June 2006, 5% effort and support

Merging Imaging Modalities, P.I. Sandra Hall, Ph.D.,  
NIH \$770,760  
April 2005 – March 2010  
Scientific Advisor/Mentor no effort of support

Flaxseed Lignan for Breast Cancer Chemoprevention, P.I. Carol Fabian, MD,  
NIH \$499,362  
May 2005 – April 2008  
Funded with 4% effort and support which was shifted to another statistician due to overfunding

Long-term Exercise, Weight Loss and Energy Balance, P.I. Joseph Donnelly, DrEd  
NIH \$435,835  
July 2005 – June 2010, 10% effort and support

KU Medical Center Clinical Research Curriculum Program (k30), P.I. Ed Ellerbeck, MD,  
NIH \$278,741  
July 2005 – August 2010, 10% effort and support

Cardiorespiratory Fitness in Alzheimer's Disease, P.I. Jeff Burns, MD,  
NIH \$119,956  
August 2005 – June 2007  
Funded with 10% effort and support which was shifted to another statistician due to overfunding

Substrate Oxidation in Children in Response to Exercise with High and Low Intakes, P.I. Joseph Donnelly,  
DrEd,  
Dairy Mgmt. \$251,473  
August 2005 – August 2006, 5% effort and support

QM-MSP, Ki-67, and Cytomorphology of RPFNA Specimens from High Risk Women, P.I. Carol Fabian,  
MD  
NIH \$163,064  
July 2005 – June 2007  
Funded with 5% effort and support which was shifted to another statistician due to overfunding

Long Term Exercise, Weight Loss and Energy Balance, P.I. Joseph Donnelly, DrEd,

NIH \$435,835  
July 2005 – June 2010, 10% effort and support

Dairy Foods and Blood Pressure in Multi-Ethnic Children, P.I. Debra Sullivan, Ph.D.,  
NIH \$421,700  
January 2006 – December 2008  
Funded with 15% effort and support which was shifted to another statistician due to overfunding

Targeted Smoking Cessation Program For Native Americans, P.I. Won Choi, Ph.D.,  
ACS \$279,148  
July 2006 – June 2009  
Funded with 15% effort and support which was shifted to another statistician due to overfunding

Perceptions of Colorectal Cancer Screening Among Low Income Adults, P.I. Aimee James, Ph.D.,  
ACS \$727,000  
January 2006 – December 2011  
Scientific Advisor/Mentor no effort and support

Training Program in Environmental Toxicology, P.I. Curtis Klaassen, Ph.D.,  
NIH \$268,188  
July 2006 – June 2011  
Original 2% effort, but then reduced to no effort and support

Breast Cancer Risk Biomarkers and Improved Energy Balance, P.I. Carol Fabian, MD,  
NIH \$125,000  
April 2006 – March 2008  
Funded with 5% effort and support which was shifted to another statistician due to overfunding

Probe Drugs for Botanical-Drug Interactions, P.I. Greg Reed, Ph.D.,  
NIH \$125,000  
April 2006 – March 2009  
Funded with 5% effort and support which was shifted to another statistician due to overfunding

Enhancing Tobacco Use Treatment for African American Light Smokers, P.I. Lisa Cox, Ph.D.,  
NIH \$421,040  
April 2006 – March 2011, 7% effort and support

Cux-1 and Cell Cycle Regulation in Kidney Development, P.I. Greg Vanden Heuvel, Ph.D.,  
NIH \$210,860  
September 2006 – August 2011, 4% effort and support

Energy Metabolism and Brain Changes with NIH Age and Alzheimer's Disease, P.I. Jeff Burns, MD,  
NIH  
September 2006 – June 2011  
Scientific Advisor/Mentor no effort and support

Planning the Heartland Institute for Clinical Research, P.I. Barbara Atkinson, MD,  
NIH \$150,000

April 2007 – March 2010, 5% effort and 0% support

General Clinical Research Center, P.I. Barbara Atkinson, MD,  
NIH \$1,938,267  
April 2007 – March 2010, 25% effort and support

Oral/Pharyngeal Cancer Incidence from Medicare Claims, P.I. Jonathan Mahnken, Ph.D.,  
NIH \$100,000  
June 2007 – May 2009, 15% effort and support

Longitudinal Study of Cardiorespiratory Fitness in Alzheimer's Disease, P.I. Jeff Burns, MD,  
NIH  
July 2007 – April 2009  
Funded with 10% effort and support which was shifted to another statistician due to overfunding

Prevention of Obesity in YMCA After School Programs, P.I. Joseph Donnelly, DrEd,  
NIH \$143,971  
July 2007 – June 2012, 10% effort and support

Equivalent Weight Loss for Phone and Clinic Weight Management Program, P.I. Joseph Donnelly, DrEd,  
NIH \$406,654  
July 2007 – June 2012, 10% effort and support

Breast Cancer Prevention by Letrozole in High Risk Women, P.I. Carol Fabian, MD,  
NIH \$335,918  
September 2007 – July 2011  
Funded with 5% effort and support which was shifted to another statistician due to overfunding

### CONTRACTS (KUMC):

Phase I and IIA Trial of Capecitabine in Combination with Oral Cyclophosphamide in Elderly Patients with Metastatic Breast Cancer:

Roche  
October 2000 – November 2001, Biostatistician, \$2650

Clinical Phase IA Trial of Letrozole in Women at High Risk of Breast Cancer:

Novartis  
April 2002 – present, Biostatistician, \$33,469

DCIS Celecoxib:

Pharmacia  
April 2002 – present, Biostatistician, \$67,127

A Phase II Trial of Neoadjuvant Docetaxel, Capecitabine Followed by Sequential Adjuvant Adrimycin/Cytosin in Locally Advanced Breast Cancer:

Roche  
March 2004 – present, Biostatistician, \$24,250

A Phase II Trial of Neoadjuvant Docetaxel, Capecitabine Followed by Sequential Adjuvant Adrimycin/Cytosan and Trastuzumab in Locally Advanced Breast Cancer:

Genetech

March 2004 – present, Biostatistician, \$24,250

Doxil, Dexamethasone Plus Thalidomide in Previously Untreated Multiple Myeloma:

Ortho-Biotech

July 2003 – December 2007, Biostatistician, \$15,000

Phase II Study of Gemcitabine Plus Irinotecan Plus Celecoxib in Patients with Hepatobiliary Cancer:

Pfizer/Lilly

August 2003 – April 2007, Biostatistician, \$32,750

Phase II Study of Gleevec and Taxotere in Recurrent Non-Small Cell Lung Cancer:

Novartis

November 2004 – present, Biostatistician, \$46,000

Health Policy Fellowship Survey:

National Medical Fellowships, Inc.

September 2004 – February 2005, Biostatistician, \$7,000

Imatinim Mesylate (Gleevec) and Docetaxel (Taxotere) with or without Trastuzumab (Herceptin) in the Treatment of Metastatic Breast Cancer: A Pilot Study

Novartis

August 2005 – November 2006, Biostatistician \$15,000 (Originally \$30,000 but do to limited accrual trial was closed early)

Combined Use of Multi-Day Doses of Palonosetron and Aprepitant with Low Dose Dexamethasone in Prevention of Nausea and Emesis Among Patients with Multiple Myeloma and Lymphoma Undergoing Autologous Stem Cell Transplant: A Pilot Study

MGI Pharma

October 2007 – present, Biostatistician, \$25,000

### **GRANT SUPPORT (UAB):**

Cancer Center Core Support Grant, P.I. Albert F. LoBuglio, M.D.,

NIH/NCI, \$15,772,455

October 1995-September 1996 35% effort and support

October 1996 15% effort and support

November 1996-May 1997 10% effort and support

June 1997-September 1997 5% effort and support

October 1997-December 1997 30% effort and support

January 1998-August 1998 5% effort and support

Clinical Trials of Therapies for Severe Herpesvirus Infection, P.I. Richard Whitley, M.D., NIH/NIAID, \$11,107,790

October 1995-September 1996 30% effort and support  
October 1996-September 1997 35% effort and support  
October 1997-August 1998 30% effort and support

General Clinical Research Center, P.I. Harold Fallon, M.D.,  
NIH, \$12,000,000  
October 1995-September 1996 20% effort and support  
October 1996 40% effort and support  
November 1996-September 1997 30% effort and support  
October 1997-August 1998 10% effort and support

Mucosal Immunity in Gonococcal Infection, P.I. Michael Russell, Ph.D.,  
NIH, \$609,627  
October 1995-June 1998 5% effort and support

Radioimmunotoxin Therapy of Experimental Human Gastrointestinal Cancer, P.I. Donald J. Buchsbaum, Ph.D.,  
DOE, \$430,270  
November 1996-August 1998 5% effort and support

Tumor Vaccine CATBRM, P.I. Albert F. LoBuglio, M.D.,  
NIH, \$1,352,721  
November 1996-August 1998 10% effort and support

New BCAs for Radioimmunotherapy with Radiometals, P.I. Donald J. Buchsbaum, Ph.D., NIH, \$387,345  
November 1996-August 1998 5% effort and support

Radiopharmaceutical and Gene Therapy Program, P.I. Donald J. Buchsbaum, Ph.D.,  
DOE, \$451,389  
October 1997-August 1998 5% effort and support

Smoking Cessation to Reduce Cervical Cancer Risk, P.I. Paul Greene, Ph.D.,  
NIH, \$1,622,501  
January 1998-August 1998 20% effort and support

Genetic Radioimmunotherapy of Pancreatic Cancer, P.I. Donald J. Buchsbaum, Ph.D.,  
NIH, \$201,712  
January 1998-August 1998 5% effort and support

### CONTRACTS (UAB):

Comparison of Pravastatin and Niacin in Hypertriglyceridemic Patients with Elevated Plasma Cholesterol Levels:

UCCR/BMS  
December 1995 - July 1996, Biostatistician, \$3,000

The Effects of a Juice Product on Blood Cholesterol:  
UCCR/Third Options Labs.

July 1995 - March 1996, Biostatistician, \$13,500

The Comparative Effects of Pravastatin and Lovastatin on Psychomotor Performance: UCCR/BMS

July 1995 - July 1996, Biostatistician, \$22,312.50

A Randomized Open Comparative Multicenter Study of Initial Treatment with Intravenous Itraconazole versus Amphotericin B followed by Consolidation Treatment with Itraconazole Capsules in Patients with Blastomycosis or Histoplasmosis:

FTSG/Janssen

December 1995 - January 1998, Biostatistician, \$20,000

A Two-arm, Double-blind, Randomized, Parallel Group Study to Evaluate Two Doses (500mg vs. 1000mg) of Lamisil® in Subjects with Cutaneous or Lymphocutaneous Sporotrichosis During a Treatment Period of up to 6 Months Maximum, with a 6 Month Follow-up:

FTSG/Novartis

December 1995 - January 1998, Biostatistician, \$20,000

Comparison of Pravastatin and Niacin in Hypertriglyceridemic Patients with Elevated Plasma Cholesterol Levels:

HRDG/BMS

November 1996 - January 1998, Principal Investigator, \$11,160

The Comparative Effects of Pravastatin and Lovastatin on Psychomotor Performance: HRDG/BMS

November 1996 - January 1998, Principal Investigator, \$13,608

Comparison of Weight Loss for Type II Diabetes Patients Taking Metformin vs. Controls: UCCR/BMS

July 1997, Biostatistician, \$6,600.00

#### **MEMBERSHIPS IN PROFESSIONAL AND SCHOLARLY ORGANIZATIONS:**

Member, American Statistical Association (ASA) (1995-present)

Member, International Biometric Society (ENAR) (1998-present)

Member, Society for Clinical Trials (SCT) (1997-present)

Member, Society for Research on Nicotine and Tobacco (SRNT) (1999-2002)

Member, American Association of Cancer Research (AACR) (2000-present)

Member, Society of Behavioral Medicine (SBM) (1999)

Member, Association of GCRC Statisticians (AGS) (1996-1998)

Member, Beta Gamma Sigma, National Business Honorary

Member, Mu Sigma Rho, National Statistics Honor Fraternity

#### **SERVICE IN PROFESSIONAL AND SCHOLARLY ORGANIZATIONS:**

Reviewer, **The American Journal of Medicine** (1997)

Beta-tester, MINITAB version 12 software, Minitab Inc. (1997)

Ad hoc Reviewer, **Cancer Research** (1998-2000)

Ad hoc Reviewer, **Clinical Cancer Research** (1998-2000)

Ad hoc Reviewer, **International Journal of Radiation Oncology, Biology, Physics** (1998-2000)

Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 1999  
Session Chair, Joint Statistical Meeting, August 1999  
Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 2000  
Beta-tester, nQuery 4.0 software, Statistical Solutions, Inc. (2000)  
Beta-tester, Patient Profiler software, Statistical Solutions, Inc. (2000)  
Session Chair, International Conference on Monte Carlo Simulation, June 2000  
Session Chair, Joint Statistical Meeting, August 2000  
Reviewer, **Toxicological Sciences** (2000)  
Member, American Association for Cancer Research (AACR) Breast Cancer Subcommittee of the Intraepithelial Neoplasia (IEN) Task Force (2000-2001)  
Reviewer, Department of Defense Congressionally Directed Medical Research Programs, Prostate Cancer Research Program, May 2001  
Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 2001  
Member, Colorado Tobacco Research Program Epidemiology Study Section, May 2001  
Reviewer, **Radiation Research** (2001)  
Editorial Review Board, **Journal of Applied Research** (2002 – 2004)  
Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 2002  
Member, Colorado Tobacco Research Program Epidemiology Study Section, May 2002  
Member, R24 Review Committee, National Center on Minority Health and Health Disparities Special Emphasis Panel, National Center on Minority Health and Health Disparities, July 2002  
Reviewer, **Computational Statistics and Data Analysis** (2002)  
Beta-tester, nQuery 5.0 software, Statistical Solutions, Inc. (2002)  
Reviewer, **Applied Occupational and Environmental Hygiene** (2003)  
Member, SPS3 DSMB, NINDS/NIH (2003 – present)  
Founding Editor, **Evidence-Based Preventive Medicine** (2003 – 2004)  
Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 2003  
Member, Colorado Tobacco Research Program Epidemiology Study Section, May 2003  
Member, R24 Review Committee, National Center on Minority Health and Health Disparities Special Emphasis Panel, National Center on Minority Health and Health Disparities, July 2003  
Session Chair, Joint Statistical Meeting, August 2003  
Reviewer, **Journal of Clinical Oncology** (2003)  
Member, Review Panel, Transdisciplinary Tobacco Use Research Centers, National Cancer Institute, June 2004  
Reviewer, **Clinical Cancer Research** (2004)  
Session Coordinator, M2004 7<sup>th</sup> Annual Data Mining Technology Conference, October 2004  
Member, CAM314 Data Safety Monitoring Board, Genzyme Oncology, (2004 – present)  
Member, Cancer Biomarkers Study Section, National Cancer Institute, October 2004, February 2005, June 2005, October 2005, February 2006, June 2006, October 2006, February 2007  
Reviewer, **Journal of Clinical Oncology** (2005)  
Reviewer, **Clinical Trials** (2005)  
Member, Clinical Oncology Study Section, National Cancer Institute, November 2006  
Reviewer, National Cancer Institute Special Emphasis Panel, AIDS Malignancy Clinical Trials Consortium, November 2005  
Member, American Joint Committee on Cancer Statistical Task Force, 2006 – present  
Reviewer, **Clinical Trials** (2006)  
Member, American Joint Committee on Cancer Grant Review Panel, March 2006  
Permanent Member, Cancer Biomarkers Study Section, National Cancer Institute, June 2007 – June 2010

### **CLINICAL AND COLLABORATIVE AFFILIATIONS (KUMC):**

Kansas Masonic Cancer Research Institute, August 1998 - present  
Tobacco Control Projects, August 1998 - present  
High Risk Breast Cancer Projects, September 1998 - present  
Breast Cancer Prevention Consortium, September 1998 - present  
Chemoprevention Contract, October 1998 - present  
Multipurpose Clinical Research Center for Rheumatic Diseases and Musculoskeletal Disorders, 1999  
Mental Retardation Research Center, July 2003 - present

### **CLINICAL AND COLLABORATIVE AFFILIATIONS (UAB):**

General Clinical Research Center, October 1995 - August 1998  
Collaborative Antiviral Study Group, October 1995 - August 1998  
Cancer Center Core Support Grant, October 1995 - August 1998  
Mucosal Immunity in Gonococcal Infections, October 1995 - August 1998  
Pediatric IgA Nephropathy Study Group, October 1995 - September 1996  
Fungal Trials Study Group, October 1995 - December 1997  
Radioimmunotoxin Therapy of Experimental Human Gastrointestinal Cancer, Nov. 1996 - August 1998  
Phase I/II Clinical Trial of Biological Response Modifiers, November 1996 - August 1998  
New BCA's for Radioimmunotherapy with Radiometals, November 1996 - August 1998  
Perceived Risk and Cancer Control in Rural Minorities, January 1997 - June 1998  
Radiopharmaceutical and Gene Therapy Program, October 1997 - August 1998  
Genetic Radioimmunotherapy Pancreatic Cancer, January 1998 - August 1998  
Smoking Cessation to Reduce Cervical Cancer Risk, January 1998 - August 1998

### **COMMITTEES (KUMC):**

#### University:

Member, University of Kansas Medical Center Multidisciplinary Cancer Committee, April 1999 - present  
Member, School of Medicine Faculty Council, 1999 - 2002  
Member, University of Kansas Medical Center Data and Safety Monitoring Board, 2001 - 2002  
Member, Internal Advisory Board, Molecular Informatics Center Planning Committee, July 2002 - July 2003  
Member, General Clinical Research Center Planning Committee, October 2002 - June 2004  
Member, School of Medicine Deans Research Advisory Group, Biomedical Research Building, University of Kansas Medical Center, November 2002 - March 2003  
Member, School of Medicine Deans Research Advisory Committee, November 2002 - December 2003  
Member, Director of Kansas Masonic Cancer Research Institute, Search Committee, University of Kansas Medical Center, November 2002 - February 2004  
Member, Pediatric Chair and Department Review Committee, School of Medicine, November 2003 - June 2004  
Member, Clinical Research Advisory Committee, KU Medical Center Research Institute, April 2004 - October 2006  
Co-Chair, General Clinical Research Center Advisory Committee, July 2004 - March 2007  
Member, School of Medicine By-Laws Revision Committee, 2007  
Member, Bioinformatics Degree Program Review Committee (KU-L), 2007-2008

University of Kansas Cancer Center and Kansas Masonic Cancer Research Institute:

Member, Internal Advisory Committee, November 1998 – 2002  
Member, Program Directors Committee, November 1998 – 2002  
Member, Protocol Review and Monitoring Committee, September 1998 – November 2006  
Chair, Protocol Review and Monitoring Committee, February 2001 – November 2006  
Member, Executive Committee, December 2000 – 2002  
Chair, Sr. Research Analyst Search Committee, Biostatistics/Informatics Core, 2002  
Chair, Project Manager Search Committee, Biostatistics/Informatics Core and Clinical Trials Office, 2002  
Member, Membership Committee, 2002 - present  
Member, Leadership Council, 2003 – present  
Member, Directors Committee – 2006 - present  
Member, Deputy Director Search Committee, 2004 – 2006  
Member, Director of Therapeutics Discovery and Development Search Committee, 2004 – 2006  
Member, Data and Safety Monitoring Board, July 2007 - present

Department of Preventive Medicine and Public Health:

Member, Masters in Public Health Admissions Committee, 1998 – 2004  
Member, Masters in Public Health Steering Committee, 1998 – 2000  
Chair, Research Analyst/Data Manager Search Committee, 1999  
Ad hoc Member, Epidemiologist Search Committee, 1999-2000  
Chair, Biostatistics Faculty Search Committee, 2000  
Chair, Research Analyst Search Committee, 2001  
Chair, Biostatistics Faculty Search Committee (2 positions), 2001  
Chair, Research Instructor Search Committee, 2001  
Chair, Research Analyst Search Committee (2 positions), 2002  
Member, Vice Chair Search Committee, 2002- present  
Chair, Biostatistics Faculty Search Committee, 2003 – 2004  
Member, Department Promotion and Tenure Committee, 2003 – 2006  
Member, MS in Clinical Research Degree Program Executive Committee, 2003 - present  
Co-Director, MS in Clinical Research Degree Program, 2003 – present  
Member, Joint Faculty Search Committee (5 faculty and 6 post-doc), 2003 – 2004  
Member, Executive Committee, MS in Clinical Research Degree Program, 2004 – present  
Member, Vice Chair, Faculty and Post-doctoral Search Committee, 2004 – 2005  
Chair, Biostatistics Faculty Search Committee, 2005

Department of Biostatistics:

Chair, Educational Subcommittee  
Chair, Graduate Program Development Committee

Dissertation, Thesis, Practicum and Advising:

Member, Jennifer Klemp Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 1999  
Member, Rebecca Hegarty Masters in Public Health Practicum Committee, Department of Preventive Medicine, Defended April 2000 (Graduated with Honors)  
Member, Monica Gorbandt, M.D. Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 2000 (Graduated with Honors)  
Member, Malaika N. Woods Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended June 2000

Member, John Martin Masters in Public Health Practicum Committee, Department of Preventive Medicine, Defended October 2000

Member, Lore Naylor, Masters in Public Health Practicum Committee, Department of Preventive Medicine, Defended June 2001 (Graduated with Honors)

Member, Walter Dalitsch III, M.D. Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended July 2001

Member, Brian Whitley, Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended December 2001

Member, Harsohena Ahluwalia, M.D., Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 2002

Member, Erin Eberle, Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 2002

Chair, Melissa Marvel, Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended May 2002 (Graduated with Honors)

Member, Kate Heelan, Doctorate of Philosophy Dissertation Committee, Department of Health, Sport & Exercise Science, Defended Fall 2002

Member, Brian Manning, Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 2003 (Graduated with Honors)

Chair, Sarah Moreland, Masters in Public Health Thesis Committee, Department of Preventive Medicine and Public Health, Defended April 2004

Advisor, Carol Moyer, MPH Student, 1999 - 2000

Advisor, John Martin, MPH Student, 1999 - 2000

Advisor, Richard Dubinsky, MD, MPH Student, 2001 - 2004

Advisor, Muhammed Zulfiqar, MD, MPH Student, 2001 - 2002

Advisor, Robin Ryan, MPH Student, 2002 - present

Advisor, Sarah Moreland, MPH Student, 2003 - 2004

Advisor, Ben Cronk, MPH Student, 2005 - present

Advisor, Jeff Burns, MD, MS in Clinical Research Student, 2004 - present

Advisor, James Wetmore, MD, MS in Clinical Research Student, 2005 - present

Chair, Emily Duethmann, Masters in Public Health Practicum Committee, Department of Preventive Medicine and Public Health, 2007-present

### **BIOSTATISTICS UNIT / COMPREHENSIVE CANCER CENTER / UNIVERISITY COMMITTEES (UAB):**

Co-chairman, Data Management and Quality Committee, January 1996 - August 1998

Ad hoc member, GCRC Scientific Advisory Council, January 1996 - August 1998

Member, Protocol Review Committee, January 1996 - August 1998

Member, Computer and Information Management Committee, October 1996 - August 1998

Research Competition and Ballot Coordinator, 1996 Comprehensive Cancer Center Annual Research Retreat

Auditor, Comprehensive Cancer Center Internal Audits, January 1997 - August 1998

Chair, Faculty Search Committee, Biostatistics Unit, December 1997 - April 1998

Member, Sharina Person's Dissertation Committee, Dept. of Biostatistics, Jan. 1998 - August 1998

Member, Collaborative Antiviral Study Group Website Committee, April 1998 - August 1998

### **AWARDS:**

1988 Statistics Graduate Instructor of the Year, University of Missouri.  
1992 Outstanding Performance on Ph.D. Comprehensive Exam, University of Alabama.  
1993 Outstanding Graduate Student in Applied Statistics, University of Alabama.  
1995 Outstanding Instructor in Statistics, University of Alabama.  
2007 University of Kansas School of Medicine Excellence in Mentoring Award

### **TEACHING EXPERIENCE:**

First and Second Level Undergraduate Statistics, University of Missouri, January 1987 - May 1991  
First and Second Level Undergraduate Statistics, University of Alabama, August 1991 - June 1995  
Biostatistics Seminar Series, University of Alabama at Birmingham, 1996  
Clinical Investigator Training Course, University of Alabama at Birmingham, October 6-10, 1997  
Oncology Didactics, University of Kansas Medical Center, 1999 - present  
Biostatistics Laboratory, University of Kansas Medical Center, 1999 - 2000  
Course Coordinator, Biostatistics Laboratory, University of Kansas Medical Center, 2001 - 2002  
Fundamentals of Biostatistics II, University of Kansas Medical Center, 2000 - 2002  
Special Topics in Community Health (Stat Software), University of Kansas Medical Center, Summer 2000  
Biostatistics for Oncology Researchers, University of Kansas Medical Center, Summer 2000, 2002, 2004  
Clinical Trials, University of Kansas Medical Center, 2002 - present  
Special Topics in Community Health (Evidence-Based Preventive Medicine), University of Kansas Medical Center, Fall 2003  
Conference Director, Continuing Education Conference, Biostatistics for the Nonstatistician, University of Kansas Medical Center, October 4, 2003  
Clinical Trials, Continuing Education Conference, Biostatistics for the Nonstatistician, University of Kansas Medical Center, October 4, 2003  
Conference Director, Continuing Education Conference, Biostatistics for the Nonstatistician, University of Kansas Medical Center, October 9, 2004  
Faculty Member, School of Breast Oncology, Emory Conference Center Hotel, Atlanta, GA, 2004 - present

### **PROFESSIONAL MEETINGS ATTENDED:**

Joint Statistical Meetings, Orlando, FL, August, 1995  
First Seattle Symposium in Biostatistics: Survival Analysis, Seattle, WA, November, 1995  
Collaborative Antiviral Study Group Annual Meeting, Bethesda, MD, March, 1996  
The Alabama Quantitative Literacy Workshop, Tuscaloosa, AL, July, 1996  
Association of GCRC Statisticians Annual Meeting, Chicago, IL, August, 1996  
Joint Statistical Meetings, Chicago, IL, August, 1996  
UAB Comprehensive Cancer Center Annual Retreat, Birmingham, AL, October, 1996  
Collaborative Antiviral Study Group Meeting, Bethesda, MD, March, 1997  
FASEB Annual Meeting, New Orleans, LA, April, 1997  
The Alabama Quantitative Literacy Workshop, Tuscaloosa, AL, July, 1997  
Society for Clinical Trials and Int. Assoc. of Clinical Biostatisticians, 2<sup>nd</sup> Joint Meeting, Boston, MA, July, 1997  
Association of GCRC Statisticians Annual Meeting, Anaheim, CA, August, 1997  
Joint Statistical Meetings, Anaheim, CA, August, 1997  
UAB Comprehensive Cancer Center Annual Retreat, Birmingham, AL, October, 1997

Collaborative Antiviral Study Group Annual Meeting, Bethesda, MD, February, 1998  
 International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March, 1998  
 Joint Statistical Meetings, Dallas, TX, August, 1998  
 The Society of Behavioral Medicine Twentieth Annual Scientific Sessions, San Diego, CA, March, 1999  
 Society for Research on Nicotine and Tobacco Annual Meeting, San Diego, CA, March, 1999  
 International Biometric Society Eastern North American Region Spring Meeting, Atlanta, GA, March, 1999  
 National Conference on Health Statistics, Washington D.C., August, 1999  
 Association of GCRC Statisticians Annual Meeting, Baltimore, MD, August, 1999  
 Joint Statistical Meetings, Baltimore, MD, August, 1999  
 International Society for Clinical Biostatistics, Heidelberg, Germany, September, 1999  
 1999 S-PLUS International User Conference, New Orleans, LA, October, 1999  
 ASA Kansas-Western Missouri Chapter Meeting, Kansas City, KS, January, 2000  
 Society for Research on Nicotine and Tobacco Annual Meeting, Arlington, VA, February, 2000  
 Society for Clinical Trials 21<sup>st</sup> Annual Meeting, Toronto, Canada, April, 2000  
 American Society of Clinical Oncology Annual Meeting, New Orleans, LA, May, 2000  
 International Conference on Monte Carlo Simulation, Monte Carlo, Monaco, June, 2000  
 Joint Statistical Meetings, Indianapolis, IN, August, 2000  
 Central States Chapter / American College of Sports Medicine Annual Meeting, Kansas City, MO, October, 2000  
 Breast Cancer Prevention Consortium Annual Meeting, Orlando, FL, January, 2001  
 American Association for Cancer Research Annual Meeting, New Orleans, LA, March, 2001  
 Society for Clinical Trials 22<sup>nd</sup> Annual Meeting, Denver, CO, May, 2001  
 International Biometric Society Eastern North American Region Spring Meeting, Arlington, VA, March, 2002  
 Cancer Center Biostatistics Directors Meeting, Manhattan, NY, August, 2002  
 Joint Statistical Meetings, Manhattan, NY, August, 2002  
 3<sup>rd</sup> Joint Meeting of the International Society for Clinical Biostatistics and Society for Clinical Trials, London, UK, July, 2003  
 Cancer Center Biostatistics Directors Meeting, San Francisco, CA, August, 2003  
 Joint Statistical Meetings, San Francisco, CA, August, 2003  
 Society for Clinical Trials 25<sup>th</sup> Annual Meeting, New Orleans, LA, May, 2004  
 Cancer Center Biostatistics Directors Meeting, Toronto, Canada, August, 2004  
 Joint Statistical Meetings, Toronto, Canada, August, 2004  
 M2004 7<sup>th</sup> Annual Data Mining Technology Conference, Las Vegas, NV, October 2004  
 Cancer Biomedical Informatics Grid Annual Meeting, Arlington, VA, April 9, 2006.  
 M2006 9<sup>th</sup> Annual Data Mining Technology Conference, Las Vegas, NV, October 2006  
 Association of GCRC Statisticians Annual Meeting, Salt Lake City, Utah, July, 2007  
 Joint Statistical Meetings, Salt Lake City, Utah, July/August 2007

### **CONTINUING EDUCATION COURSES:**

*Analysis of Longitudinal Data:* Joint Statistical Meeting, Orlando, FL, August, 1995  
*Survival Analysis Methods and Software:* First Seattle Symposium in Biostatistics: Survival Analysis, Seattle, WA, November, 1995  
*Updates on Statistical Methods for Longitudinal Studies:* International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March, 1998

*Using Mixed Models and PROC MIXED for Repeated Measures and Random Effects Data:* International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March, 1998

*LaTeX for Statisticians:* International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March, 1998

*Practical Aspects of Mixed Model Analysis Using the SAS System:* International Biometric Society Eastern North American Region Spring Meeting, Atlanta, GA, March, 1999

*Analysis of Repeated Measurements Using the GEE Method:* International Biometric Society Eastern North American Region Spring Meeting, Atlanta, GA, March, 1999

*Introduction to Receiver Operating Characteristic (ROC) Methodology, with Application to the Evaluation of Diagnostic Medical Products:* International Biometric Society Eastern North American Region Spring Meeting, Atlanta, GA, March, 1999

*Design and Analysis of Cluster Randomization Trials:* Joint Statistical Meeting, Indianapolis, IN, August, 2000

*Fitting Nonlinear and Generalized Mixed Models with PROC NLMIXED:* Joint Statistical Meeting, Indianapolis, IN, August, 2000

*Valid "As-treated" Analysis in Clinical Trials:* Society for Clinical Trials Annual Meeting, Denver, CO, May, 2001

*Essentials of Clinical Trials:* Society for Clinical Trials Annual Meeting, Denver, CO, May, 2001

*Statistical Analysis of Microarray Data:* International Biometric Society Eastern North American Region Spring Meeting, Arlington, VA, March, 2002

*Handling Missing Data in Longitudinal Studies: An Imputation Approach:* International Biometric Society Eastern North American Region Spring Meeting, Arlington, VA, March, 2002

*Microarray Data Analysis:* International Biometric Society Eastern North American Region Spring Meeting, Arlington, VA, March, 2002

*Coping with Missing Outcome Data:* 3<sup>rd</sup> Joint Meeting of the International Society for Clinical Biostatistics and the Society for Clinical Trials, London, UK, July, 2003

*Analysis of Genetic, Microarray, and Proteomic Data within a Comprehensive SAS Solution Software Environment:* Joint Statistical Meetings, Toronto, Canada, August, 2004

#### **ALUMNAE AND COMMUNITY ORGANIZATIONS AND ACTIVITIES:**

Coach, Columbia Youth Football League, 1988 - 1990

Member, Board of Directors, Columbia Youth Football League, 1989-1991

Life Member, University of Missouri Alumni Association

President, Birmingham & North Alabama Region of MU Alumni Association (1997-1998)

Member, University of Alabama Alumni Association, 1995 - present

Member, VinKC, 2001 - 2004

Member, Shawnee Mission Labrador Retriever Club, 2003 - 2006

Member, Board of Directors, Shawnee Mission Labrador Retriever Club, 2003 - 2006

Date: September 24, 2008

**UNIVERSITY OF KANSAS SCHOOL OF MEDICINE**  
**FACULTY CURRICULUM VITAE**

**PERSONAL DATA**

Name: Jo Adrienne Edmonds, Ph.D.  
Current Academic Rank: Assistant Professor  
Department(s): Biostatistics

Office Address: University of Kansas Medical Center  
5028 Rainbow, MS 1026  
3901 Rainbow Blvd.  
Kansas City, KS 66160-7312

Phone: (913) 588-4790  
Fax: (913) 588-0252  
E-mail: jedmonds2@kumc.edu

**PROFESSIONAL DEVELOPMENT**

**Undergraduate and Graduate Education**

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
2006 - 2008	Ph.D. (Statistics)	Baylor University
2004 - 2005	M.S. (Statistics)	Baylor University
2002 - 2003	B.S. (Mathematics, Computer Science)	University of Mary Hardin-Baylor

**Postgraduate Education**

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
N/A		

**Academic and Professional Appointments and Activities** (List in chronological order. Please explain any discontinuity in professional experience)

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
January 1999 – May 2000	Research Assistant	Arkansas State University Engineering Department, Jonesboro, AR
May 2002 – December 2003	Teaching Assistant	University of Mary Hardin-Baylor Department of Mathematics, Belton, TX
January 2004 – December 2005	Teaching Assistant	Baylor University Department of Statistical Science, Waco, TX
May 2005 – May 2007	Statistical Consultant	Baylor University Department of Social Work, Waco, TX
May 2005 – December 2007	Statistical Consultant	Baylor University Department of Statistical Science, Waco, TX
March 2006	Statistical Consultant	Darnall Army Community Hospital, Fort Hood, TX
April 2006 – August 2007	Statistical Consultant	Eli Lilly & Company, Indianapolis, IN
May 2006 – May 2007	Teacher of Record	Baylor University, Waco, TX
November 2006 – August 2007	Statistical Consultant	Martin Audiology, Waco, TX
April 2007 – August 2007	Biostatistics Intern	Eli Lilly & Company, Indianapolis, IN

January 2008 – Present	Assistant Professor	Department of Biostatistics, University of Kansas Medical Center, Kansas City, KS
January 2008 – Present	Member	Center for Biostatistics and Advanced Informatics, University of Kansas Medical Center, Kansas City, KS
January 2008 – Present	Member	University of Kansas Cancer Center, Kansas City, KS

### Professional Registration/Licensure

<u>Year</u>	<u>Number</u>	<u>State</u>
N/A		

### Professional Certification(s)

<u>Date</u>	<u>Board</u>
N/A	

### Professional Societies and Affiliations

<u>Year</u>	<u>Organization</u> (including offices held)
2002	Kappa Mu Epsilon Mathematics Society, UMHB Chapter President
2004	American Statistical Association, Member

### Honors and Awards (honorary societies, research awards, teaching and other awards.)

<u>Year</u>	<u>Award</u>
2005	Interdisciplinary Research and Scholarship Appointment, Baylor University
2007	Outstanding Graduate Student, Baylor University
2007	Cambridge Who's Who Among Professional Women in Teaching and Education

### TEACHING ACTIVITIES

#### Brief statement of areas of teaching interest

#### Didactic

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2004	PSY2380	Elementary Statistics	Lecture	3	30	Undergraduate
2004	PSY2380	Elementary Statistics	Lecture	3	31	Undergraduate
2005	PSY2380	Elementary Statistics	Lecture	3	27	Undergraduate
2005	PSY2380	Elementary Statistics	Lecture	3	31	Undergraduate
2006	PSY2380	Elementary Statistics	Lecture	3	30	Undergraduate
2006	STA1380	Elementary Statistics	Lecture	3	30	Undergraduate
2007	STA1380	Elementary Statistics	Lecture	3	31	Undergraduate

**Nondidactic**

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2004	PSY2380	Elementary Statistics	Lab	1.5	30	Undergraduate
2004	PSY2380	Elementary Statistics	Lab	1.5	31	Undergraduate
2005	PSY2380	Elementary Statistics	Lab	1.5	27	Undergraduate
2005	PSY2380	Elementary Statistics	Lab	1.5	31	Undergraduate
2006	PSY2380	Elementary Statistics	Lab	1.5	30	Undergraduate
2006	STA1380	Elementary Statistics	Lab	1.5	30	Undergraduate
2007	STA1380	Elementary Statistics	Lab	1.5	31	Undergraduate

**Clinical**

<u>Year</u>	<u>Hours</u>	<u>Student</u>		<u>Length of Service</u>
		<u>No</u>	<u>Type</u>	
N/A				

**Master's Theses and PhD. Dissertations directed**

<u>Year</u>	<u>Student Name</u>	<u>Thesis title</u>	<u>Degree (Completed/In process)</u>
N/A			

**Supervision of Postdoctoral fellows**

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
N/A		

**Advising**

<u>Date</u>	<u>Student or group name</u>	<u>Type of Student/group</u>
N/A		

**Other teaching activities**

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching function</u>
March 2008	Statistical Considerations for Grant writing	University of Kansas Medical Center	Invited lecture for NRSG 890: Grant writing
June 2008	Basic Clinical Biostatistics	University of Kansas Medical Center	USMLE Step 1 Prep Program biostatistics review lecture for 68 medical students (co-taught with Jonathan D. Mahnken, PhD)
September 2008	Biostatistics for Oncology Researchers	University of Kansas Medical Center Fellows	An introductory survey lecture course in biostatistics for 10 KU Oncology
October 2008	Designing a Clinical Research Protocol	University of Kansas Medical Center	PRVM 803/IDSP 850 & 950: Introduction to Clinical Research, invited lecture

## Educational Materials

<u>Year</u>	<u>Title Description</u>	<u>Intended Audience</u>
2004	Elementary Statistics lectures This consisted of the development of a series of lectures, homework, and quizzes for a class meeting three times weekly for a semester (PSY 2402)	Undergraduate quantitative psychology students for degree requirement
2006	Elementary Statistics class development This consisted of the development of a course plan, syllabus, didactic lectures, homework, quizzes, and examinations for a class meeting three times weekly for a semester (STA 1380)	Undergraduate pre-medicine and -nursing students for degree requirement
2008	Biostatistics for Oncology class development This consisted of the development of course plan, syllabus, and four didactic lectures for a survey course in biostatistics for Oncology Fellows	Oncology Fellows
2008	Analysis of Variance class development This consisted of the development of a course plan, syllabus, didactic lectures, homework, quizzes, and examinations for a class meeting once weekly for a semester (NRSG )	
2008	Clinical Trials class development This consisted of the development of a course plan, syllabus, didactic lectures, homework, quizzes, and examinations for a class meeting once weekly for a semester (PRVM 810)	

## Educational Leadership

N/A

## RESEARCH and SCHOLARLY ACTIVITIES:

### Brief Statement of Areas of Research Interest and Current Projects Underway

**Grants and Contract Support** (Information must include whether the nominee is the principal investigator or a co-investigator, names of all investigators, title of grant, funding source, dollar amount in direct costs, and years during which grant applies. Please describe in sufficient detail your contribution as co-investigator.)

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
M. Mayo		<i>Biostatistics/Informatics Shared Resource</i>	NIH		6	Funded
G. Reed		<i>Workstatement 45: Phase I Multiple-Dose Safety, PK, and Drug Interaction Clinical Study of Diindolymethane</i>	NIH/NCI		5	Funded
S. Kambhampati	J. Edmonds	<i>A Phase II trial with Azacitidine single agent in</i>	Pharmion/VA		4	Funded

*newly-diagnosed AML  
VA elderly patients who are  
ineligible for standard for  
induction therapy*

J. Drisko	J. Edmonds	<i>Phase II study evaluating safety and efficacy of IV AA in combination with Gemcitabine in the treatment of pancreatic cancer</i>	Marcus Foundation	3	Funded
J. Drisko	J. Edmonds	<i>Pharmacokinetic Evaluation of IV AA</i>	Marcus Foundation	3	Funded
J. Drisko	J. Edmonds	<i>Pilot study evaluating safety and efficacy of IV AA in combination with conventional therapy in the treatment of renal cell carcinoma</i>	Marcus Foundation	3	Funded
S. Kambhampati	J. Edmonds	<i>Design of 2-Methoxyestradiol Pro-drug and evaluation of its anti-cancer potential in xenografts</i>	NIH/COBRE	3	Funded

**Full Length, Peer-Reviewed Articles in Scientific Journals** (Provide names of all authors, year, title, journal, volume, and inclusive pages. List in chronological order.)

Articles published

Divita, L.R. and **Edmonds, J.A.** (2006), "Elimination of Apparel Quotas and Consumer Expenditures, *Texas Association of Family and Consumer Sciences Research Journal*, 2, 9-11.

Garland, D. and **Edmonds, J.A.** (2007), "Family Life of Baptists," *Family and Community Ministries: Empowering Through Faith*, 21 (1), 6-21.

Manuscripts in press

N/A

Manuscripts submitted but not yet accepted

**Edmonds, J.A.**, Seaman, J., and Stamey, J. (2008), "Correcting for Misclassified Response in a Bayesian Response-Adaptive Clinical Trial Design," *Clinical Trials*.

Invited or non-peer-reviewed articles or reviews

**Edmonds, J.A.**, Seaman, J., and Stamey, J. (2008), "Impact of Misclassified Outcomes on a Bayesian Response-Adaptive Design," *Proceedings of the 2008 Joint Statistical Meetings*.

Books and book chapters

N/A

Published abstracts

**Edmonds, J.A.** and Seaman, J. (2007), "Semiparametric Smoothing for Scintigraphy Data from a Three-Period Crossover Design," *Proceedings of the 2007 Joint Statistical Meetings*.

**Edmonds, J.A.**, Seaman, J., and Stamey, J. (2008), "Impact of Misclassified Outcomes on a Bayesian Response-Adaptive Design," *Proceedings of the 2008 Joint Statistical Meetings*.

Other scholarly publications

N/A

**Oral Paper Presentations** (Provide names of all authors, title, sponsoring organization, extent of peer-review, and location and date of presentation.)

Scientific papers presented at national and international meetings:

**Edmonds, J.A.**, Seaman, J., and Stamey, J. (2008), "Impact of Misclassified Outcomes on a Bayesian Response-Adaptive Design," *Proceedings of the 2008 Joint Statistical Meetings*.

Scientific papers presented at local and regional meetings:

**Edmonds, J.A.** and Millen, B.A. (2008), "A Bayesian Approach to Benefit-Risk Assessment," (invited) Symposium on Innovations in Design, Analysis, and Dissemination: Frontiers in Biostatistical Methods, Kansas City, MO, May 8 – 9, 2008.

Poster presentations at national and international meetings:

**Edmonds, J.A.** and Seaman, J. (2007), "Semiparametric Smoothing for Scintigraphy Data from a Three-Period Crossover Design," Joint Statistical Meetings, Salt Lake City, UT, July 29 – August 2, 2007.

Poster presentations at local and regional meetings:

**Edmonds, J.A.** and Seaman, J. (2006), "Semiparametric Smoothing for Scintigraphy Data from a Three-Period Crossover Design," Baylor University/Eli Lilly & Company Research Symposium, Indianapolis, IN, November 6 – 7, 2006.

**Edmonds, J.A.** (2007), "Scatterplot Smoothing using Semiparametric Regression," Conference of Texas Statisticians, Waco, TX, March 30 – 31, 2007.

**Edmonds, J.A.** (2007), "Bayesian Approaches to Problems in Drug Safety," The Lilly Summer Research Symposium, Indianapolis, IN, August 26, 2007.

Invited seminars at other universities: (Provide title, sponsoring organization or institution, and date of presentation.)

N/A

### **Other Evidence of Scholarly Activities**

**Edmonds, J.A.**: "Bayesian Methods and Adaptive Clinical Trial Designs," Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, April 1, 2008.

**Edmonds, J.A.**: "Recent Advancements in Benefit-Risk Analysis," Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, September 16, 2008.

**ACADEMIC ACTIVITIES** (See attached guidelines for definitions of professional and academic activities.)

### **Brief Statement of Service Activities**

#### **Professional Service**

2008 Ad Hoc Reviewer, *Contemporary Clinical Trials*  
2008 Member, Protocol Review and Monitoring Committee, Kansas Masonic Cancer Research Institute

**Academic Service**

2008 Co-Chair, Biostatistics Graduate Degree Program Development Committee, University of Kansas Medical Center

**Byron J. Gajewski, Ph.D.**

**ADDRESS**

MS 1026  
The University of Kansas Medical Center  
3901 Rainbow Blvd.  
Kansas City, KS 66160  
913-588-1603  
Email: [bgajewski@kumc.edu](mailto:bgajewski@kumc.edu)

**EDUCATION**

Aug. 2000     Doctor of Philosophy: Statistics, Texas A&M University  
                  Advisor: Dr. C.H. Spiegelman  
Dec. 1995     Master of Science: Mathematics, Marquette University  
                  Advisor: Dr. S. Merrill  
Dec. 1993     Bachelor of Science: Civil Engineering and Mathematics, Marquette University

**PROFESSIONAL EXPERIENCE**

2008-present   Associate Professor w/ tenure, Department of Biostatistics, University of Kansas  
                  School of Medicine, secondary appointment School of Nursing  
2006-2008     Assistant Professor, University of Kansas, Schools of Allied Health and Nursing  
2005-present   Member, Center for Biostatistics and Advanced Informatics, University of Kansas  
2007-present   Full Member, Kansas Cancer Center, University of Kansas  
2002-2006     Research Assistant Professor, University of Kansas, Schools of Allied Health and  
                  Nursing  
2000-2002     Statistical Consultant, University of Florida School of Medicine  
2000-2002     Assistant Professor of Statistics, St. Cloud State University  
1998-2000     Research Assistant, Texas Transportation Institute, Texas A&M University  
1996-1998     Teaching Assistant, Department of Statistics, Texas A&M University  
1996           GED Instructor, Career Youth Development, Milwaukee, WI  
1994-1995     Teaching Assistant, Department of Mathematics, Marquette University  
1994-1995     (Summer) Junior Civil Engineer, CRW Engineering, Anchorage, AK  
1990-1993     (Summer) Junior Civil Engineer Tech., Indian Health Service, Anchorage, AK

**CURRENT RESEARCH INTERESTS**

Bayesian methods  
Latent Variable Modeling  
Inter Rater Agreement  
Bayesian Clinical Trials  
Models for Health Policy  
Applications in medicine, nursing, and allied health  
Undergraduate and Graduate education research

**CONSULTING INTERESTS**

Health experiments and retrospective studies

**GRANTS/CONTRACTS APPLIED AND AWARDS**

**Awarded**

**Project Title:**                    **National Database of Nursing Quality Indicators (NDNQI)**  
**PI:**                                    **Nancy Dunton**  
**Period:**                            07/15/2002- 01/01/2010

Funding Agency: American Nurses Association  
Role (% Contribution): Statistician (25%)  
Amount: \$ 753,621 Total Direct Costs per year

**Project Title: Methods Development Contract**  
**PI: Nancy Dunton**  
Period: 02/01/2008- 07/31/2009  
Funding Agency: American Nurses Association  
Role (% Contribution): Consultant (3%)  
Amount: \$ 69,259 Total Direct Costs per year

**Project Title: Kansas Nursing Facility Project**  
**PI: Marge Bott**  
Period: 07/01/2003- 07/01/2008  
Funding Agency: Kansas Department on Aging  
Role (% Contribution): Statistician (20%)  
Amount: \$ 306,018 Total Direct Costs per year

**Project Title: Effects of modified T'ai Chi on health-related outcomes in older adults with OA**  
**PI: Jacque Carpenter**  
Period: 8/1/2008 – 7/31/2010  
Funding Agency: NIH  
Role (% Contribution): Statistician (2%)  
Amount: \$ 50,000 Total Direct Costs per year

**Project Title: Elderspeak: Impact on Dementia Care**  
**PI: Kristine Williams**  
Period: 8/1/2005 – 7/31/2007  
Funding Agency: NIH  
Role (% Contribution): Statistician (5%)  
Amount: \$ 50,000 Total Direct Costs per year

**Project Title: A CDSS to Translate Pressure Ulcer Prediction and Prevention to Home Health Care**  
**PI: Sandra L Bergquist-Beringer**  
Period: 10/01/07 – 10/01/2008  
Funding Agency: NIH  
Role (% Contribution): Statistician (2.5%)  
Amount: \$36,783 Total Direct Costs per year

**Project Title: Promoting Stroke Caregiver Health via Self Care Talk: Education and Support Telephone Partnerships with Nurses**  
**PI: Cynthia Teel**  
Period: 07/01/05 - 06/30/07  
Funding Agency: American Heart Association  
Role (% Contribution): Statistician (2%)  
Amount: \$ 71,500 Total Direct Costs per year

**Project Title: Hemorrhagic Shock: Effects of Dopamine on the Diaphragm**  
**PI: Janet Pierce**  
Period: 15/2005 - 07/14/2007  
Funding Agency: Department of Defense  
Role (% Contribution): Statistician (10%)  
Amount: \$171,147 Total Direct Costs per year

**Project Title: Technological Home Care: Improving Care Giving**  
**PI: Carol Smith**

Period: 09/29/2005 - 06/30/2010  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (5%)  
Amount: \$516,630 Total Direct Costs per year

**Project Title: Rural Dwelling Older Adults: CPAP Adherence Support**  
**PI: Carol Smith**  
Period: 1/2000 – 03/31/2007  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (10%) – for one year only  
Amount: \$501,225 Total Direct Costs per year

**Project Title: DHA Supplementation and Pregnancy Outcomes**  
**PI: Susan Carlson**  
Period: 04/2006 - 01/31/2011  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (10%)  
Amount: \$ 352,891 Total Direct Costs per year

**Project Title: Immuno-modulatory Effects of Parenteral Nutrition After Intestinal Failure**  
**PI: Mary Hise**  
Period: 01/2006 - 06/30/2008  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (2%)  
Amount: \$ 147,000 Total Direct Costs per year

**Project Title: HF Group Clinic Appointments: Rehospitalization Prevention Clinical Trial**  
**PI: Carol Smith**  
Period: 9/1/2006 - 05/31/2011  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (5%)  
Amount: \$720,640 Total Direct Costs per year

**Project Title: The Impact of Quality End of Life Care in Nursing Homes**  
**PI: Sarah Thompson**  
Period: 04/01/2007 - 10/31/2011  
Funding Agency: National Institutes of Health  
Role (% Contribution): Co-Investigator (10%)  
Amount: \$356,528 Total Direct Costs per year

**Project Title: HIPAA Transactions & Code Sets: Have the Standards Been Successful? A Hospital Financial Manager Perspective**  
**PI: Julie Roth**  
Period: 06/01/2006 - 11/30/2007  
Funding Agency: Am Health Information Management Association  
Role (% Contribution): Statistician (5%)  
Amount: \$24,204 Total Direct Costs per year

**Project Title: Self-Care TALK to Promote AD Spousal Caregiver Health**  
**PI: Cynthia Teel**  
Period: 04/01/2006 - 03/31/2008  
Funding Agency: NIH  
Role (% Contribution): Statistician (2% - Donated)  
Amount: \$196,433 Total Direct Costs per year

**Project Title: Kansas Nursing Home Care Planning**

**PI:** **Roma Lee Taunton & Marge Bott**  
Period: 7/1/2002-4/30/2005 (no cost extension presently)  
Funding Agency: NIH  
Role (% Contribution): Statistician (10% for last funding year)  
Amount: \$456,583 Total Direct Costs per year

**Project Title:** **Welfare Reform**  
**PI:** **Nancy Dunton**  
Period: 8/1/02-10/1/02  
Funding Agency: US Health and Human Services  
Role (% Contribution): Statistician (15%)  
Amount: \$112,458 Total Direct Costs per year

**Project Title:** **Chronic Stroke Survivor's Cardiovascular Fitness Response to an Aerobic Based Exercise Program**  
**PI:** **James K. Cho**  
Period: 1/1/02-12/1/02  
Funding Agency: US Health and Human Services  
Role (% Contribution): Statistician (\$500)

**Project Title:** **Travel Award to The International Environmetrics Society Annual Meeting**  
**PI:** **Gajewski**  
Period: 11/03  
Funding Agency: NSF  
Role (% Contribution): Travel & Speak  
Amount: \$ 1,500 Total Direct Costs per year

**Project Title:** **A Psychiatric Rehabilitation Approach to Weight Loss**  
**PI:** **Tana Brown**  
Period: 12/1/06-11/30/09  
Funding Agency: NIH  
Role (% Contribution): Statistician (5%)  
Amount: \$ 139,500 Total Direct Costs per year

**Project Title:** **Effects of delivery mode of cognitive intervention in early AD**  
**PI:** **Patricia Pohl**  
Period: 7/1/07 - 6/30/10  
Funding Agency: Alzhemeir Foundation  
Role (% Contribution): Statistician (3%)  
Amount: \$78,445 Total Direct Costs per year

**Project Title:** **Multidisciplinary Education: Improving Elder Heart Failure Patients' Self-Management**  
**PI:** **Ubolrat Piamjariyakul**  
Period: 7/1/2006 - 6/30/2008  
Funding Agency: AHA Heartland - Beginning Grant in Aid  
Role (% Contribution): Statistician (5%)  
Amount: \$65,883 Total Direct Costs per year

**Project Title:** **Describing and Measuring Treatment in Drug Treatment**  
**PI:** **Kimber Richter**  
Period: 07/01/07-06/31/09  
Funding Agency: NIH  
Role (% Contribution): Statistician (10%)  
Amount: \$150,000 Total Direct Costs per year

Project Title: Effects of Fast ForWord on Language Processing  
**PI: Marc E. Fey**  
Period: 9/1/05-8/31/07  
Funding Agency: NIH  
Role (% Contribution): Statistician (10%)  
Amount: \$ 150,000 Total Direct Costs per year

**Project Title: Effects of intense cognitive training in mild AD: performance and brain activity**  
**PI: Patricia Pohl**  
Period: 12/1/07 - 11/30/09  
Funding Agency: NIH  
Role (% Contribution): PI (5%)  
Amount: \$ 134,504 Total Direct Costs per year

2003 KUMC Travel Fund, award  
2000 St. Cloud State Grant-Getters' Support, award for transportation statistics  
2001 St. Cloud State Foundation, award for receptor modeling  
2001 St. Cloud State Faculty Development, award for receptor modeling  
1998-2000 Texas Transportation Institute Research Assistant  
1997 Kosciusko Foundation Fellowship  
1996 Texas A&M University Regents Fellowship

#### **Pending**

**Project Title: Play Preferences of Preschool-aged Children with Autism Spectrum Disorder**  
**PI: Lisa Mische Lawson**  
Period: 07/01/2008 - 7/31/2009  
Funding Agency: Department of the Army  
Role (% Contribution): Statistician (1%)  
Amount: \$75,000 Total Direct Costs per year

**Project Title: Communication in AD: Behavioral and Pharmacotherapy**  
**PI: Susan Jackson**  
Period: 07/01/2007 – 6/30/2010  
Funding Agency: Alzheimer's Association  
Role (% Contribution): PI (5%)  
Amount: \$81,718 Total Direct Costs per year

#### **Applied but not Awarded**

**Project Title: Bayesian planning tools for accrual rates in clinical trials**  
**PI: Byron Gajewski**  
Period: 12/01/2007 - 11/31/2008  
Funding Agency: Children's Mercy Hospital and Clinics  
Role (% Contribution): PI (17%)  
Amount: \$14,205 Total Direct Costs per year

2007 Applied, National Institutes of Health, Dopaminergic Modulation of Cognitive Motor Programming in Parkinson Disease, (PI – Dr Susan Jackson)  
2007 Applied, Children's Mercy Hospital and Clinics, Early Detection of Accrual Problems in Clinical Trials, (PI – Dr Byron Gajewski)  
2007 Applied, Robert Wood Johnson Foundation, Investigator, The Economic Value of Nursing in the Prevention of Pressure, (PI – Dr Nancy Dunton, KU Nursing)  
2006 Applied, co- Investigator, National Institutes of Health, Dopaminergic Modulation of Cognitive Motor Programming in Parkinson Disease, (PI, Brenda Hanna-Pladdy, Center on Aging, University of Kansas)

- 2006 Applied, Co-Investigator, Robert Wood Johnson Foundation, Effects of Nursing Workforce Attributes on Selected Nursing-Sensitive Outcome Indicators, (PI: Nancy Dunton)
- 2006 Applied, Co-Investigator, National Institutes of Health, Effects of Aging and Activity on Myocellular Responses to Acute Exercise, (PI: Phillip Gallagher)
- 2005 Applied, Contract Statistician, AHRQ, Patient Perceptions of Hospital Safety Instrument Development, (PI: Connelly, KU Nursing)
- 2005 Applied, National Institutes of Health, Statistician, Quantitative Evaluation of DBS for Parkinson's Disease (PI – Dr. Wen Liu, University of Kansas Department of Rehabilitative Sciences)
- 2005 Applied, Contract Statistician, American Health Assistance Foundation, Communication in AD: Pharmacologic & behavioral therapy, (PI: Susan Jackson, KU Hearing and Speech)
- 2005 Applied, National Institutes of Health, Investigator, Measurement of articulatory contact pressure (ACP), (PI – Dr. Jeffrey Searl, University of Kansas Department of Hearing and Speech)
- 2005 Applied, American Diabetes Association, Statistician, Ankle Joint Mobilization in Subjects with Diabetic Neuropathy, (PI – Dr. Patricia Kluding, University of Kansas Department of Rehabilitative Sciences)**
- 2005 Applied, National Institutes of Health, Statistician, Combine Acupuncture and Robot in Stroke Rehabilitation, (PI – Dr. Wen Liu, University of Kansas Department of Rehabilitative Sciences)**
- 2005 Applied, National Institutes of Health, Statistician, Does STN DBS affect the postural control of patients with PD long-term?, (PI – Dr. Wen Liu, University of Kansas Department of Rehabilitative Sciences)**
- 2005 Applied, National Institutes of Health, Investigator, Clinical Measures of Auditory Linear/Nonlinear Processes, (PI – Dr. Mark Chertoff, University of Kansas Department of Hearing and Speech)**
- 2005 Applied, National Institutes of Health, Investigator, End-of-Life Decision Making for Children and Their Family, (PI – Dr. Peggy Ward-Smith, University of Missouri Kansas City School of Nursing)**
- 2005 Applied, National Institutes of Health, Statistician, Describing and Measuring Treatment in Drug Treatment, (PI – Dr. Kimber P. Richter, KU Preventive Medicine)**
- 2005 Applied, National Institutes of Health, Investigator, End-of-Life Decision Making In ICUs: Improving Clinician Communication, (PI – Dr. Diane Boyle, KU Nursing)**
- 2004 Applied, Contract Statistician, National Institutes of Health, Statistician, Pressure Ulcer Prediction in Home Care, Best Practice, (PI: Dr. Sandra Bergquist, KU School of Nursing)
- 2004 Applied, National Multiple Sclerosis Society, Co-Investigator, A systematic evaluation of MS day programs: Organization, Funding, and Patient Outcomes, (PI – Dr. Katherine Grobe, KU Occupational Therapy)
- 2003 Applied, Alzheimer's Association, Contract Statistician, Promoting Health and Well-being in Caregivers of Persons with Early Dementia, (PI: Cynthia S. Teel, KU Nursing)
- 2003 Applied, Co-Investigator, National Institutes of Health, Immunity of Long-Term Parenteral Nutrition (LTPN) for Patients in the Home, (PI: Dr. Mary Hise, KU Dietetics and Nutrition)
- 2003 Applied, Contract Statistician, National Institutes of Health, Internet Intervention of Depressed Caregiver's, (PI: Dr. Carol Smith, KU School of Nursing)
- 2003 Applied, Contract Statistician, National Institutes of Health, Meditation-based Spiritual Obesity Intervention, (PI: Sue Popkess-Vawter, KU Nursing)
- 2003 Applied, Co-Investigator, National Institutes of Health, Elderspeak and Dementia, (PI: Kristine Williams, KU School of Nursing)
- 2003 Applied, Contract Statistician, American Heart Association, Effect of Isometrics on Stroke Patients, (PI: Emmanuel John, KU Physical Therapy)
- 2003 Applied, US Department of Defense, Contract Statistician, Sleep Study Intervention for Military Truckers, (co-PI: Dr. Carol Smith and Helen Schaag, KU Nursing)
- 2003 Applied, Co-Investigator, University Healthsystem Consortium, Nurse Residency Program Research Database, (PI: Nancy Dunton, KU Nursing)
- 2002 U.S. Health and Human Services Grant, Contract Statistician, welfare reform (PI-

- 2002 Dr. Nancy Dunton, KU Nursing, 15%, two months, Aug-Sep. 2002)  
 2002 Kansas Research Institute, Contract Statistician, Chronic Stroke Survivor's Cardiovascular Fitness Response to an Aerobic Based Exercise Program (PI- Dr. James K. Cho, KU Physical Therapy, 5%, October 2002)
- 2002 St. Cloud State Short-Term Grant, travel award
- 2002 St. Cloud State Faculty Development, applied for transportation statistics
- 2002 St. Cloud State Foundation, award for student travel to give talks
- 2002 Applied, Principal Investigator, BTS Grant, US DOT, applied for transportation statistics
- 2001 Applied, Principal Investigator, BTS Grant, US DOT, applied for transportation statistics

## **DSMB**

- 2007-2008 "Donepezil Effects on Cocaine Craving and Pharmacokinetics," VA Medical Center, Kansas City, MO
- 2007-present "DHA Supplementation and Pregnancy Outcomes," KU Medical Center, Kansas City, KS

## **PROFESSIONAL SERVICE**

- 2008-present Chair, Department of Biostatistics Promotion and Tenure Committee
- 2008-present Chair, Search Committee for Therapeutics, Discovery & Development Faculty Member, Department of Biostatistics
- 2007-present KU Center for Biostatistics and Advanced Informatics Membership Application Committee
- 2007-present Member, KU Biostatistics Graduate Degree Program Development Committee
- 2007-present American Statistical Association, Joint Statistical Meetings, Continuing Education Course Evaluation Subcommittee
- 2008-present ex-officio Member, School of Allied Health Research Committee, University of Kansas
- 2007-2008 Member, School of Allied Health Research Committee, University of Kansas
- 2007 Session Chair, Contributed Papers: Health Policy Statistics, JSM
- 2007 Session Chair, Contributed Papers: Causal Inference, Eastern North American Regional Meeting, International Biometrics Society
- 2006 The Agency for Healthcare Research Quality (AHRQ) Quality Indicators Risk Adjustment Workgroup Member
- 2005-2006 Chapter Representative, American Statistical Association, Kansas – Western Missouri Chapter
- 2005 Session Chair, Functional Data Analysis, Western North American Regional Meeting, International Biometrics Society
- 2005-2006 President, American Statistical Association, Kansas – Western Missouri Chapter
- 2005 Session Chair, Contributed Papers: Cox Regression Models, Eastern North American Regional Meeting, International Biometrics Society
- 2004-Present Protocol Review and Monitoring Committee (PRMC) of the Kansas Masonic Cancer Research Institute
- 2004-2005 Vice President, American Statistical Association, Kansas – Western Missouri Chapter
- 2002-2007 Chair, KU Biostatistics Journal Club, Department of Biostatistics
- 2002 Co-Editor Mathematics Contest, St. Cloud State University
- 2001-2002 Search Committee, Department of Statistics, St. Cloud State University
- 2001-2002 Promotion Committee, Department of Statistics, St. Cloud State University
- 2001-2002 Curriculum Committee, Department of Statistics, St. Cloud State University
- 2001 Session Chair, Teaching Statistics Using Sports, Joint Statistical Meetings
- 2000-2001 Search Committee, Department of Statistics, St. Cloud State University
- 2000-2001 Co-Editor Mathematics Contest, St. Cloud State University
- 2000-2002 Assistant Coordinator for the Statistics Club at St. Cloud State University
- 1999-2000 Coordinator of "Brown Bag Series" at Texas A&M University

## **MEMBERSHIPS**

- 2002-present Member, The International Biometrics Society

1996-present Member, American Statistical Association

#### REVIEWER (number of reviews)

*Chemometrics and Intelligent Laboratory Systems* (3)  
*Communications in Statistics* (2)  
*Hawaii International Conference of Statistics* (1)  
*Journal of Transportation and Statistics* (5)  
*The American Statistician* (4)  
ad hoc Associate Editor *The American Statistician* (1)  
*Transportation Research Board* (3)  
*Evidence-Based Preventive Medicine Journal*(1)  
*Ear and Hearing* (3)  
*Western Journal of Nursing Research* (1)  
*Clinical Trials* (1)  
*Nursing Research* (12)  
*Journal of Quantitative Analysis in Sports* (5)  
*Text: Basic Statistics for Nursing & Health Professions* (1)  
*Statistics in Medicine* (4)  
*Pharmaceutical Statistics* (1)  
*Journal of the American Statistical Association (Case Studies)* (1)  
*Health Services and Outcomes Research Methodology* (1)  
*Research in Nursing and Health* (3)  
*BMC Medical Research Methodology*(1)  
*Statistics in Biopharmaceutical Research* (1)  
*Nicotine and Tobacco Research* (1)  
*Journal of Statistics Education* (1)

#### PUBLICATIONS

##### Refereed (peer reviewed)

1. **Gajewski, B.J.**, Turner, S.M., Eisele, W.L., and Spiegelman, C.H. (2000), "Intelligent Transportation System Data Archiving: Statistical Techniques for Determining Optimal Aggregation Widths for Inductance Loop Detector Speed Data," *Transportation Research Record*, 1719, 85-93.
2. Turner, S., Albert, L. **Gajewski, B.**, and Eisele, W. (2000), "Archived Intelligent Transportation System Data Quality: Preliminary Analyses of San Antonio TransGuide Data," *Transportation Research Record*, 1719, 77-84.
3. Sedwick, J.D., **Gajewski, B.J.**, Prevatt, A.R., and Antonelli, P.J. (2001), "Magnetic Resonance Imaging in the Search for Retrocochlear Pathology," *Otolaryngology-Head and Neck Surgery*, 124(6), 652-655.
4. Westine, J.G., Giannoni, C.M., **Gajewski, B.** and Antonelli, P.J. (2002), "Opening Plugged Tympanostomy Tubes," *The Laryngoscope*, 112, 1342-1345.
5. **Gajewski, B.J.**, Rilett, L., Dixon, M., and Spiegelman, C.H. (2002), "Robust Estimation of Origin-Destination Matrices," *Journal of Transportation and Statistics* 5(2/3), 37-56.
6. Richardson, M. and **Gajewski, B.J.**, (2003), "Archaeological Sampling Strategies," *Journal of Statistics Education*, 11(1).
7. Lindberg, P.E., Parell, G.J., **Gajewski, B.J.**, Prevatt, A.R. and Antonelli, P.J. (2003), "Hyperbaric Compression in the Guinea Pig with Perilymph Fistula," *Otolaryngology Head and Neck Surgery*, 129(3), 259-264.
8. **Smith, C.E., Leenerts, M.H., and Gajewski, B.J.** (2003), "A Systematically Tested Intervention To Manage A Common Adverse Symptom: Reactive Depression," *Nursing Research*, 52(6), 401-409.

9. Gomes, Shaheen, Truong, Brown, Beasley and **Gajewski** (2003), "The Incidence of Venous Thromboembolic Events Among Nursing Home Residents: A Database Cohort study," *Journal of General Internal Medicine*, 18, 934-936.
10. Falcolne, **Gajewski** and Antonelli (2003), "Hearing Loss With Stepedotomy in Otitis Media," *Otolaryngology – Head and Neck Surgery*, 129(6), 666-673.
11. Yunus, T.M., Molina, R.M., Prevatt, A.R., **Gajewski, B.J.**, Sedwick, J.D., and Antonelli, P.J. (2003), "Hearing Loss with Canal Fistula in Exotoxin A Deficient Pseudomonas Otitis Media," *Otolaryngology Head and Neck Surgery*, 130(4), 430-436.
12. Dunton, N., **Gajewski, B.**, Taunton, R.L., and Moore, J. (2004), "Nurse Staffing and Patient Falls on Acute Care Hospital Units," *Nursing Outlook*, 52(1), 53-59.
13. Prevatt, A.R., Sedwick, J.D., **Gajewski, B.J.** and Antonelli, P.J. (2004), "Hearing Loss with Labyrinthine Fistula and *Pseudomonas aeruginosa* Otitis Media," *Otolaryngology Head and Neck Surgery*, 131(3), 248-252..
14. Mayo, M.S., and **Gajewski, B.J.** (2004), "Bayesian sample size calculations in phase II clinical trials using informative conjugate priors," *Controlled Clinical Trials*, 25, 157-167.
15. Bishop, T. and **Gajewski, B.J.** (2004), "Drafting a Career in Sports: Determining Underclassmen College Players' Stock in the NBA Draft," *Chance*, 17(12), 12-15.
16. Gajewski, B.J., Sedwick, J.D., and Antonelli, P.J. (2004), "A Log-Normal Distribution Model of the Effect of Bacteria and Ear Fenestration on Hearing Loss: A Bayesian Approach," *Statistics in Medicine*, 23(3), 493-508.
17. Gajewski, B.J., and Spiegelman, C.H. (2004), "Correspondence Estimation of the Source Profiles in Receptor Modeling," *Environmetrics*, 15, 613-634.
18. **Gajewski, B.J.** and Rilett, L.R. (2004), "Estimating Link Travel Time Correlation: an Application of Bayesian Smoothing Splines," *Journal of Transportation and Statistics*, 7(2/3), 53-70.
19. Loudon, J.K., **Gajewski, B.**, Goist-Foley, H.L. and Loudon, K.L. (2004), "The Effectiveness of Exercise for Treatment of Patellofemoral Pain Syndrome," *Journal of Sports Rehabilitation*, 13(4), 323-342.
20. Richardson, M., Rogness, N. and **Gajewski, B.** (2005), "4 out of 5 Students Surveyed Would Recommend this Activity (Comparing Chewing Gum Flavor Durations)," *Journal of Statistics Education*, 13(5).
21. Scheibmeir, M.S, O'Connell, K.A., Aaronson, L.S., and **Gajewski, B.** (2005), "Smoking Cessation Strategy Use Among Pregnant Ex-smokers," *Western Journal of Nursing Research*, 24(4), 411-427.
22. Popkess-Vawter, S. Yoder, E., and **Gajewski, B.** (2005), "The Role of Spirituality in Holistic Weight Management," *Clinical Nursing Research*, 14(2), 158-174.
23. Sedwick, J., Lopez, A.B., **Gajewski, B.**, and Simons, R. (2005), "Caudal Septoplasty: Is it effective in the treatment of aesthetic and functional problems of the nasal base created by septal deviation?" *Archives of Facial Plastic*, 7(3), 158-162.
24. Cagle, **Gajewski**, Dyson, and Lukert (2007), "Can quantitative ultrasound biomicroscopy predict bone density?," *Skin Research and Technology*, 13, 95-100.
25. **Gajewski, B.J.**, Thompson, S., Dunton, N., Becker, A. and Wrona, M. (2006), "Inter-rater Reliability of Nursing Home Surveys: A Bayesian Latent Class Approach," *Statistics in Medicine*, 25(2), 325-344.

26. Hise, ME, Compher, C, Harlan, L, Kohlmeier, J, Benedict, SH, **Gajewski, B.** and Brown, JC (2006), "Inflammatory Mediators and Immune Function Are Altered in Home Parenteral Nutrition Patients," *Nutrition- International Journal of Applied and Basic Nutritional Sciences*, 22(2), 97-103.
27. **Gajewski, B.J.** and Mayo, M.S. (2006), "Bayesian sample size calculations in phase II clinical trials using a mixture of informative priors," *Statistics in Medicine*, 25(15), 2554-2566.
28. **Gajewski B.J.** (2006) "There's No Place Like Home: Estimating Intra-Conference Home Field Advantage in College Football Using a Bayesian Piecewise Linear Model", *Journal of Quantitative Analysis in Sports*, 2(1), Article 1.  
<http://www.bepress.com/jqas/vol2/iss1/1>.
29. **Gajewski, BJ**, Lee, R, Thompson, S, Dunton, N, Becker, A, Wells, V (2006), "Non-Normal Path Analysis in the Presence of Measurement Error and Missing Data: A Bayesian Analysis of Nursing Homes' Structure and Outcomes," *Statistics in Medicine*, 25(21), 3632-3647.
30. Hart, S., Bergquist, S, **Gajewski, B**, Dunton, N (2006) Reliability Testing of the National Database of Nursing Quality Indicator's Pressure Ulcer Indicator, *Journal of Nursing Care Quality*, 21(3), 256-265.
31. Forbes-Thompson, S, **Gajewski, BJ**, Scott-Cawiezell, J & Dunton, N (2006), "An Exploration of Nursing Home Organizational Processes," *Western Journal of Nursing Research*, 28(8), 935-954.
32. Boyle, DK, Miller, PA, **Gajewski, BJ**, Hart, S, & Dunton, N (2006), "Nurse Satisfaction Differences among Practice Specialties," *Western Journal of Nursing Research*, 28(6), 622-640.
33. Kluding, P, Swafford, BB, Cagle, P, **Gajewski, BJ** (2006), "Reliability, Responsiveness and Validity of The University of Kansas Standing Balance Scale," *Journal of Geriatric Physical Therapy*, 29(3), 93-9.
34. Bott, M, **Gajewski B**, Lee, R, Piamjariyakul, U, & Taunton, RL (2007), "Care Planning Efficiency for Nursing Facilities," *Nursing Economics*, 25 (2), 85-94.
35. Lee, RH, **Gajewski, BJ**, and Thompson, S (2006), "Reliability of the Nursing Home Survey Process: A Simultaneous Survey Approach," *The Gerontologist*, 46, 772-779.
36. Shefelbine, SE, Anthony A. Mancuso, AA, **Gajewski, BJ**, Ojiri, H, Stringer, S, Sedwick, JD (2007), "Pediatric Retropharyngeal Lymphadenitis: Differentiation from Retropharyngeal Abscess and Treatment Implications," *Otolaryngology, Head and Neck Surgery*, 136(2), 182-188
37. Hise ME, Halterman K, Parkhurst M, **Gajewski B**, Moncure M, and Brown J. (2007), "Feeding Practices of Severely Ill ICU Patients: An Evaluation of Energy Sources and Clinical Outcomes," *Journal of the American Dietetic Association*, 107, 458-465.
38. **Gajewski, B.**, Hall, M., and Dunton, N. (2007), "Summarizing Benchmarks in the National Database of Nursing Quality Indicators using Bootstrap Confidence Intervals," *Research in Nursing & Health*, 30, 112-119.
39. Ammouri, A, Kaur, H, Neuberger, G, **Gajewski, B**, Choi, W (2007) "Correlates of Exercise Participation in Adolescents," *Public Health Nursing*, 24 (2), 111-120.
40. Neuberger, GB, Aaronson, LS, **Gajewski, B**, Embretson, S, Cagle, PE, Loudon, JK, Miller, P (2007), "Effects of an Exercise Intervention on Symptoms, Function, and Disease Outcomes of Rheumatoid Arthritis", *Arthritis Care and Research*, 57(6), 943-952.
41. **Gajewski, BJ**, Hart, S, Bergquist, S, & Dunton, N (2007), "Inter-rater Reliability of Pressure Ulcer Staging: Probit Bayesian Hierarchical Model that allows for Uncertain Rater Response," *Statistics in Medicine*, 26(25), 4602-4618.

42. **Gajewski B** & Simon S (2008), "A One-Hour Training Seminar on Bayesian Statistics for Nursing Graduate Students," *The American Statistician*, 62(3), 190-194.
43. **Gajewski, B.J.**, Nicholson, N. and Widen, J.E. (2007), "Predicting Hearing Threshold in Non-Responsive Subjects Using a Log-Normal Bayesian Linear Model in the Presence of Left Censored Covariates," Accepted by *Statistics in Biopharmaceutical Research*.
44. **Gajewski, B**, Simon, S, and Carlson, S (2008), "Predicting Accrual in Clinical Trials with Bayesian Posterior Predictive Distributions," *Statistics in Medicine*, 27(13), 2328-2340.
45. Billinger, S, Loudon, J, and **Gajewski B** (2008), "Validity of a Total Body Recumbent Stepper (TBRS) to Assess Cardiorespiratory Fitness," *Journal of Strength and Conditioning Research*, 22(5), 1556-1562.
46. Carpenter, J, **Gajewski, B**, Teel, C, and Aaronson, LS (2008), "Bayesian Data Analysis: Estimating the Efficacy of Tai Chi as a Case Study," *Nursing Research*, 57(3), 214-219.
47. Williams, KN, Herman, R, **Gajewski, B**, Wilson, K (2008), "Elderspeak Communication: Impact on Dementia Care," Accepted by *American Journal of Alzheimer's Disease and Other Dementias*.
48. Taunton, RL, Piamjariyakul, U, **Gajewski, B**, Lee, RH, Reker, D, Bott, MJ (2008), "Care Planning Integrity in Nursing Facilities," *Nursing Research*, 57(4), 271-282.
49. Lee, R, **Gajewski, B**, Taunton, RL, Bott, M (2008), "Modeling Efficiency at the Process Level: An Examination of the Care Planning Process in Nursing Homes," Accepted by *Health Services Research Journal*.
50. Kluding, P, and **Gajewski, B** (2008), "Relationship between Impairments of Body Function and Activity Limitations in People with Chronic Stroke," Accepted by *Physical Therapy*.
51. Dunton, N., **Gajewski, B.**, Klaus, S., and Pierson, B. (2006), "Do Magnet facilities maintain their workforce 'magnetism'?" *American Nurse Today*, 1(3), 22-23.

***Invited (peer reviewed)***

52. Mayo, MS, **Gajewski, BJ**, and Morris, J (2006), "Some Statistical Issues in Microarray Gene Expression Data," *Radiation Research*, 165(6), 745-8.
53. Winkler, MF, Ross, VM, Piamjariyakul, U, **Gajewski, B**, and Smith, C (2006), "Technology Dependence in Home Care: Impact on Patients and their Family Caregivers," *Nutrition in Clinical Practice*, 21(6), 544-556.
54. Dunton, N., **Gajewski, B.**, Klaus, S., Pierson, B. (2007), "The Relationship of Nursing Workforce Characteristics to Patient Outcomes" *OJIN: The Online Journal of Issues in Nursing*, 12 (3), Manuscript 4.

***Letters to the Editor (peer reviewed)***

55. **Gajewski, B.J.**, Petroski, G., Thompson, S, Dunton, N, Wrona, M, Becker, A, Coffland, V (2006), "Letter to the editor: the effect of provider-level ascertainment bias on profiling nursing homes by Roy J, Mor V," *Statistics in Medicine*, 25(11), 1976-1977.

**Refereed Submitted (peer reviewed)**

1. Swift, M, Spake, E, and **Gajewski, B** (2006), "The Reliability of Musculoskeletal Objective Clinical Examination in Professional Therapist Programs," Submitted to *Journal of Physical Therapy Education*.
2. Swift, M, Spake, E, and **Gajewski, B** (2007), "Do Exam Preparation Methods Affect Student Performance and Satisfaction for a Musculoskeletal Objective Clinical Examination?," Submitted to *Journal of Physical Therapy Education*.

3. **Gajewski, BJ**, Lee, R, Bott, M, Piamjariyakul, U, Taunton, RL (2007), "On Estimating the Distribution of Data Envelopment Analysis Efficiency Scores: An Application to Nursing Homes' Care Planning Process," Submitted to *Journal of Applied Statistics*.
4. Hou, Q, Mahnken, JD, **Gajewski, B**, Dunton, N (2008), "The Box-Cox power transformation on nursing sensitive indicators: Does it matter if structural effects are omitted during the estimation of the transformation parameter?" Submitted to *The Journal of Nursing Measurement*.
5. **Gajewski, BJ**, Coffland, V, Boyle, D, Bott, MJ (2008), "Integrated Analysis of Content and Construct Validity of Psychometric Instruments," Submitted to *Psychological Methods*.
6. **Gajewski, BJ**, Mahnken, JD, Dunton, N, (2008), "Is the Sky Really Falling? Model-Based Report Cards for Nursing Outcomes," Submitted to *BMC Medical Research Methodology*.
7. Al-momani, MO, Ferraro, JA, **Gajewski, BJ**, Ator, G (2008), "Improved Sensitivity of ECochG in the Diagnosis of Meniere's Disease," Submitted to *International Journal of Audiology*.
8. Bott, M, **Gajewski, BJ**, Boyle, DK, Becker, A, Coffland, V, Lee, R, Averett, E, Bonnel, W, Dunton, N (2008), "Psychometric Assessment of Staff and Leader Instruments of Culture Change in Nursing Homes," Submitted to *The Journal of Nursing Measurement*.
9. Duncan, J, Bott, M, Forbes-Thompson, S, **Gajewski, B** (2008), "Relative Rates of Symptom Occurrence and Associated Clinical Factors in Nursing Home Residents with Cancer," Submitted to *Research in Nursing and Health*.
10. **Gajewski, BJ**, Boyle, DK, and Thompson, S, (2008) "On Estimating the Distribution of a Covariance Matrix from Ordinal-Dynamic Scaled Data: A Case Study Measuring Nursing Home Residents Quality of Life," Submitted to *Methodology: European Journal of Research Methods for the Behavioral and Social*.

### In Preparation

1. Nicholson N, Widen JE, **Gajewski BJ**, and Chertoff M (2006), "Systematic Investigation of Filtering and Re-Windowing TEOAE Waveforms," In Preparation.
2. Duncan J, Forbes-Thompson S, and **Gajewski B** (2006), "Measuring Palliative Care in Nursing Homes: Development and Initial Validation of the Palliative Care Process Measure," In Preparation.
3. Liu, W., Mukherjee, M. and **Gajewski, B.** (2005), "The effect of tactile feedback on the accuracy of hand movement while performing tracking tasks," In Preparation.
4. Swift, MC, Connors, H, **Gajewski, BJ**, and Spake, E (2007), "Lay Persons Verse Students Trained As Standardized Patients In OSCE Exams," In Preparation.
5. Sharma, N, Ryals, JM, **Gajewski, BJ**, and Wright, DE (2008), "Exercise-Induced Analgesia and NT-3 Synthesis in an Animal Model of Chronic Muscular Pain," In Preparation.

### Proceedings

1. Rilett, L.R., Park, D.J., and **Gajewski, B.J.** (1999), "Estimating Confidence Intervals for Freeway Corridor Travel Time Forecasts," paper number 1154 6<sup>th</sup> *World Congress on ITS*.
2. **Gajewski, B.J.** (2001), "Applications of Robust Multivariate Receptor Modeling," *Proceedings of the Joint Statistical Meetings of the American Statistical Association*.
3. **Gajewski, B.J.** and Mayo, M.S. (2003), "[Incorporating Pessimistic and Optimistic Priors into the Design of Bayesian Phase II Clinical Trials](#)," *Proceedings of the Joint Statistical Meetings of the American Statistical Association: Bayesian Statistical Science*, 1549-1563.

4. John EB, **Gajewski B**, Gobert D, Bouckhout V, Billinger S A, Cho JK (2003) "Cardiovascular Response of Chronic Stroke-Survivors to an Aerobic Exercise Training Program" *Medicine & Science in Sports & Exercise*, 35(Supplement): S195.
5. Richardson, M, Rogness, N., and **Gajewski, B.** (2003), "Using Chewing Gum to Illustrate Introductory Statistical Concepts," *Proceedings of the Joint Statistical Meetings of the American Statistical Association: Statistical Education*, 3460-3466.
6. Rogness, N., Richardson, M. and **Gajewski, B.** (2003) "Using Chewing Gum to Illustrate Intermediate Statistical Concepts," *Proceedings of the Joint Statistical Meetings of the American Statistical Association: Statistical Education*, 3545-3547.
7. **Gajewski, B.J.**, Nicholson, N. and Widen, J.E. (2004), "Predicting Hearing Threshold in Non-Responsive Subjects Using a Log-Normal Bayesian Linear Model in the Presence of Left Censored Covariates," *Proceedings of the American Statistical Association, Statistics in Epidemiology Section [CD-ROM]*, Alexandria, VA: American Statistical Association.

## PRESENTATIONS

- 2008 Cerner Corporation, Innovations in Design, Analysis, and Dissemination: Frontiers in Biostatistical Methods, "On Estimating the Distribution of Data Envelopment Analysis Efficiency Scores: An Application to Nursing Homes' Care Planning Process," North Kansas City, MO, *Invited*.
- 2008 University of Kansas Medical Center, Statistics Seminar Series, "Predicting Accrual in Clinical Trials with Bayesian Posterior Predictive Distributions," Kansas City, KS.
- 2008 2008 Bayesian Biostatistics Conference, "Integrated Analysis of Content and Construct Validity of Psychometric Instruments," *MD Anderson Cancer Center, Houston, TX*.
- 2008 7<sup>th</sup> International Conference on Health Policy Statistics, "[Introducing Bayesian Data Analysis to Non-Statisticians in a Frequentist Course: Illustration with NDNQI Data](#)," Philadelphia, PA.
- 2007 Faculty Research Day, University of Kansas Medical Center, "Predicting Accrual in Clinical Trials: A Bayesian Based Approach," Kansas City, KS
- 2007 The Joint Statistical Meetings, "Distribution of Cronbach's Alpha for Ordinal Data A Bayesian Based Approach," Salt Lake City, UT.
- 2007 Department of Psychology, University of Kansas, Quantitative Psychology Program, "Distribution of Cronbach's Alpha for Ordinal Data A Bayesian Based Approach," Lawrence, KS.
- 2007 International Biometrics Society, Eastern North American Region Spring Meeting, "Distribution of Data Envelopment Analysis Efficiency Scores: An Application to Nursing Homes' Care Planning Process," Atlanta, GA.
- 2007 Sigma Xi: The Scientific Research Society, "Modeling Healthcare Efficiency," w/ Robert H. Lee, KU Medical Center, Kansas City, KS.
- 2007 National Database of Nursing Quality Indicators: Transforming Nursing Data into Quality Outcomes The First National Conference, "What are the Odds and Max Your Bet! NDNQI Research Methods," Las Vegas, NV.
- 2006 Faculty Research Day, University of Kansas Medical Center, "Inter-rater Reliability of Pressure Ulcer Staging: Ordinal Probit Bayesian Hierarchical Model that allows for Uncertain Rater Response," Kansas City, KS
- 2006 The National State of the Science Congress in Nursing Research, "Symposium: Complexity Science and Analysis: Emerging Methods to Discern Patterns of Organizational Outcomes in Long Term Care; Non-Marginal Analytic Techniques: An Introduction to the use of Statistical Methods in Organizational Research," Washington DC.
- 2006 Gastrointestinal Grand Rounds, University of Kansas Medical Center, "Four S's: Sensitivity, Specificity, Significance, and Sample Size," Kansas City USA
- 2006 University of Kansas Medical Center, Statistics Seminar Series, "Is the Sum of Two Studies Better than Their Parts?," Kansas City USA
- 2006 The Joint Statistical Meetings: Section on Biometrics and Bayesian Statistical Modeling, "Inter-rater Reliability of Pressure Ulcer Staging: Ordinal Probit Bayesian Hierarchical Model that Allows for Uncertain Rater Response," Seattle, WA, USA

- 2006 International Biometrics Society, Western North American Region Spring Meeting, “Non-Normal Path Analysis in the Presence of Measurement Error and Missing Data: A Bayesian Analysis of Nursing Homes' Structure and Outcomes,” Flagstaff, AZ
- 2006 University of Missouri Kansas City, Mathematics and Statistics Department, “There's No Place Like Home: Estimating Intra-Conference Home Field Advantage in College Football,” Kansas City, MO.
- 2005 The 58<sup>th</sup> Annual Scientific Meeting of the Gerontological Society of America, “Relationship of Nursing Home Staff Turnover and Deficiencies: A Regression Tree”, Orlando, FL.
- 2005 Biostatistics External Advisory Board, University of Kansas Medical Center, “Bayesian Sample Size Calculations in Phase II Clinical Trials Using a Simple Mixture of Informative Priors: Incorporating Pessimistic and Optimistic Opinions Simultaneously,” Kansas City, KS
- 2005 International Biometrics Society, Western North American Region Spring Meeting, “Inter-rater Reliability of Nursing Home Surveys: A Bayesian Latent Class Approach,” Fairbanks, AK
- 2005 Falls and Wandering Conference, “Nurse Staffing and Patient Falls in US Hospitals,” Tampa, FL
- 2005 International Biometrics Society, Eastern North American Region Spring Meeting, “Bayesian Sample Size Calculations in Phase II Clinical Trials Using a Simple Mixture of Informative Priors: Incorporating Pessimistic and Optimistic Opinions Simultaneously,” Austin, TX
- 2004 University of Kansas, Biostatistics Journal Club, “A Robust Multivariate Statistical Method with an Application to Receptor Modeling: A Robust Structural Equation Model,” Kansas City, KS
- 2004 Pittsburg State Department of Mathematics, “Predicting Hearing Threshold in Nonresponsive Subjects Using a Bayesian Linear Model in the Presence of Left-censored Covariates,” Pittsburg, KS
- 2004 The University of Kansas Department of Mathematics, “Predicting Hearing Threshold in Nonresponsive Subjects Using a Bayesian Linear Model in the Presence of Left-censored Covariates,” Lawrence, KS
- 2004 The Joint Statistical Meetings: Section on Statistics in Epidemiology, “Predicting Hearing Threshold in Nonresponsive Subjects Using a Bayesian Linear Model in the Presence of Left-censored Covariates,” Toronto, Ontario, Canada
- 2004 University of Kansas, Biostatistics Journal Club, “Predicting Hearing Threshold in Nonresponsive Subjects Using a Bayesian Linear Model in the Presence of Left-censored Covariates,” Kansas City, KS
- 2003 Biostatistics External Advisory Board, University of Kansas Medical Center, “A Bayesian Log Normal Mixed model with Peakedness Parameter in the Presence of Censoring,” Kansas City, KS
- 2003 The International Environmetrics Society Meeting and 50<sup>th</sup> South African Statistical Association Meeting, “Modeling Several Levels of Uncertainty in Hearing Threshold Data,” Johannesburg, South Africa
- 2003 Faculty Research Day, University of Kansas Medical Center, “Consistency of Clustered Match-Paired Data in the Presence of Prior Information with an Application to the Evaluation of Nursing Homes,” co-presenters Becker, Wrona, Dunton, and Thompson, Kansas City, KS
- 2003 The Joint Statistical Meetings: [Section on Bayesian Stat. Sciences](#), “Incorporating Pessimistic and Optimistic Priors into the Design of Bayesian Phase II Clinical Trials,” co-presenter Matthew S. Mayo, San Francisco, CA
- 2003 University of Kansas, Biostatistics Journal Club, University of Kansas Medical Center, “Bayesian Data Analysis: It's in the Likelihood,” Kansas City, KS
- 2003 International Biometrics Society, Eastern North American Region Spring Meeting, “Sample Size Calculations in Phase II Clinical Trials Using Informative Conjugate Priors,” co-presenter Matthew S. Mayo, Tampa, FL
- 2003 Brigham Young University, Department of Statistics, “Modeling Several Levels of Uncertainty in Hearing Threshold Data,” Provo, UT, *Invited*
- 2003 Transportation Research Board, National Academy of Sciences, “Estimating Link Travel Time Correlations: An Application of Bayesian Smoothing Splines”, co-presenter Larry Rilett, Washington, DC, *Invited*
- 2002 Faculty Research Day, University of Kansas Medical Center, “A Log-Normal Distribution Model of the Effect of Bacteria and Ear Fenestration on Animal Hearing Loss: A Bayesian Approach,” Kansas City, KS
- 2002 Kansas State University, Department of Statistics, “Effect of Surgery on Hearing Loss Using the Log Normal Distribution in the Presence of Interval Censoring,” Manhattan, KS, *Invited*
- 2002 University of Missouri, Department of Statistics, “Effect of Surgery on Hearing Loss Using the Log Normal Distribution in the Presence of Interval Censoring,” Columbia, MO, *Invited*
- 2002 The Joint Statistical Meetings: Section on Bayesian Statistical Science, “A Bayesian Model of the Effect of Pseudomonas Aeruginosa and Ear Fenestration on Hearing Loss,” New York, NY
- 2002 University of Kansas, “A Statistical Model of the Effect of Pseudomonas Aeruginosa and Fenestration on Hearing Loss,” Kansas City, KS 2002 Grand Valley State University, “Categorical Data Analysis: Introduction to Two-way Frequency Tables,” Allendale, MI
- 2002 University of Wisconsin-La Crosse, “Integrating Teaching, Research, Continuing Study and Student Growth:

- A Case Study Using Medical Experiment Data,” La Crosse, WI
- 2002 University of Wisconsin-Platteville, “Integrating Teaching, Research, Continuing Study and Student Growth: A Case Study Using Medical Experiment Data,” Platteville, WI
- 2001 University of Minnesota at Duluth, “Integrating Teaching, Research, Continuing Study and Student Growth: A Case Study Using Medical Experiment Data,” Duluth, MN
- 2001 Winona State University, “Integrating Teaching, Research, Continuing Study and Student Growth: A Case Study Using Medical Experiment Data,” Winona, MN
- 2001 The International Environmetrics Society Conference, “Robust Receptor Modeling,” Portland, OR, *Invited*
- 2001 The Joint Statistical Meetings: Session on Receptor Modeling, “Applications and Goodness of Fit for Robust Multivariate Receptor Modeling,” Atlanta, GA, *Invited*
- 2001 St. Cloud State Statistics Colloquium, “A Hierarchical Model of the Effect of Pseudomonas Aeruginosa and Ear Fenestration on Hearing Loss,” St. Cloud MN
- 2001 Minnesota Council of Teachers of Mathematics, “Sampling and Experimentation,” Duluth, MN
- 2001 Transportation Research Board Annual Meeting, “Robust Estimation of Origin-Destination Matrices,” Washington D.C.
- 2000 Marquette University Mathematics Colloquium, “Robust Multivariate Estimation in Transportation and Environmental Engineering,” Milwaukee, WI, October 2000, *Invited*
- 2000 St. Cloud State Mathematics Colloquium, “Robust Multivariate Estimation in Transportation and Environmental Engineering,” St Cloud, MN
- 2000 The Joint Statistical Meetings: Session on Statistics and the Environment, “Robust Multivariate Receptor Modeling,” Indianapolis, IN
- 2000 Texas A&M University Statistics Colloquium, “Robust Multivariate Estimation and Variable Selection in Transportation and Environmental Engineering,” College Station, TX, *Invited*
- 2000 St. Cloud State Statistics Colloquium, “Statistical Science at the Texas Transportation Institute: Case Studies Involving Intelligent Transportation System (ITS) Data,” St. Cloud, MN, *Invited*
- 2000 University of Wisconsin at Oshkosh Mathematics Colloquium, “Statistical Science at the Texas Transportation Institute: Case Studies Involving Intelligent Transportation System (ITS) Data,” Oshkosh, WI, *Invited*
- 2000 Conference of Texas Statistician, “Statistical Science at the Texas Transportation Institute: Case Studies Involving Intelligent Transportation System (ITS) Data,” Sam Houston State University, Huntsville, TX
- 2000 Transportation Research Board Annual Meeting, “ITS Data Archiving: Statistical Techniques for Determining Optimal Aggregation Widths or Inductance Loop Detector Speed Data,” Washington D.C.
- 1999 Bureau of Transportation Statistics (BTS), “Statistical Science at the Texas Transportation Institute: Case Studies Involving Intelligent Transportation System (ITS) Data,” Washington D.C.

## CO-PRESENTATIONS

- 2007 Joint Statistical Meetings, with Stephen Simon, “Predicting Accrual in Clinical Trials: A Bayesian Based Approach,” Salt Lake City, UT
- 2005 Pressure Ulcer Consensus Conference, with Sandra Bergquist and Nancy Dunton, “Pressure Ulcers in Hospitalized Patients: Report from the National Database for Nursing Quality Indicators,” Tampa, FL, **Poster Winner**
- 2004 Annual Magnet Conference, with Nancy Dunton and Ali Ammouri, “Nurse Staffing and Patient Outcomes of Magnet & Non-Magnet Facilities,” Sacramento, CA
- 2004 Annual Magnet Conference, with Nancy Dunton and Ali Ammouri, “Nurse Staffing and Patient Outcomes of Magnet & Non-Magnet Facilities,” Sacramento, CA
- 2004 National Congress on the State of the Science in Nursing Research, with Nancy Dunton, Matthew Hall and Ali Ammouri, “Using Nursing Indicators To Monitor Quality of Care,” Washignton DC
- 2004 American Academy of Audiology, with Nannette Nicholson, Judith Widen, Mark Chertoff, Jack Kantz, Robert Lee, “Effects of Filtering and Re-windowing on TEOAE’s”
- 2003 Faculty Research Day, University of Kansas Medical Center, with Nancy Dunton, “Nurse Staffing and Patient Falls in U. S. Acute Care Hospitals,” co-presenters Becker, Wrona, Dunton, and Thompson, Kansas City, KS
- 2003 The Joint Statistical Meetings: [Section on Statistical Education](#), with N. Thomas Rogness and Mary Richardson, “Four out of Five Students Surveyed Would Recommend This Activity (Part 2),” San Francisco, CA
- 2003 The Joint Statistical Meetings: [Section on Statistical Education](#), with Mary Richardson and N. Thomas Rogness, “Four out of Five Students Surveyed Would Recommend This Activity (Part 1),” San Francisco, CA

- 2002 Faculty Research Day, University of Kansas Medical Center, with Jan Moore and Nancy Dunton, "Health Limitations of Missouri Temporary Assistance to Needy Families (TANF) Leavers and Stayers," Kansas City, KS
- 2002 The Joint Statistical Meetings: Section on Statistics in Sports, with Todd Bishop, "Prediction of the NBA and the NFL Draft Picks for 2001 and 2002," New York, NY
- 2002 The Joint Statistical Meetings: Section on Statistical Education, with James Nelson, "A Project That Demonstrates the Estimation of Censored Distributions to Undergraduate Students of Statistics," New York, NY
- 2002 The Joint Statistical Meetings: Section on Statistical Education, with Stacia Merkel, "Appropriateness of the Paired T-Test from Poisson Data: A Case Study of the Effect of Surgery and Streptococcus Pneumoniae and Pseudomonas Aeruginosa on Hearing Loss," New York, NY
- 2001 American Academy of Otolaryngology—Head and Neck Surgery Annual Meeting, with Sedwick, J.D., Prevatt, A.R., and Antonelli, P.J., "Hearing Loss with Labyrinthine Fistulae in Pseudomonas Aeruginosa Induced Chronic Suppurative Otitis Media," Denver, CO.
- 2001 American Academy of Otolaryngology—Head and Neck Surgery Annual Meeting, with Yunus, T.M., Molina, R., Sedwick, J.D., Prevatt, A.R. and Antonelli, P.J., "Hearing Loss with Canal Fistula in Exotoxin A-Deficient Pseudomonas Otitis Media," Denver, CO.
- 2001 American Academy of Otolaryngology—Head and Neck Surgery Annual Meeting, with Molina, R., Yunus, T.M., Sedwick, J.D., Prevatt, A.R. and Antonelli, P.J., "Exotoxin A and Hearing Loss with Pseudomonas Otitis Media and Labyrinthine Fistula," Denver, CO.
- 2001 Transportation Research Board Annual Meeting, with Gold, D. L., Turner, S.M., and Spiegelman "Imputing Missing Values in ITS Data Archives for Intervals Under 5 Minutes," Washington, D.C.
- 2001 Transportation Research Board Annual Meeting, with Turner, S.M., "Using Archived ITS Data to Estimate Mobile Source Emissions Effects of Aggregation Level on VMT-Speed Distributions and Emissions Estimates," Washington, D.C.
- 2001 Transportation Research Board Annual Meeting, with Park, D.J., Rilett, L.R. and Spiegelman, C.H., "Optimal Aggregation Interval Size of Probe-Based Travel Time Information for AITS," Washington, D.C.
- 2000 Otolaryngology-Head and Neck Surgery Annual Meeting, with Sedwick, J.D., Prevatt, A.R., and Antonelli, P.J., "Magnetic Resonance Imaging in the Search for Retrocochlear Pathology," Washington, D.C.

## TEACHING EXPERIENCE

### The University of Kansas

#### Continuing Education: Biostatistics for Nonstatisticians

- Introduction to Survival Analysis (2003)
- Introduction to Biostatistics (2003)
- Introduction to SPSS (2004)
- Introduction to SPSS (2006)

#### School of Nursing Scholarship Program

- 2006 "Bayesian One-Way Analysis of Variance: A Framework for Teaching Bayesian Data Analysis to Non-Statisticians"
- 2005 "Normal Univariate Linear Mixed Models, Hierarchical Linear Models, Multilevel Models, and Nested Models with Random Effects A Basic Primer with Applications in SPSS"
- 2003 "A Note on 'A Comparison of Imputation Techniques for Handling Missing Data'"
- 2002 "Interdisciplinary Research with A Statistician: A Win-Win Situation"

#### New Course

- NRSG 801: Analysis of Variance (2003, 2004, 2005, 2006, 2007,2008)
- BMTR 801: Analysis of Variance (2003, 2004, 2005, 2006, 2007)
- NRSG 997: Independent Study (2004), "Bayesian Statistical Methods"
- NRSG 997: Independent Study (2006), "Meta-Analysis"
- NRSG 898: Research Experience (2006), "Statistical Research Practicum from beginning

to end: Database Development and Statistical Analysis”

**Guest Lecturer (The University of Kansas)**

2003 Physical Therapy Research II (for Wen Liu, PT)  
2003 Grant Writing Course (for Lauren Aaronson, NRSG)  
2003 Dietetics and Nutrition (for Mary Hise, DN)  
2004 Nursing Research (Twice for Phoebe Williams, NRSG)  
2005 Nursing Research (Phoebe Williams, NRSG)  
2006 Nursing Research (Phoebe Williams, NRSG)  
2007 Nursing Research (Twice for Phoebe Williams, NRSG)  
2007 Nursing Research (Geri Neuberger, NRSG)  
2008 Research clinical trial Coordinator: During Study Activities (Helen Schaag, NRSG)

**St. Cloud State University 2000-2002**

Stat 193, Statistical Thinking  
Stat 447, Elementary Theory of Probability  
Stat 448, Elementary Theory of Statistics  
Stat 480, Senior Project  
Honors 110, Statistical Thinking for Honors students

**Texas A&M University 1996-2000**

Stat 307, Elementary Statistical Sampling  
Stat 303, Elementary Statistics

**Marquette University 1994-1995**

MATH 070, Calculus for Business Students

**UNDERGRADUATE SUPERVISORY EXPERIENCE**

**St. Cloud State University**

Todd Bishop (B.S., 2002)  
Stacia Merkel (B.S., 2002)  
James Nelson (B.S., 2002)  
Souleymane Kone (B.S., 2001)

**GRADUATE SUPERVISORY EXPERIENCE**

**M.S. COMMITTEE**

**St. Cloud State University**

Mariann Gabrawy (M.S., 2002)

**University of Kansas**

Gouthami Erra (Hearing and Speech., 2003)  
David Heller (Health, Sport and Exercise Science, 2008)  
Elizabeth Zayat (Occupational Therapy, 2007)  
Carola Dopp (Occupational Therapy)  
Jessica Clark (Occupational Therapy, 2008)  
Andy Wu (Occupational Therapy)

**MS. RESEARCH EXPERIENCE ADVISOR**

**University of Kansas**

Tracy Clark (Nursing)

## **MS. PROJECT ADVISOR**

**University of Kansas**

**Janet Cellitti (Nursing)**

## **PH.D. COMMITTEE**

**University of Kansas**

Catherine Siengsukon (Rehabilitative Sciences, 2008)  
Susan Megerson (Hearing and Speech)  
Linda Wendling (Nursing, Ph.D., 2005)  
Susan Klaus (Nursing, Ph.D., 2006)  
Kelli Kramer (Nursing, PhD, 2007)  
Ali Ammouri (Nursing, Ph.D., 2005)  
Emmanuel John (Rehabilitative Sciences, Ph.D., 2006)  
Nannette Nicholson (Hearing and Speech, Ph.D., 2003)  
Cynthia Ellisstoll (Nursing, Ph.D., 2003)  
Karen Komoroski (Nursing, Ph.D., 2003)  
Vicky Ross (Nursing, Ph.D., 2003)  
Lisa Mische Lawson (Occupational Therapy, PhD, 2006)  
Carol Elliot (Nursing, PhD, 2006)  
Jacque Carpenter (Nursing, PhD, 2006)  
Jeffery Lichtenhan (Hearing & Speech, PhD, 2007)  
Jennifer Duncan (Nursing, PhD, 2007)  
Murad Al-momani (Hearing & Speech, PhD, 2006)  
Diane Ebbert (Nursing, PhD, 2007)  
Jo Ellen Branstetter (Nursing, PhD, 2007)  
Hasan Al-Omani (Nursing, Ph.D., 2007)  
Marcie Swift (Rehabilitative Sciences, Ph.D., 2007)  
Gretchen Quenstedt-Moe (Nursing, Ph.D., 2007)  
Peggy Miller (Nursing, Ph.D., 2007)  
Carol Kemper (Nursing)  
Kendra Gagnon (Rehabilitative Sciences)

## **PH.D. QUALIFYING EXAM COMMITTEE**

**University of Kansas Dept of Rehabilitative Sciences**

Tarang Jain (2007)  
Kevin Farmer (2007)

## **PH.D. CUMULATIVE EXAM COMMITTEE**

**University of Kansas School of Nursing**

Stephanie Dallam (2008)

## **CONTINUING EDUCATION ATTENDED**

2008 "SAS Data Mining Course," by J Michael Hardin

2007 Eastern North American Regional Meeting, International Biometrics Society  
Short Course, "Advances in Latent Variable Mixture Modeling," by Bengt Muthen

2006 JSM Short Course, "Meta-analysis: Concepts and Applications," by

Michael Borenstein and Hannah R. Rothstein

2006 JSM Short Course, “Applied Bayesian Nonparametric Modeling,” by Alan E. Gelfand and Athanasios Kottas

2005 Western North American Regional Meeting, International Biometrics Society Short Course, “Bayesian Clinical Trials,” by Scott Berry

2004 Joint Statistical Meetings Short Course, “Generalized Linear Latent and Mixed Models ,” by Anders Skrondal, Sophia Rabe-Hesketh, and Andrew Pickels

2004 Joint Statistical Meetings Short Course, “Intermediate/Advanced Bayesian Hierarchical Modeling,” David Draper

2004 ASA Short Course, “Statistical Methods for the Measurement of Repeated Measurements,” by Charles Davis

#### OTHER ACTIVITIES

**2004 University of Kansas’ Wheat State Whirlwind Tour:** six days touring Kansas with other University of Kansas faculty and staff. This is a competitive application through the Chancellor’s office. The goals of the tour are: To understand/appreciate origins of KU students, develop a deeper relationship with Kansas and its people so that we can gain a better understanding of their needs and hopes, experience a wide spectrum of Kansas people, heritage, and physical beauty and create a community within the University that crosses disciplinary boundaries.

**2004 Election Checker for Democratic Party**

**2004 Participant in the Analytic Strategies for Nursing Databases: A Collaborative Conference of the National Nursing Quality Database Consortium, Palo Alto, CA**

**2005 (11/12/05) Sports reporter Blair Kerkhoff, Kansas City Star, Reported Results of my paper “There’s No Place Like Home: Estimating Intra-Conference Home Field Advantage in College Football using a Bayesian Piecewise Linear Model,”**

**2007 NDNQI First National Conference Planning Committee Member.**

#### OTHER SKILLS

##### **Software Knowledge**

Matlab, WinBUGS, Minitab, MS Office, Splus, HTML, SAS, R, SPSS, Microsoft, Mplus

Date: Sep 16, 2008

**UNIVERSITY OF KANSAS SCHOOL OF MEDICINE**  
**FACULTY CURRICULUM VITAE**

**I. PERSONAL DATA**

Name: Jianghua (Wendy) He, PhD  
Current Academic Rank: Assistant Professor  
Department(s): Biostatistics

Office Address: University of Kansas Medical Center  
5028 Robinson, Mailstop 1026  
3901 Rainbow Blvd.  
Kansas City, Kansas 66160-7312

Phone: (913) 588-2985  
Fax: (913) 588-0252  
E-Mail: jhe@kumc.edu

PROFESSIONAL DEVELOPMENT

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
1997	BS (Information Management)	University of Science and Technology of China
2000	MS (Management Science)	University of Science and Technology of China
2001	MA (Statistics)	Bowling Green State University
2007	PhD (Statistics)	Florida State University

Postgraduate Education:

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
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Academic and Professional Appointments and Activities. (List in chronological order. Please explain any discontinuity in professional experience)

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
08/2000 – 12/2001	Teaching Assistant	Bowling Green State University
08/2003 – 05/2005	Teaching Assistant	Florida State University
06/2005 – 06/2007	Biostatistician	Florida State University, School of Medicine
06/2007 – Present	Assistant Professor	University of Kansas Medical Center
06/2007 – Present	Member	Center for Biostatistics and Advance Informatics, University of Kansas Medical Center
10/2005 – Present	Member	Kansas Masonic Cancer Research Institute, University of Kansas Medical Center

Professional Registration/Licensure:

<u>Year</u>	<u>Number</u>	<u>State</u>
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Professional Certification(s):

<u>Date</u>	<u>Board</u>
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Professional Societies and Affiliations:

<u>Year</u>	<u>Organization</u> (including offices held)
10/2004 --- present	American Statistical Association
12/2007 --- present	Eastern North American Region/International Biometric Society

Honors and Awards: (honorary societies, research awards, teaching and other awards.)

<u>Year</u>	<u>Award</u>
04/2006	Winner of the Yongyuan and Anna Li Student Presentation, Stat. Dept., FSU
02/2006	Student Paper Award, ASA Chapter Meeting of Florida
08/2004	Best First-year Student in theoretical statistics, FSU
08/2004	Book award, Statistics Department, FSU
08/2003	Teaching Fellowship, FSU

**II. TEACHING ACTIVITIES** (Evaluations and other evidence of quality of teaching must be attached; this represents the teacher's portfolio and should accurately summarize ALL of your teaching activities)

Brief statement of areas of teaching interest:

Linear Regression, Logistic Regression, Survival Analysis, Categorical  
Categorical Data Analysis, Nonparametric Statistics.

1. Instruction:

Didactic (e.g.: lectures and formal presentations)

<u>Academic</u> <u>Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2001	College Algebra		Lectures		5 hrs/week	undergraduate
2003-2004	STAR1013	Statistics Through Examples	Lectures		3hrs/week	undergraduate
2005	STAT2023	Business Statistics	Lectures		3hrs/week	undergraduate
2007	PRVM886	Applied Linear Regression	Lectures		3hrs/week	graduate
2008	PRVM882	Applied Nonparametric Statistics	Lectures		3hrs/week	graduate
2008	PRVM886	Applied Linear Regression	Lectures		3hrs/week	graduate

Nondidactic (e.g.: workshops, labs and discussion groups)

<u>Academic</u> <u>Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>

Clinical

<u>Year</u>	<u>Hours</u>	<u>Student</u>		<u>Length of Service</u>
		<u>No</u>	<u>Type</u>	

Master's Theses and PhD. Dissertations directed

<u>Year</u>	<u>Student Name</u>	<u>Thesis title</u>	<u>Degree (Completed /In process)</u>
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Supervision of Postdoctoral fellows

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
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Advising (Thesis or dissertation committees: student academic group/individual)

<u>Date</u>	<u>Student or group name</u>	<u>Type of Student/group</u>
05/30/08	Tarang Jain	PhD/Physical Therapy

Other teaching activities

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching function</u>
05/05/08	Multiple Tests	KU Biostatistics Journal Club	literature review /leading the discussion

## 2. Development of Educational Materials

(course materials e.g. syllabi, educational software packages, Web sites, films, educational tapes and evaluation tools)

<u>Year</u>	<u>Title Description</u>	<u>Intended Audience</u>
2008	Applied Nonparametric Statistics: syllabus, lectures	medical school graduate students
2008	Regression: syllabus	MS of biostatistics
2008	Nonparametric Statistics: syllabus	MS of biostatistics

## 3. Educational Leadership

(responsibility for courses and other leadership activities including mentoring of junior faculty. Please list faculty members mentored – letters from mentorees may be provided.)

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### III. SERVICE ACTIVITIES:

See guidelines and instructions to applicants for definitions and suggested documentation of professional and academic service.

#### **Professional Service:**

The diverse area of professional service includes patient care. Applicants should select measures that most clearly and concisely document their accomplishments and the value of these activities to the Medical School and University. Measures of both quantity and quality of activities are required and if necessary, applicants should provide brief descriptions to assist reviewers. **Measures of patient care activities include numbers of patients, time allocation in clinical activity, procedures completed, Relative Value Units (RVUs), and value to the School of the clinical service.** If the primary quality evaluation is the subjective assessment of peers, this should be available in letters from departmental colleagues, chair, or referees.

The significance of professional service in the forms of task forces, committees and similar groups should be explained and the specific role of the applicant clarified.

Professional consulting services must have academic credibility and clear service intent and not be performed primarily for personal profit.

2006-Present Non-Voting Member, General Clinical Research Center, University of Kansas Medical Center  
 2006-Present Biostatistical Reviewer, General Clinical Research Center, University of Kansas Medical Center

**Academic Service:**

In academic service the contribution of the candidate to the academic community should be clearly documented. Names and dates of committees, task forces, or working groups should be provided. A concise description of the significance of the group and explanation of the role of the applicant should be provided.

Activities related to Academic Societies should be documented in this section.

**IV. RESEARCH and SCHOLARLY ACTIVITIES:**

Brief statement of areas of research and scholarly interest, including current projects: Bayesian Survival Analysis, Meta Analysis, Obesity Research, Longitudinal Data Analysis

1. Grants and contracts

(Information must include whether the nominee is the principal investigator or a co-investigator, names of all investigators, title of grant, funding source, dollar amount in direct costs, and years during which grant applies. Co-investigators must specify role). Provide four copies of abstracts and award notice or renewal for all grants or contracts awarded in last five years.

Grants and contracts awarded:  
 (List in chronological order)

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Sullivan		Dairy Foods and Blood Pressure in Multi-Ethnic Children	National Institutes of Health	\$466,430	09/01/06 – 07/31/09	Active
Mayo		Biostatistics/Informatics Shared Resource	National Institutes of Health	\$195,300	04/01/02 - 03/31/08	Completed
Atkinson		General Clinical Research Center (GCRC)	NIH/NCRR	\$1,938,267	04/01/2007 – 03/31/2010	Active
Richter		Strengthening Organizational Capacity to Treat Co-Occurring Nicotine Dependence Among People with Mental Illness	Health Care Foundation of Greater Kansas City	\$79,213	08/01/2007 – 07/31/2008	Active
Richard Barohn		The methotrexate in myasthenia gravis (RO1)	FDA OPD program	\$1,600,000	12/01/08 - 11/30/12	Funded

Grants and contracts submitted:

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Benyi Li		PI3K p110beta activation in androgen receptor transactivation and prostate cancer progression	Department of Defense	\$120,315	04/01/2009 - 03/31/2012	Pending
Richard Barohn		Heartland Institute for Clinical and Translational Resear	National Institutes of Health	\$6,616,362	07/01/2008 - 06/30/2013	Not funded
Ann Davis		A Randomized Controlled Trial to Enhance Nutrition and Activity Among Rural Children	National Institutes of Health	\$50,000	12/01/2008 - 11/30/2010	Not funded

## 2. Scholarly Publications

Full length, peer-reviewed articles in scientific journals: (Provide names of all authors, year, title, journal, volume, and inclusive pages. List in chronological order.)

Articles published: **(Provide 4 copies of each peer-reviewed article published within the last five years. Other articles may be provided at the applicant's discretion.)**

Johnson SB, Pilkinton LL, Deeb LC, Jeffers S, **He J**, and Lamp C: "Prevalence of Overweight in North Florida Elementary and Middle School Children: Effects of Age, Sex, Ethnicity, and Socioeconomic Status". Journal of School Health. 2007,77,630-636

Singh S, Reddymasu S, Waheed S, Vail M, **He J**, Talapanneni J, Olyae M: "Endoscopic Ultrasonography findings in patients with nonspecific changes of the pancreas on computed tomography: A single-center experience". Digestive Diseases and Sciences. 2008, 53:2799–2804

Manuscripts in press: (Provide names of all authors, title, journal, and **4 photocopies of manuscript plus evidence of acceptance by journal**)

Johnson SB, Pilkinton LL, Lamp C, **He J**, and Deeb LC: "Parent Reactions to a School-Based Body Mass Index Screening Program". Journal of School Health.

Manuscripts submitted but not yet accepted: (Provide names of all authors, title, journal, and **4 photocopies plus evidence of receipt of manuscript by journal.**)

**He J**, McGee D, and Niu X: "Application of the Bayesian Dynamic Survival Model in Medicine". Statistics in Medicine. June, 2008

Ely AC, Befort CA, Banitt A, **He J**, Gibson C, Sullivan DK, Smith C, and Ellerbeck EF. "A Chronic Care Model Program Incorporating Group Office Visits for Obesity Treatment in Primary Care". Journal of Family Practice. Sep, 2008.

Invited or non-peer-reviewed articles or reviews: **(Provide names of all authors, year, title, journal, volume, and pages. If in press, provide documentation and 4 photocopies if published within the last five years.)**

Books and book chapters: **(Provide names of all authors, year, book title, chapter title, edition, publisher, and pages. If in press, provide documentation and 4 photocopies if published the last five years.)**

Published abstracts: (Provide names of all authors, year, title, where published, volume, and pages.)

Other scholarly publications

### 3. Presentations and posters

Oral paper presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review, and location and date of presentation.)

Scientific papers presented at national and international meetings:

**He J**, McGee D, and Niu X: "Application of Bayesian Dynamic Survival Model for Medical Research", ENAR (Eastern North American Region of International Biometric Society) 2008 Spring Meeting, Arlington, Virginia, Mar 19, 2008

**He J**, Mayo M: "Adjust the Analysis of Group Sequential Trials Using Bayesian Dynamic Survival Models Combined with Computation Techniques", Joint Statistical Meeting 2008, Denver, Colorado, Aug 5, 2008

Scientific papers presented at local and regional meetings:

**He J**, McGee D, and Niu X: Varying Relationship between BMI and All-cause Mortality, 2006 American Statistical Association Chapter Meeting of Florida Feb.17, 2006, Jacksonville, FL

**He J**, McGee D, and Niu X: "Application of Bayesian Dynamic Survival Model for Medical Research" Biostatistics Journal Club, University of Kansas Medical Center, Nov.5, 2007

**He J**: "The Effect of Length of Follow-up on Survival Analysis in Medical and Epidemiological Settings" Center for Biostatistics and Advanced Informatics Seminar Series, KUMC, December 11 2007

**He J**: "Using multiple imputation to adjust the estimates of the Cox model for group sequential designs." External Advisory Board Site Visit for the Center for Biostatistics and Advanced Informatics, University of Kansas Medical Center, Feb.22, 2008.

Poster presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review and location and date of presentation.)

Poster presentations at national and international meetings:

Ely AC, Befort C, Banitt A, He J, Smith CE, and Ellerbeck EE: "Managing Obesity as a Chronic Disease in Primary Care: The Kansas Primary Care Weighs In II Experience" *SGIM 31st Annual Meeting*, Pittsburgh, Pennsylvania, April 9-12, 2008

Sullivan DK, Spaeth K, Gibson CA, He J, and Donnelly JE: "High prevalence of overweight and obesity among multi-ethnic, urban, low-socioeconomic children" *2008 obesity society annual scientific meeting*, October 3-7, 2008

Banitt A, Ely A, Befort C, Goetz JR, He J, Gibson C, Sullivan DK: "Group Office Visits for Obesity in Primary Care: The Kansas Primary Care Weighs In II Experience" *2008 obesity society annual scientific meeting* October 3-7 2008

Poster presentations at local and regional meetings:

Invited seminars at other universities: (Provide title, sponsoring organization or institution, and date of presentation.)

4. Other evidence of scholarship

(includes clinical guidelines, policy documents, contributions to significant position statements by professional organizations, and development of national examinations)

March 1, 2008

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE  
FACULTY CURRICULUM VITAE

**PERSONAL DATA**

Name: **John Keighley**  
Current Academic Rank: Research Assistant Professor  
Department(s): Biostatistics

*Office Address, Phone, Fax and e-mail:*

University of Kansas Medical Center  
Department of Biostatistics  
3901 Rainbow Boulevard Mail-Stop 1026  
Kansas City, KS 66160  
Phone (913) 588-7391  
Fax (913) 588-0252  
e-mail: [jkeighle@kumc.edu](mailto:jkeighle@kumc.edu)

**PROFESSIONAL DEVELOPMENT**

*Undergraduate and Graduate Education:*

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
1979-1985	B.S. (Earth Science)	Emporia State University
1986-1989	M.S. in Mathematics	Emporia State University
1989-2005	Ph.D. in Statistics	Kansas State University

*Postgraduate Education:*

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
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*Academic and Other Professional Appointments and Activities:*

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
Aug 1986 - May 1989	GTA	Department of Mathematics Emporia State University, KS
Aug 1989 - May 1995	GTA	Department of Statistics Kansas State University, KS
Oct 1995 - June 1999	Research Associate	Department of Preventive Medicine University of Kansas Medical Center Kansas City, KS
June 1999 – Dec 2005	Research Instructor	Department of Preventive Medicine University of Kansas Medical Center
Jan 2006 – July 2007	Research Assistant Professor	Department of Preventive Medicine and Public Health University of Kansas Medical Center
July 2007 - Present	Research Assistant Professor	Department of Biostatistics University of Kansas Medical Center

*Professional Registration/Licensure:*

<u>Year</u>	<u>Number</u>	<u>State</u>
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*Professional Certification(s):*

<u>Date</u>	<u>Board</u>
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*Professional Societies and Affiliations:*

<u>Year</u>	<u>Organization</u> (including offices held)
1987 - 1989	Association of Computing Machinery
1990 - 1992	American Statistical Association
1996 - current	North American Association of Central Cancer Registries
2000 – current	American Statistical Association

*Honors and Awards: (honorary societies, research awards, teaching awards etc.)*

<u>Year</u>	<u>Award</u>
2007	Travel Award to ASA joint meetings in Salt Lake City

## TEACHING ACTIVITIES

*Brief statement of areas of teaching interest:*

*Didactic:* (e.g.: lectures and formal presentations)

Academic Year	Course	Title	Instruction		No	Student	
			Type	Hours		Type	
Fall 1986		Intermediate Algebra			70	Undergraduate	(2 sections)
Spring 1987		Intermediate Algebra			70	Undergraduate	(2 sections)
Fall 1987		Intermediate Algebra			35	Undergraduate	
Fall 1987		Math for Elementary Teachers			40	Undergraduate	
Spring 1988		Intermediate Algebra			35	Undergraduate	
Spring 1988		Elementary Mathematics			30	Undergraduate	
Fall 1988		Intermediate Algebra			70	Undergraduate	(2 Sections)
Spring 1989		Intermediate Algebra			70	Undergraduate	(2 Sections)
Fall 1989		Business Statistics I			40	Undergraduate	
Spring 1990		Business Statistics II			40	Undergraduate	
Fall 1990		Business Statistics I			80	Undergraduate	(2 Sections)
Spring 1991		Business Statistics I			40	Undergraduate	
Spring 1991		Social Statistics			40	Undergraduate	
Summer 1991		Social Statistics			30	Undergraduate	
Fall 1991		Business Statistics II			80	Undergraduate	
Spring 1992		Business Statistics II			80	Undergraduate	
Fall 1992		Business Statistics I			80	Undergraduate	
Spring 1993		Business Statistics II			80	Undergraduate	
Fall 1993		Business Statistics II			80	Undergraduate	
Spring 1994		Business Statistics II			80	Undergraduate	
Fall 1994		Business Statistics II			80	Undergraduate	(2 Sections)
Spring 1995		Business Statistics II			80	Undergraduate	(2 Sections)
Summer 1999	PRVM 871	Data Management & Descriptive Epidemiology			10	Graduate	
Summer 2001	PRVM 871	Data Management & Descriptive Epidemiology			10	Graduate	
Summer 2002	PRVM 871	Data Management & Descriptive Epidemiology			6	Graduate	
Summer 2003	PRVM 871	Data Management & Descriptive Epidemiology			6	Graduate	
Fall 2004	PRVM 879	Statistical Computing in Research			6	Graduate	

Summer 2005	PRVM 804	Principles of Statistics in Public Health	11	Graduate
Fall 2005	PRVM 879	Statistical Computing in Research	6	Graduate
Summer 2006	PRVM 804	Principles of Statistics in Public Health	10	Graduate
Fall 2006	PRVM 879	Statistical Computing in Research	9	Graduate
Fall 2007	PRVM 879	Statistical Computing in Research	5	Graduate
Fall 2007	PRVM 804	Principles of Statistics in Public Health	22	Graduate
Spring 2008	PRVM 804	Principles of Statistics in Public Health	25	Graduate

*Nondidactic:* (e.g.: workshops, labs and discussion groups)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Type</u>	<u>Instruction Hours</u>	<u>Student No</u>	<u>Type</u>
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*Clinical:*

<u>Year</u>	<u>Hours</u>	<u>Student No</u>	<u>Type</u>	<u>Length of Service</u>
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*Master's and Ph.D. theses directed:*

<u>Year</u>	<u>Student Name</u>	<u>Thesis title</u>	<u>Degree (Completed /In process)</u>
2006	Kelly Cramm	Patient-Provider Communication	MPH – completed
2006-2007	Laura Roling	Trans Fatty Acid Consumption and the Effect on Lipids in Young Adults: Jayhawk Observed Eating Study (JOE)	MS – Completion 7/07
2007-2008	Angela Myers	Not known yet	MPH – In Process
2007-2008	Josh Powell	Not Known yet	MS – In Process
2007-2008	Stacy Picek	Not Known yet	MPH-In Process
2007-2008	Joseph Soltys	The Role of the Central Nervous System in the Integration of Proprioceptive Information	PhD-In Process

*Supervision of Postdoctoral fellows:*

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
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*Advising:* (Thesis committee/student academic group/individual)

Date	Student or Group Name	Topic	Type of Student/Group
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*Educational materials:* (films, educational tapes, syllabi, educational Software packages, courses developed, Web courses)

<u>Year</u>	<u>Title Description</u>	<u>Intended Audience</u>
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*Other teaching activities:*

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching function</u>
Sept 6 2007	Critical Review of Randomized Clinical Trial Study Design”, CORE 800 – Foundations in Medicine Small Group Leader	Orr-Major 1012	Group Discussion Leader
Sept 17 2007	Talk on Kansas Cancer Registry, Role and purpose.	Orr-Major 1025	Speaker
Dec 4 <sup>th</sup> 2007	Lecture on Analysis of Mixed Models	SON 1005	Lecturer

**RESEARCH AND SCHOLARLY ACTIVITIES:**

*Brief statement of areas of research interest and current projects underway:*

Applied Statistics and Mixed Model Analysis methods.

*Current projects underway:*

1. Kansas Cancer Registry: To establish a statewide Kansas cancer registry to ascertain incidence on cancer in Kansas. The registry is used for cancer surveillance, prevention, control efforts, and for special studies on cancers.

Grant and contract support:

*Previous grants:*

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>
Pamela Duncan, PI Sue-Min Lai, Co-PI	Stephanie Studenski John Keighley, (Data Analyst)	Characterizing Measures of Stroke Outcomes	Glaxo-Wellcome Company	\$176,637	7/95 - 6/96
Pamela Duncan, PI Stephanie Studenski, Co-PI Sue-Min Lai, Co-PI	John Keighley, (Data Analyst)	Characterizing Measures of Stroke Rehabilitation Outcomes	Veteran’s Administration 4/99	\$269,900	7/97 -
Sue-Min Lai	John Keighley, (Data Analyst)	Kansas Cancer Registry	CDC & KDHE	\$3,657,241	10/94 - 6/00
Sue-Min Lai	John Keighley (Data Analyst)	Cancers in nursing home residents	CDC & KDHE	\$ 126,000	6/01 - 6/02

Sue-Min Lai	John Keighley, (Data Analyst)	Kansas Cancer Registry	CDC & KDHE	\$2,850,000	7/00 - 6/05
Sue-Min Lai	Brantley Thrasher John Keighley	Pesticides & risk for prostate cancer	CDC/ATPM KDHE	\$ 450,000	4/01 - 4/04
Sue-Min Lai	John Keighley, (Data Analyst)	Kansas Cancer Registry Using GIS technology	CDC & KDHE	\$3,712,945	7/02 - 6/07
Matthew Mayo	John Keighley (Statistician)	Biostatistics/ Informatics Shared Resource	NIH	\$196,530	4/01 - 3/07

*Current grants:*

Principal Investigator	<u>Investigators</u>	<u>Title of Grant</u>	<u>Source</u>	<u>Costs</u>	<u>Years</u>
Sue-Min Lai	John Keighley, (Data Analyst)	Kansas Cancer Registry	CDC & KDHE	\$3,800,000	7/07 - 6/12
Mahnken Jonathan	John Keighley (Data Analyst)	Oral/Pharyngeal Cancer Incidence from Medicare Claims	NIH	\$294,000 5/09	6/07
Elizabeth Topp	John Keighley (Consultant)	Controlled Release of Immunomodulating Peptides in T1D	Juvenile Diabetes Research Fd	\$98,182	06/07 - 05/08
Norge Jerome	John Keighley (Statistician)	Enhancing Behavioral Obesity Treatment for African American Women	NIH	\$404,250	12/07 -
Amit Rostogi	John Keighley	A Prospective, Randomized Controlled Trial form the Increased Detection of Colon Polyps and Predicting Histology		\$??	?

*Pending grant proposals: (i.e. those written and submitted)*

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>
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**PUBLICATIONS:**

Full length, peer-reviewed articles in scientific journals:

*Articles already published:*

Lai SM, Duncan PW, Keighley J. Prediction of functional outcome after stroke: Comparison of the Orpington Prognostic Scale and the NIH Stroke Scale. *Stroke* 1998; 29:1838-1842.

Duncan PW, Lai SM, Keighley J. Defining post-stroke recovery: implications for design and interpretation of drug trials. *Neuropharmacology* 2000; 39(5): 835-841.

Lai SM, Duncan PW, Keighley J, Johnson D. Depressive symptoms and independence in BADL and IADL. *J Rehab Res and Development*, 2002;39(5): 589-596.

Lai SM, Gray J, Garimella S, Keighley J, Murphy P. Digital Document Management - There is Far More Than Meets the Eyes. *J Registry Management*, 2003;30(3);121-124.

Lai SM, Garimella S, Keighley J. Pathology and dermatology reports: Key in completeness of melanoma cancer reporting in population-based cancer registries. *J Registry Management* 2004;31:87-91.

Lai SM, Duncan PW, Dew P, Keighley J. Sex Differences in Stroke Recovery. *Prev Chronic Dis*, 2005;2(3):

*Manuscripts in press:*

(Provide names of all authors, title, journal, and photocopy of manuscript and letter of acceptance from journal editor.)

*Manuscripts submitted but not yet accepted:*

Mahnken JD, Keighley JD, Cumming CG, Girod DA, Mayo MS: "Evaluating the Completeness of the SEER-Medicare Linked Database for Oral and Pharyngeal Cancer". *Medical Care*

*Invited or non-peer-reviewed articles or reviews:*

*Books and book chapters:*

*Published abstracts:*

Lai SM, Duncan PW, Keighley J, Studenski S. Prognostic ability of Orpington Prognostic Scale and NIH Stroke Scale. *Stroke* 29(1):318,1998

Duncan PW, Lai SM, Keighley J, Rymer M. Time to medical attention after a mild or moderate acute stroke. *Stroke* 239(1):312, 1998

Oral paper presentations:

*Scientific papers presented at national and international meetings:*

*Scientific papers presented at local and regional meetings:*

Poster presentations:

*Poster presentations at national and international meetings:*

Duncan PW, Lai SM, Keighley J, Rymer M. Time to medical attention after a mild or moderate acute stroke. *American Heart Association, 23<sup>rd</sup> International Joint Conference on Stroke and Cerebral Circulation*, Orlando, FL, 1998.

Lai SM, Duncan PW, Keighley J, Studenski S. Prognostic ability of Orpington Prognostic Scale and NIH Stroke Scale. *American Heart Association, 23<sup>rd</sup> International Joint Conference on Stroke and Cerebral Circulation*, Orlando, FL, 1998.

Lai SM, Van Ness C, Dirisina M, Keighley J. Reassessment of access to cancer care in Kansas using GIS technology. *The 2002 North American Association of Central Cancer Registries*, Toronto, Canada, June 2002.

Lai SM, Garimella S, Keighley J. How valuable is it to use hospital disease index from small size hospitals for cancer case finding. *The 2002 North American Association of Central Cancer Registries*, Toronto, Canada, June 2002.

Lai SM, Gray J, Garimella S, Keighley J, Murphy P. Digital Document Management - There is far more to it than meets the eyes *The 2003 North American Association of Central Cancer Registries*, Honolulu, HI, June 2003.

Lai SM, Garimella S, Keighley J. Hospices – Another source of cancer reporting. *The 2003 North American Association of Central Cancer Registry Annual Conference*, Honolulu, HI, June 2003.

Lai SM, Garimella S, Keighely J. Pathology and Dermatology Reports: Key in Completeness of Melanoma Cancer Reporting in Population-based Cancer Registries. *The 2004 North American Association of Central Cancer Registry Annual Conference*, Salt Lake City, UT, June, 2004.

Lai SM, Garimella S, Keighely J. Pathology and Dermatology Reports: Key in Completeness of Melanoma Cancer Reporting in Population-based Cancer Registries. *The 2004 North American Association of Central Cancer Registry Annual Conference*, Salt Lake City, UT, June, 2004.

Lai SM, Keighley J, Krebill R. Is Age-adjusted Incidence to Mortality Ratio a Useful Tool? *The 2005 North American Association of Central Cancer Registry Annual Conference*, Boston, MA, June, 2005.

Lai SM, Keighley J, Garimella S. Significance of Non-Hospital Physician Reporting? *The 2006 North American Association of Central Cancer Registry Annual Conference*, Regina, Canada, June, 2006.

Mahnken JD, Keighley J, Mayo MS: “Evaluating SEER-Medicare Linked Database Completeness for Oral and Pharyngeal Cancer.” Joint Statistical Meetings, Salt Lake City, UT, July 29-August 2, 2007.

*Poster presentations at local and regional meetings:*

Mahnken J, Keighley J, Girod D, Cumming C, Mayo M. Oral and Pharyngeal Cancer Incidence From Medicare Claims. *The 2006 Annual Mason’s Day*, Kansas City, KS, Oct 2006.

*Invited seminars at other universities:*

*Other evidence of scholarly activities:*

Member of GU Cancer Working Working Group, University of Kansas Medical Center 2007 - current

## **ACADEMIC ACTIVITIES**

*Professional Service:*

*Academic Service:* \

Date: September 11, 2008

**UNIVERSITY OF KANSAS SCHOOL OF MEDICINE**  
**FACULTY CURRICULUM VITAE**

**PERSONAL DATA**

Name: Jonathan D. Mahnken, PhD  
 Current Academic Rank: Assistant Professor  
 Department(s): Biostatistics

Office Address: University of Kansas Medical Center  
 MSN 1026, 3901 Rainbow Blvd  
 Kansas City, Kansas 66160  
 Phone: (913) 588-2696  
 Fax : (913) 588-0252  
 Email: jmahnken@kumc.edu

**PROFESSIONAL DEVELOPMENT****Undergraduate and Graduate Education**

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
1992-1996	BA (Mathematics)	Concordia University, Nebraska
1997-1998	N/A (Biometry)	University of Nebraska
1998-2000	MS (Preventive Medicine)	University of Texas Medical Branch
2000-2003	PhD (Biometry)	University of Texas – Health Science Center

**Postgraduate Education**

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
N/A		

**Academic and Other Professional Appointments and Activities** (List in chronological order. Please explain any discontinuity in your professional experience.)

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
Nov. 1997-May 1998	Student Intern	Nebraska Agricultural State Statistician
Aug. 1998-Apr. 2000	Graduate Assistant	University of Texas Medical Branch
Apr. 2000-Jan. 2001	Research Assistant	University of Texas Medical Branch
Jan. 2001-Apr. 2004	Research Associate II	University of Texas Medical Branch
Apr. 2004-Jun. 2007	Assistant Professor	Dept. of Preventive Medicine and Public Health, University of Kansas Medical Center
<b>Jul. 2007-Present</b>	<b>Assistant Professor</b>	<b>Dept. of Biostatistics, University of Kansas Medical Center</b>
<b>Jan. 2005-Present</b>	<b>Member</b>	<b>Center for Biostatistics and Advance Informatics, University of Kansas Medical Center</b>
<b>Mar. 2005-Present</b>	<b>Associate</b>	<b>Landon Center on Aging, University of Kansas Medical Center</b>
<b>May 2005-Present</b>	<b>Member</b>	<b>Kansas Masonic Cancer Research Institute, University of Kansas Medical Center</b>
<b>Aug. 2008-Present</b>	<b>Scientific Director</b>	<b>Biostatistics/Informatics Shared Resource, University of Kansas Cancer Center</b>

**Professional Registration/Licensure**

<u>Years</u>	<u>Number</u>	<u>State</u>
N/A		

**Professional Certification(s)**

<u>Date</u>	<u>Board</u>
N/A	

### Professional Societies and Affiliations

<u>Year</u>	<u>Organization</u> (including offices held)
<b>1999-Present</b>	<b>Member, American Statistical Association</b>
2000-2001	Member, American Public Health Association
<b>2003-Present</b>	<b>Member, International Biometric Society Eastern North American Region</b>

### Honors and Awards (honorary societies, research awards, teaching awards, etc.)

<u>Year</u>	<u>Award</u>
2004	Delta Omega Honorary Society in Public Health
2005-2007	National Institutes of Health Clinical Research Loan Repayment Program
2007	Excellence in Public Health Teaching Award
<b>2008</b>	<b>Faculty Domestic Travel Award</b>
<b>2008-2010</b>	<b>National Institutes of Health Clinical Research Loan Repayment Program Renewal</b>

### TEACHING ACTIVITIES

#### Brief Statement of Areas of Teaching Interest

I have interest in teaching biostatistics courses at various levels. These include introductory biostatistics courses with a broad range of students, both with and without a concentration in biostatistics; also included are more theoretical statistics courses as well as advanced applications courses such as survival analysis. I developed the curriculum for the new course PRVM 884. This course was initiated as part of the new MS in Clinical Research degree program and was first offered in the Fall 2005 semester. PRVM 884 has broad applications to students in other fields both at the Medical Center and on the KU Lawrence campus whose research may involve categorical or censored data. In addition, I have revised the curriculum for the PRVM 814 course and adopted a new textbook to help differentiate this course from others offered at the Medical Center, and to better prepare students to take the more advanced statistics courses that currently being are offered and developed. I have developed and adopted a series of electronic lectures for PRVM 817, which were used in conjunction with weekly open discussions of the course material. Incorporating this technology allowed students to utilize the advantages afforded to online students, while maintaining weekly contact for questions arising from the course material and homework. This hybrid teaching setting is ideal for working professionals such as faculty at our institution who are interested in developing the skills to become independent clinical researchers. Finally, I have also developed electronic lectures for the PRVM 884 course, and began utilizing a hybrid teaching format similar to that described fro PRVM 817 during the Fall 2007 semester.

**lactic** (e.g., lectures and formal presentations)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2004	PRVM 814	Fundamentals of Biostatistics I	Lecture	48	16	Graduate
2005	PRVM 814	Fundamentals of Biostatistics I	Lecture	48	15	Graduate
2005	PRVM 884	Categorical Data and Survival Analysis	Lecture	48	2	Graduate
2006	PRVM 806	Advanced SAS Programming: Macro Processing and SQL	Independent Study		1	Graduate

2006	PRVM 814	Fundamentals of Biostatistics I	Lecture	48	20	Graduate
2006	PRVM 891	Public Health Practicum	Independent Study		1	Graduate
2007	PRVM 817	Fundamentals of Biostatistics II	Lecture	48	6	Graduate
2007	PRVM 893	Public Health Project	Independent Study		1	Graduate
2007	PRVM 884	Categorical Data and Survival Analysis	Lecture	48	3	Graduate
<b>2008</b>	<b>PRVM 817</b>	<b>Fundamentals of Biostatistics II</b>	<b>Lecture</b>	<b>48</b>	<b>5</b>	<b>Graduate</b>
<b>2008</b>	<b>PRVM 803</b>	<b>Introduction to Clinical Research</b>	<b>Lecture</b>	<b>1.5</b>	<b>???</b>	<b>Graduate</b>
<b>2008</b>	<b>PRVM 884</b>	<b>Categorical Data and Survival Analysis</b>	<b>Lecture</b>	<b>48</b>	<b>1</b>	<b>Graduate</b>

**Nondidactic** (e.g., workshops, labs and discussion groups)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2005	ICM 801	Health of the Public	Small Group	1	3	Medical

**Clinical:**

<u>Year</u>	<u>Hours</u>	<u>Student</u>		<u>Length of Service</u>
		<u>No</u>	<u>Type</u>	
N/A				

**Master's and PhD Theses Directed**

<u>Year</u>	<u>Student Name</u>	<u>Thesis Title</u>	<u>Degree (Completed/In Progress)</u>
<b>2008-Present</b>	<b>Catherine Womack</b>	<b>Comparing Oral and Pharyngeal Cancer Rates in Rural and Urban Areas</b>	<b>In Progress</b>

**Supervision of Postdoctoral Fellows**

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
N/A		

**Advising** (thesis committee/student academic group/individual)

<u>Date</u>	<u>Student or Group Name</u>	<u>Type of Student/Group</u>
2004-2006	Kelly Cramm, MD	MPH, University of Kansas Medical Center
2004-2006	Julie Anderson	MS in Clinical Research, University of Kansas Medical Center
<b>2004-Present</b>	<b>Timothy Welch</b>	<b>MPH, University of Kansas Medical Center</b>
<b>2004-Present</b>	<b>Vera Wekulo, MD (Capstone)</b>	<b>MPH, University of Kansas Medical Center</b>
2005-2007	Sarah Bond, PharmD	MPH, University of Kansas Medical Center
2005-2006	Raegen Bond (Capstone)	MPH, University of Kansas Medical Center

2005-2007	Samantha Machen	MPH, University of Kansas Medical Center
2005-2007	Laura Mussulman (Capstone)	MPH, University of Kansas Medical Center
2006	Julie Anderson (Capstone)	MS in Clinical Research, University of Kansas Medical Center
<b>2006-Present</b>	<b>Catherine Womack</b>	<b>MS in Clinical Research, University of Kansas Medical Center</b>
<b>2006-Present</b>	<b>Steven Jernigan</b>	<b>PhD, University of Kansas Medical Center</b>
<b>2007-Present</b>	<b>Brandon Carlson</b>	<b>MPH, University of Kansas Medical Center</b>
2007	Benjamin Cronk	MPH, University of Kansas Medical Center
<b>2007-Present</b>	<b>Greg Howell</b>	<b>MPH, University of Kansas Medical Center</b>
2007	Molly McVey (Thesis)	MS in Mechanical Engineering, University of Kansas
<b>2007-2008</b>	<b>George Thomas</b>	<b>MD-PhD in Molecular and Integrative Physiology Qualifying Examination Committee, University of Kansas Medical Center</b>
<b>2008</b>	<b>Jason Rucker</b>	<b>PhD in Rehabilitation Science Qualifying Examination Committee, University of Kansas Medical Center</b>
<b>2008-Present</b>	<b>Sundar Sankaran</b>	<b>MS in Clinical Research, University of Kansas Medical Center</b>

**Educational Materials** (films, educational tapes, syllabi, educational software packages, courses developed, web courses)

<u>Year</u>	<u>Title/Description</u>	<u>Intended Audience</u>
2003	Health Services Research: Biostatistics Modules This was a series of 12 lectures to be presented on a one-on-one basis for the purpose of faculty development in the area of biostatistics (part of an AHRQ grant)	Physicians interested in learning more about biostatistics
2007	PRVM 817 Electronic Lectures This was a series of lectures to allow students and faculty much of the flexibility of an online course for PRVM 817: Fundamentals of Biostatistics II	Graduate students in the MS in Clinical Research and MPH programs
2007	PRVM 884 Electronic Lectures This was a series of lectures to allow students and faculty much of the flexibility of an online course for PRVM 884: Categorical Data and Survival Analysis	Graduate students in the MS in Clinical Research and MPH programs

### **Other Teaching Activities**

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching Function</u>
Jun. 2003	Health Services Research: Biostatistics Modules	University of Texas Medical Branch	One-on-one instruction to resident
Oct. 2004	Introduction to Categorical Data and Survival Analysis	University of Kansas Medical Center	Biostatistics for the Nonstatistician Short Course (CME)
Feb. 2006	Introduction to Biostatistics	University of Kansas Medical Center	Biostatistics for the Nonstatistician Short Course (CME)
<b>Jun. 2008</b>	<b>Basic Clinical Biostatistics</b>	<b>University of Kansas Medical Center</b>	<b>USMLE Step 1 Prep Program biostatistics review lecture for 68 medical students (co-taught with Jo A. Edmonds, PhD)</b>

### **RESEARCH AND SCHOLARLY ACTIVITIES**

## Brief Statement of Areas of Research Interest and Current Projects Underway

I have statistical research interests focused in two areas: 1) power analysis and sample size justification for complex study designs; and 2) maximum likelihood estimation for multivariate censored data. Reviewing and designing studies requiring covariate adjustment motivated me to develop a new method for calculating power for data when the underlying distribution is not known. Not knowing the true underlying distribution is a common problem for calculating power and sample size, and often covariate adjustment may be required in the planned statistical protocol. This method, which allows for covariate adjustment, presents a generalizable tool for use in the justification or determination of a study sample size. A manuscript of this work is currently under review by *Biostatistics*. My other focus area, analyzing multivariate censored data, extends the traditional maximum likelihood techniques for univariate survival data. This work has applications to public health research involving screening data (e.g., screening mammography for breast cancer). On a more applied level, I have research interests and expertise in secondary data analysis. My pilot award from the Kansas Masonic Cancer Research Institute and my funded R03 (NIH/NIDCR) will allow me to evaluate the utility of using Medicare claims to identify incident oral and pharyngeal cancer cases. This work is the basis for future research avenues such as the improving baseline and trend data and investigating health trajectories among people with oral and pharyngeal cancer in the United States.

Beyond my own research interests, I am currently a co-investigator on a numerous projects ranging from pilot research to large externally funded grants and contracts. I am also the co-Director of the Oversight Core and the Director of the Biostatistics and Data Management Subcore of a large pre-clinical U54 project (Nudo). My contributions to the research at this institution include grant development, study design, data analysis, interpretation of the results, and dissemination of the study findings to the scientific community.

**Grant and Contract Support** (Information must include whether the nominee is the principal investigator or a co-investigator, names of all investigators, title of grant, funding source, dollar amount in direct costs, and years during which grant applies. Please describe in sufficient detail your contribution as co-investigator.)

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Shireman	Ellerbeck, Howard, Mahnken, Kresowik	Development of a Contemporary Bleeding Risk Model for Elderly Warfarin Recipients	American Heart Association (AHA0450071Z)	\$130,000	01/01/04-12/31/05	Completed
Thomas	Ahluwalia, Baucom, Beebe, Croghan, Lichtenstein, Mahnken, Mayo, Offord, Patten	Supportive Behaviors to Assist in Smoking Cessation	National Institute of Drug Abuse	\$50,000	03/20/05-02/28/06	Completed
Freeman	Greiner, Okuyemi, Ahluwalia, Ellerbeck, Ebersole, Born	Patients in Diverse Communities	Health Resources and Services Administration	\$241,610	09/01/03-08/31/06	Completed

(Continued)

Dunton	Boyle (Mahnken: Programmer)	National Database of Nursing Quality Indicators	American Nurses Association		01/01/00-12/31/06	Completed
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<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Engelman	Ellerbeck, Mahnken	Use of a Radiolucent Pad to Reduce Mammography Discomfort among African Americans	Susan G. Komen Breast Cancer Foundation (POP0503504)	\$199,496	05/01/05-04/30/07	Completed
Mahnken	Mayo, Girod	Oral/Pharyngeal Cancer Incidence from Medicare Claims	Kansas Masonic Cancer Research Institute	\$35,000	07/01/06-06/30/07	Completed
Shireman	Ellerbeck, Mahnken, Spertus, Wetmore	Cardiovascular Outcomes Measures in the USRDS: Preliminary Data Analyses	KUMC Lied Center Clinical Pilot	\$35,000	02/01/07 - 01/31/08	Completed
Engelman	Campbell, Ellerbeck, Greiner, James, Mahnken	Use of Novel Tailored Reminders in Rural Primary Care	National Institutes of Health (5R21CA121907-02)	\$298,580	04/01/06 - 03/31/08	Transferred to other statistician
Engelman	Ellerbeck, Gibson, Greiner, Mahnken	Implementation Intentions to Promote Colon Cancer Screening in Rural Primary Care	National Institutes of Health (1R01CA121016-01A1)	\$1,555,314	04/01/07 - 03/31/11	Transferred to other statistician
Greiner	Buckles, Campbell, Ellerbeck, Engelman, James	Tailored Touchscreen Colorectal Cancer Prevention in Urban Care Clinics	National Institutes of Health (1R01CA123245-01A1)	\$1,824,038	05/11/07 - 01/31/11	Transferred to other statistician
Narayan	Buch, Mahnken, Yankee	Morphine and Neuropathogenesis of SIV in Macaques	National Institutes of Health (1R01DA024442-01)	\$1,878,105	09/30/07 - 08/31/12	Transferred to other statistician
Richter	Ellerbeck, Mahnken	Building the Capacity of Mental Health Facilities to Treat Tobacco Dependence in Mental Health Treatment	Health Care Foundation of Greater Kansas City	\$79,213	08/01/07 - 07/31/08	Transferred to other statistician
Vivian	Mahnken	Phenotypic Screen in Mouse Embryonic Stem Cells for TGF-beta Signaling Mutations	National Institutes of Health	\$275,000	04/01/06 - 03/31/08	Transferred to other statistician
Atkinson		General Clinical Research Center (GCRC)	National Institutes of Health	\$5,422,783	04/01/07 - 03/31/10	Transferred to other statistician

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
(Continued) Dunton	Boyle (Mahnken: Programmer )	National Database of Nursing Quality Indicators	American Nurses Association	\$5,293,81 2	01/01/07 - 12/31/10	Active
Ellerbeck	Greiner, Mahnken, Sanderson- Cox	Disease Management for Smokers in Rural Primary Care	National Cancer Institute (1R01CA101963-01)	\$2,196,36 3	07/01/03 - 06/30/08	Active
Engelman	Ellerbeck, Mahnken, Richter	Development of a Comprehensive Mammography Services Quality Index	American Cancer Society (CPHPS- 111021)	\$776,493	01/01/06 - 12/31/09	Active
Mahnken	Mayo, Cumming, Girod	Oral/Pharyngeal Cancer Incidence from Medicare Claims	National Institute of Dental and Craniofacial Research (1R03DE016958- 01A2)	\$200,000	06/01/07 - 05/31/09	Active
Manzardo	Brown, Gabrielle, Knop, Nickel, Penick (Mahnken: Scientific Advisor)	Danish Study of Perinatal Neurodevelopmenta l Contributions to Adult Alcoholism	National Institutes of Health (1K01AA015935- 01A1)	\$358,598	04/01/07 - 03/31/10	Active
Nudo	Jones, Kleim, Mahnken, Plautz, Teskey	Cortical Stimulation to Enhance Recovery after Stroke	National Institutes of Neurological Disorders and Stroke (1U54NS048126- 01A1)	\$3,640,17 0	09/01/05 - 05/31/09	Active
Rigler	Ellerbeck, Mahnken, Shireman, Whittle	Current Antipsychotics and Fractures in Nursing Homes	National Institute of Aging (1R01AG079221- 01A2)	\$552,500	04/03/06 - 03/31/09	Active
Shireman	Brooks, Ellerbeck, Mahnken, Rigler, Spertus, Wetmore	Are Cardioprotective Medications Effective in ESRD?	National Institutes of Health	\$1,086,50 5	09/01/08 - 08/31/12	Pending

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Wetmore	Ellerbeck, Quarles, Rigler, Shireman, (Mahnken: Scientific Advisor)	Stroke & Bleed Outcomes with Warfarin in Dialysis Patients w/ Atrial Fibrillation	National Institutes of Health	\$731,500	12/01/08 - 11/30/13	Not Funded (Priority Score 225)
Choi		Center for Research and Education in Addictions and Health Disparities	National Institutes of Health	\$4,734,655	04/01/09 - 03/31/14	Pending
(Continued) Ellerbeck	Cox, Cupertino, Greiner, Mahnken, Richter, Shireman	Centralized Disease Management for Rural Hospitalized Smokers	National Institutes of Health	\$2,496,662	04/01/09 - 03/31/14	Pending
Rigler	Ellerbeck, Mahnken, Shireman	Weight Change & Incident Diabetes during Antipsychotic Use in Nursing Homes	National Institutes of Health	\$925,000	07/01/09 - 06/30/13	Pending

**Full Length, Peer-Reviewed Articles in Scientific Journals** (Provide names of all authors, year, title, journal, volume, and inclusive pages. List in chronological order.)

Articles already published:

1. Ahuja T, Freeman DH, **Mahnken JD**, Agraharkar M, Siddiqui M, Memon A: "Predictors of the Development of Hyperkalemia in Patients Using Angiotensin-Converting Enzyme Inhibitors." *American Journal of Nephrology*, 20:268-272, 2000.
2. Goodwin JS, Freeman JL, **Mahnken JD**, Freeman DH, Nattinger AB: "Geographic Variations in Breast Cancer Survival Among Older Women: Implications for Quality of Breast Cancer Care." *Journal of Gerontology: Medical Science*, 57A(6):M401-M406, 2002.
3. Randolph WM, Goodwin JS, **Mahnken JD**, Freeman JL: "Regular Use Is Associated with Elimination of Age-Related Disparities in Size and Stage of Breast Cancer at Diagnosis." *Annals of Internal Medicine*, 137(10):783-790, 2002.
4. Randolph WM, **Mahnken JD**, Goodwin JS, Freeman JL: "Using Medicare Data to Estimate the Prevalence of Breast Cancer Screening in Older Women: Comparison of Different Definitions to Identify Screening Mammograms." *Health Services Research*, 37(6):1643-1657, 2002.
5. Du XL, Key CR, Osborne C, **Mahnken JD**, Goodwin JS: "Discrepancy between Consensus Recommendations and Actual Community Use of Adjuvant Chemotherapy in Women with Breast Cancer." *Annals of Internal Medicine*, 138(2):90-98, 2003.
6. Lackan NA, Ostir GV, Freeman JL, **Mahnken JD**, Goodwin JS: "Decreasing Variation in the Use of Hospice among Older Adults with Breast, Lung, Colorectal and Prostate Cancer." *Medical Care* 42:116-122, 2004.
7. Eschbach KE, **Mahnken JD**, Goodwin JS: "Neighborhood Composition and Incidence of Cancer Among Hispanics in

the United States.” *Cancer* 103(5):1036-1044, 2005.

8. Kreisler KR, Vance RA, Cruzzavala J, **Mahnken JD**: “Heparin-Bonded Cardiopulmonary Bypass Circuits Reduce the Rate of Red Blood Cell Transfusion When Compared to Patients Receiving Placebo During Elective Coronary Artery Bypass Surgery.” *Journal of Cardiothoracic and Vascular Anesthesia*, 19(5):608-611, 2005.
9. Neuberger JS, **Mahnken JD**, Mayo MS, Field RW: “Risk Factors for Lung Cancer in Iowa Women: Implications for Prevention.” *Cancer Detection and Prevention Control*, 30:158-167, 2006.
10. Shireman TI, **Mahnken JD**, Howard PA, Kresowik TF, Ellerbeck EF, Hou Q: “Development of a Contemporary Bleeding Risk Model for Elderly Warfarin Recipients.” *Chest*, 130(5):1390-1396, 2006.
11. Dancause N, Barbay S, Frost S, Zoubina E, Plautz E, **Mahnken JD**, Nudo R: “Effects of Small Ischemic Lesions in the Primary Motor Cortex on Neurophysiological Organization in Ventral Premotor Cortex.” *Journal of Neurophysiology*, 96:3506-3511, 2006.
12. Santos M, Zahner LH, McKiernan BJ, **Mahnken JD**, Quaney B: “Severe Chronic Hand Dysfunction Post-Stroke: Neuromuscular Electrical Stimulation Improves Motor Performance.” *Journal of Neurologic Physical Therapy*, 30(4):175-183, 2006.
13. **Mahnken JD**, Freeman DH, DiNuzzo AR, Freeman JL: “Mammography Use among Older Mexican-American Women: Correcting for Over-Reports of Breast Cancer Screening.” *Women & Health*, 45(3):53-64, 2007.
14. Cupertino AP, **Mahnken JD**, Richter K, Cox LS, Casey G, Resnicow K, Ellerbeck EF: “Long-Term Engagement in Smoking Cessation Counseling among Rural Smokers.” *Journal of Health Care for the Poor and Underserved*, 18(4):39-51, 2007.
15. Caban ME, **Mahnken JD**, Kuo Y, Freeman JL, Nosek MA: “Mammography Use Mediates Disparities in Tumor Size at Diagnosis in Women with Social Security Disabilities.” *Women & Health*, 46(4):1-17, 2007.
16. Dancause N, Barbay S, Frost SB, **Mahnken JD**, Nudo RJ: “Interhemispheric Connections of the Ventral premotor Cortex in a New World Primate.” *Journal of Comparative Neurology*, 505(6):701-715, 2007.
17. Berg CJ, Cox LS, **Mahnken JD**, Greiner KA, Ellerbeck EF: “Correlates of Smoking Abstinence Self-Efficacy among a Sample of Rural Smokers.” *Journal of Health Psychology*, 13(3):416-421, 2008.
18. Cox LS, Cupertino AP, Mussulman LM, Nazir N, Greiner KA, **Mahnken JD**, Ahluwalia JS, Ellerbeck EF: “Design and Baseline Characteristics from the KAN-QUIT Disease Management Intervention for Rural Smokers in Primary Care.” *Preventive Medicine*, 47:200-205, 2008.

Manuscripts in press: (Provide names of all authors, title, journal, and **photocopy of manuscript and letter of acceptance from journal editor.**)

1. **Mahnken JD**, Chan W, Freeman DH, Freeman JL: “Reducing the Effects of Lead-Time Bias, Length Bias, and Over-Detection in Evaluating Screening Mammography: A Censored Bivariate Data Approach.” *Statistical Methods in Medical Research*. In press.
2. **Mahnken JD**, Mayo MS, Nudo RJ: “A Decision Algorithm for Translating Preclinical Trial Results to Enhance Recovery after Stroke.” *Journal of Biopharmaceutical Statistics*. In press.
3. Wetmore JB, Lovett DH, Hung AM, Cook-Wiens G, **Mahnken JD**, Sen S, Johansen KL: “Associations of Interleukin-6, C-reactive Protein, and Serum Amyloid A with Mortality in Hemodialysis Patients.” *Nephrology*. In press.

Manuscripts Submitted but Not Yet Accepted (Provide names of all authors, title, journal, and **photocopy and letter acknowledging receipt of manuscript by journal.**)

1. Mahnken JD: "Power and Sample Size Calculations for Models from Unknown Distributions Using Quasi-likelihood Methods." *Statistics in Biopharmaceutical Research*.
2. Thomas JL, Patten CA, Mahnken JD, Offord KP, Hou Q, Lynam IM, Wirt BA, Croghan IT: "Validation of the Support Provided Measure among Spouses of Smokers Receiving a Clinical Smoking Cessation Intervention." *Nicotine & Tobacco Research*.
3. Nollen NL, Befort C, Davis AM, Snow T, Mahnken JD, Hou Q, Story M, Ahluwalia JS: "Competitive Foods in Schools: Availability and Purchasing in Small and Large High Schools and Their Relationship to Student BMI." *Journal of the American Dietetic Association*.
4. Ellerbeck EF, Cupertino AP, Sanderson Cox L, Greiner KA, Mussulman LM, Nazir N, Shireman T, Mahnken JD, Resnicow K, Ahluwalia JS: "Disease Management Versus Pharmacotherapy Management Alone for Smoking Cessation." *Annals of Internal Medicine*.
5. Hou Q, Mahnken JD, Gajewski B, Dunton N: "The Box-Cox Power Transformation on Nursing Sensitive Indicators: Does It Matter if Structural Effects Are Omitted During the Estimation of the Transformation Parameter?" *Journal of Nursing Measurement*.
6. Mahnken JD, Keigley JD, Cumming CG, Girod DA, Mayo MS: "Evaluating the Completeness of the SEER-Medicare Linked Database for Oral and Pharyngeal Cancer." *Journal of Registry Management*.
7. Gajewski BJ, Mahnken JD, Dunton N: "Is the Sky Really Falling? Model-based Report Cards for Nursing Outcomes." *BMC Medical Research Methodology*.
8. Mayo MS, Mahnken JD, Soong S: "Randomized Two-Arm, Phase II Clinical Trial Design Using Multiple Constraints." *Statistics in Biopharmaceutical Research*.
9. Cannon C, Braxton C, Kling-Smith M, Mahnken JD, Carlton E, Moncure M: "Utility of the Shock Index in Predicting Mortality in Traumatically Injured Patients." *Journal of Trauma*.

Manuscripts in preparation:

1. King GW, Luchies CW, Kluding PM, Mahnken JD, Stylianou AP, McVey MA, Hughes Zahner L: "Effects of Age and Localized Muscle Fatigue on Balance Recovery from a Forward Fall."
2. McVey MA, Stylianou AP, Luchies CW, Lyons KE, Pahwa R, Jernigan S, Mahnken JD: "The Effect of Parkinson's Disease on the Step Response to a Backwards Pull."

**Invited or Non-Peer-Reviewed Articles or Reviews** (Provide names of all authors, year, title, journal, volume, and pages. If in press, provide documentation.)

1. Mahnken JD, "Many-to-Many Merging Using the SAS® Macro Facility." *Proceedings of the Twenty-Seventh Annual SAS Users Group International Conference*, Paper 89-27, 2002 (Presented as Oral Presentation, Twenty-Seventh Annual SAS Users Group International Conference, Orlando, FL, April 14-17, 2002).
2. Mahnken JD, Chan W, Freeman DH, Freeman JL. (2004), "Left, Right, and Interval Bivariate Censored Data: Evaluating Screening Mammography in the Presence of Lead-Time Bias, Length Bias, and Over-Detection," *2004 Proceedings of the American Statistical Association*, [CD-ROM], Alexandria, VA: American Statistical Association, (Presented as Oral Presentation, Joint Statistical Meetings, Toronto, Canada, August 8-12, 2004).

**Books and Book Chapters** (Provide names of all authors, year, book title, chapter title, edition, publisher, and pages. If in press, provide documentation.)

N/A

**Published Abstracts** (Provide names of all authors, year, title, where published, volume, and pages.)

1. Li C, Kaur H, Nazir N, **Mahnken J**, So J, Ahluwalia JS: "Natural History and Early Life Predictors of Obesity Onset from Childhood to Adolescence." *Obesity Research*, 12:A873, 2004 (Presented as Poster, North American Association for the Study of Obesity Annual Meeting, Las Vegas, NV, November 14-18, 2004).
2. Shireman TI, **Mahnken JD**, Howard PA, Kresowik TF, Ellerbeck EF, Hou Q: "Development of a Bleeding Risk Model for Elderly Warfarin Recipients with Atrial Fibrillation." *Circulation* 112(Suppl II):823, 2005 (Presented as Paper, American Heart Association Scientific Sessions, Dallas, TX, November 13-16, 2005).
3. Cannon CM, Kling M, **Mahnken JD**, Carlton RN, Moncure M: "Utility of the Shock Index in the Field on Emergency Department Arrival in Predicting Mortality in Traumatically Injured Patients." *Academic Emergency Medicine* 13(5, Suppl 1):S72-S73, 2006 (Presented as Poster, Society for Academic Emergency Medicine Annual Meeting, San Francisco, CA, May 18-21, 2006).

**Technical Reports**

1. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 4, 2004 Report*, Kansas City, KS: University of Kansas School of Nursing, 2005.
2. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 1, 2005 Report*, Kansas City, KS: University of Kansas School of Nursing, 2005.
3. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 2, 2005 Report*, Kansas City, KS: University of Kansas School of Nursing, 2005.
4. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 3, 2005 Report*, Kansas City, KS: University of Kansas School of Nursing, 2005.
5. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 4, 2005 Report*, Kansas City, KS: University of Kansas School of Nursing, 2006.
6. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 1, 2006 Report*, Kansas City, KS: University of Kansas School of Nursing, 2006.
7. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 2, 2006 Report*, Kansas City, KS: University of Kansas School of Nursing, 2006.
8. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 3, 2006 Report*, Kansas City, KS: University of Kansas School of Nursing, 2006.
9. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 4, 2006 Report*, Kansas City, KS: University of Kansas School of Nursing, 2007.
10. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 1, 2007 Report*, Kansas City, KS: University of Kansas School of Nursing, 2007.
11. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 2, 2007 Report*, Kansas City, KS: University of Kansas School of Nursing, 2007.
12. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 3, 2007 Report*, Kansas City, KS: University of Kansas School of Nursing, 2007.
13. **Dunton N et al. (co-author: Mahnken JD): National Database of Nursing Quality Indicators: Quarter 4, 2007 Report, Kansas City, KS: University of Kansas School of Nursing, 2008.**

14. **Dunton N et al. (co-author: Mahnken JD): National Database of Nursing Quality Indicators: *Quarter 1, 2008 Report*, Kansas City, KS: University of Kansas School of Nursing, 2008.**

**Oral Paper Presentations** (Provide names of all authors, title, sponsoring organization, and location and date of presentation.)

Scientific papers presented at national and international meetings:

1. **Mahnken JD**, Dinuzzo AR, Freeman JL, Freeman DH: "Healthy People 2000 Mammography Goals: Can We Declare Victory for Older Mexican-American Women?" Joint Conference of the National Mammography Marketing and Education Association and the National Association of Mobile Health Providers, Houston, TX, September 27 – October 1, 2001, *invited*.
2. **Mahnken JD**, Chan W, Freeman JL: "Maximum Likelihood Estimates for Incomplete Bivariate Survival Data and Their Application in Evaluating Mammography Efficacy." Joint Statistical Meetings, San Francisco, CA, August 3-7, 2003.

3. **Mahnken JD**, Chan W, Freeman DH, Freeman JL: "Left, Right and Interval Bivariate Censored Data: Evaluating Screening Mammography in the Presence of Lead-Time Bias, Length Bias and Over-Detection." International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March 28-31, 2004.
4. Stylianou AP, Luchies CW, Maletsky RA, Lyons KE, Pahwa R, **Mahnken JD**: "Postural Sway Analysis in Parkinson's Disease: Visual Feedback." Summer Bioengineering Conference, Amelia Island, FL, June 21-25, 2006.
5. **McVey M**, Stylianou A, Luchies C, Lyons K, Pahwa R, **Jernigan S**, **Mahnken J**: "The Effect of Parkinson's Disease on the Step Response to a Backwards Pull." Summer Bioengineering Conference, Marco Island, FL, June 25-29, 2008.
6. **Mahnken JD**: "Quasi-likelihood Power and Sample Size Calculations for Models from Unknown Distributions." Association of General Clinical Research Center Statisticians, Denver, CO, August 2-3, 2008, *Invited Paper*.
7. **Mahnken JD**: "Statistical Consulting for a Newly Formed Department of Biostatistics in a Highly Collaborative Environment at the University of Kansas Medical Center." Joint Statistical Meetings, Denver, CO, August 3-7, 2008, *Invited Paper*.
8. **Gajewski BJ**, **Mahnken JD**, **Dunton N**: "Is the Sky Really Falling? Model-Based Report Cards for Nursing Outcomes." National Association for Healthcare Quality Annual Conference, Phoenix, AZ, September 15, 2008.

Scientific papers presented at local and regional meetings:

1. **Mahnken JD**, Chan W, Freeman DH, Freeman JL: "Evaluating the Benefit of Screening Mammography in the Elderly." External Advisory Board Site Visit for the Center for Biostatistics and Advanced Informatics, University of Kansas Medical Center, October 29, 2004.
2. **Mahnken JD**, Mayo MS, Nudo RJ: "Cortical Stimulation to Enhance Recovery after Stroke: A Milestone Decision Algorithm for Translating Preclinical Trial Results." External Advisory Board Site Visit for the Center for Biostatistics and Advanced Informatics, University of Kansas Medical Center, October 21, 2005.
3. **Mahnken JD**: "Quasi-likelihood Power and Sample Size Calculations for Models from Unknown Distributions." Cerner Colloquium, University of Kansas Medical Center, December 14, 2007.

**Poster Presentations** (Provide names of all authors, title, sponsoring organization, and location and date of presentation.)

Poster presentations at national and international meetings:

1. **Mahnken JD**, DiNuzzo AR, Freeman JL, Freeman DH: "Healthy People 2000 Mammography Goals: Can We Declare Victory for Older Mexican-American Women?" American Public Health Association Annual Meeting, Boston, MA, November 12-16, 2000.

2. Khan S, Freeman DH, Randolph WM, **Mahnken JD**, Goodwin JS, Freeman JL: "The Association Between Marital Status and Stage at Diagnosis of Breast Cancer: What Role Does Screening Play?" American Public Health Association Annual Meeting, Philadelphia, PA, November 9-13, 2002.
3. Mercado AC, Randolph WM, Khan S, **Mahnken JD**, Freeman DH, Goodwin JS, Freeman JL: "Racial Disparities in Size of Tumor at Breast Cancer Diagnosis: What Role Does Screening Play in Older Women?" Gerontological Society of America Annual Meeting, San Diego, CA, November 21-25, 2003.
4. Caban MA, Freeman JL, **Mahnken JD**, Nosek M: "Impact of screening mammography in the size and staging of breast cancer at diagnosis among women with Social Security Disability Insurance." American Academy of Physical Medicine and Rehabilitation Annual Assembly, Phoenix, AZ, October 7-10, 2004.
5. **Mahnken JD**, Li C, Nazir N, So J, Kaur H, Ahluwalia JS: "Analyzing the National Longitudinal Survey of Youth: A Comparison of Statistical Methods." Joint Statistical Meetings, Minneapolis, MN, August 7-11, 2005.
6. Berg CJ, Cox LS, **Mahnken JD**, Greiner KA, Ellerbeck EF: "Correlates of Self-Efficacy among Rural Smokers." Society for Research on Nicotine and Tobacco, Orlando, FL, February 15-18, 2006.
7. **Mahnken JD**: "Calculating Power for Generalized Linear Models Using the Wald Test." Joint Statistical Meetings, Seattle, WA, August 6-10, 2006.
8. Cupertino AP, **Mahnken JD**, Richter K, Casey G, Ellerbeck EF: "Adherence to Long Term, Disease Management Focused Tobacco Counseling." Society for Research on Nicotine and Tobacco, Austin, TX, February 20-23, 2007.
9. Engelman KK, **Mahnken JD**, Jianas L, Ellerbeck EF: "A Description of Mammography Discomfort among African American Women." Society for Behavioral Medicine, Washington, DC, March 21-24, 2007.
10. **Mahnken JD**, Keighley J, Mayo MS: "Evaluating SEER-Medicare Linked Database Completeness for Oral and Pharyngeal Cancer." Joint Statistical Meetings, Salt Lake City, UT, July 29-August 2, 2007.
11. Nollen NL, Befort C, Davis A, **Mahnken JD**, Story M, Ahluwalia JS: "Competitive Food Availability and Purchasing in Small and large High Schools and Their Relationship to Student BMI." Annual Meeting of the Obesity Society, New Orleans, LA, October 20-24, 2007.
12. Hou Q, **Mahnken JD**, Pierson B, Klaus S, Gajewski B, Dunton N: "NDNQI® Quarterly Report Informatics: Understanding the Processing Blackbox." Annual National Database of Nursing Quality Indicators Data Use Conference, Orlando, FL, January 30-February 1, 2008.
13. Engelman KK, **Mahnken JD**, Jianas LL, Ellerbeck EF: "Use of a Radiolucent Mammography Cushion among African American Women." Society of Behavioral Medicine, San Diego, CA, March 26-28, 2008.
14. Cupertino AP, Richter K, Mussulman L, **Mahnken JD**, Ellerbeck EF: "Long-Term Disease Management Focused on Pharmacotherapy Utilization among Rural Smokers." Society for Research on Nicotine and Tobacco, Portland, OR, February 27-March 1, 2008.

Poster presentations at local and regional meetings:

1. **Mahnken JD**, DiNuzzo AR, Freeman JL, Freeman DH: "A Validation Study for Self-Reported Data of Recent Mammography Use Among Older Mexican-American Women in Southeast Texas." University of Texas Medical Branch Forum on Aging, Galveston, TX, September 29, 1999.
2. **Mahnken JD**, Goodwin JS, Eschbach K: "Investigating the Hispanic Paradox with Cancer Outcomes." University of Texas Medical Branch Forum on Aging, Galveston, TX, September 25, 2002.
3. **Mahnken JD**, El-zeky FF, Khan S, Freeman DH, Freeman JL: "Faculty Development: Tutorials in Data Management and Statistics." University of Texas Medical Branch Forum on Aging, Galveston, TX, September 25, 2003.

4. Mercado AC, Freeman JL, Freeman DH, Goodwin JS, Khan S, **Mahnken JD**, Randolph WM: “Racial Disparities in Size of Tumor at Breast Cancer Diagnosis: What Role Does Screening Play in Older Women?” University of Texas Medical Branch Forum on Aging, Galveston, TX, September 25, 2003.
5. **Mahnken JD**, Chan W, Freeman JL: “Maximum Likelihood Estimates for Incomplete Bivariate Survival Data and Their Application in Evaluating Mammography Efficacy.” University of Texas Medical Branch Forum on Aging, Galveston, TX, September 25, 2003.
6. **Mahnken JD**, Chan W, Freeman JL: “Left, Right and Interval Bivariate Censored Data: Evaluating Screening Mammography in the Presence of Lead-Time Bias, Length Bias and Over-Detection.” University of Texas – Health Science Center Graduate and Postgraduate Research Forum, Houston, TX, November 14, 2003.
7. Stylianou AP, Luchies CW, Lyons K, Pahwa R, Maletsky R, **Mahnken JD**: “Effects of Low Severity Parkinson’s Disease on the Control of Postural Sway.” University of Kansas Medical Center Faculty Research Day, Kansas City, KS, November 2, 2005.
8. **Mahnken JD**, Keighley JD, Mayo MS: “Evaluating the Completeness of the SEER-Medicare Linked Database for Oral and Pharyngeal Cancer.” University of Kansas Medical Center Faculty Research Day, Kansas City, KS, November 8, 2007.

**Invited Seminars at Other Universities** (Provide title, sponsoring organization or institution, and date of presentation.)

1. “Evaluating the Benefit of Screening Mammography in the Elderly.” Center for Health Promotion and Prevention Research, University of Texas – Health Science Center, March 17, 2004.
2. “Evaluating the Benefit of Screening Mammography in the Elderly.” Department of Mathematics Colloquium, Pittsburg State University, April 19, 2005.
3. **“Quasi-likelihood Power and Sample Size Calculations for Models from Unknown Distributions.”** **University of Minnesota School of Public Health, January 31, 2008.**

#### **Other Evidence of Scholarly Activities**

1. **Mahnken JD**, Chan W, Freeman DH, Freeman JL: “Screening Mammography in the Elderly: The Case for Biennial Over Annual Use.” Biostatistics Journal Club, University of Kansas Medical Center, June 7, 2004.
2. **Mahnken JD**: “Understanding and Interpreting Statistical Interactions.” Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, July 25, 2006.
3. **Mahnken JD**: “Statistical Considerations for Grants and Protocols: What Information Should be Conveyed?” Clinical and Translational Research Seminar, University of Kansas Medical Center, May 17, 2007.
4. Grady JJ, Pollock BH, **Mahnken JD**: “The Future of AGS.” Invited Panel, Association of General Clinical Research Center Statisticians Annual Meeting, Salt Lake City, UT, July 28-29, 2007.
5. **Mahnken JD**: “What Is Sensitivity Analysis?” **Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, March 4, 2008.**

**ACADEMIC ACTIVITIES** (See attached guidelines for definitions of professional and academic activities.)

### **Brief Statement of Service Activities**

My faculty position has provided me with numerous opportunities for service, both to KUMC and to the greater scientific community. In addition to the institutional service activities on important committees, such as the Protocol Review and Monitoring Committee (KMCRI), the General Clinical Research Center Advisory Counsel, and the MPH and MS in Clinical Research degree admissions committees, I have provided significant in kind support through activities such as grant development and grant writing. This service has touched many of the departments across the different schools at KUMC. On the national level, I have been provided the opportunity to review grants for the NIH, both for the Cardiovascular and Integrative Sciences Study Section and for the National Institute of Dental and Craniofacial Research. I continue to be asked for future service on these committees. Serving the greater scientific community through these committees has also helped to improve my abilities in support of the myriad of ongoing collaborative research here at KUMC.

### **Professional Service**

2004	Ad Hoc Reviewer, <i>Journal of General Internal Medicine</i>
2005	Ad Hoc Reviewer, <i>Archives of Internal Medicine</i>
2005	Ad Hoc Reviewer, <i>Journal of the Royal Statistical Society: Series C – Applied Statistics</i>
2005	Ad Hoc Reviewer, <i>Ear and Hearing</i>
<b>2005-Present</b>	<b>Non-Voting Member/Biostatistical Reviewer, General Clinical Research Center, University of Kansas Medical Center</b>
2006	Ad Hoc Reviewer, <i>Journal of the Royal Statistical Society: Series C – Applied Statistics</i>
<b>2006-2008</b>	<b>Member, Protocol Review and Monitoring Committee, Kansas Masonic Cancer Research Institute, University of Kansas Medical Center</b>
2006	Clinical and Integrative Cardiovascular Science Study Section, National Institutes of Health (March and July)
2006	Session Chair, Joint Statistical Meetings
2006	Ad Hoc Reviewer, <i>Ear and Hearing</i>
2006	Ad Hoc Statistical Reviewer, <i>Circulation</i>
2006	Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health (November)
2006	Ad Hoc Reviewer, <i>Biometrical Journal</i>
2007	Clinical and Integrative Cardiovascular Science Study Section, National Institutes of Health (February, October)
2007	Ad Hoc Reviewer, <i>Journal of General Internal Medicine</i>
2007	Ad Hoc Statistical Reviewer, <i>Circulation</i>
2007	Data Analysis and Statistical Methodology (R03) Review Committee, National Institute of Dental and Craniofacial Research, National Institutes of Health (May)
2007	Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health (August, October)
<b>2007-2008</b>	<b>Co-Organizer, Regional Symposium: “Innovations in Design, Analysis, and Dissemination: Frontiers in Biostatistical Methods” held May 8-9, 2008 in Kansas City, Missouri</b>
<b>2008</b>	<b>Ad Hoc Statistical Reviewer, <i>Circulation</i></b>
<b>2008</b>	<b>Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health (February)</b>
<b>2008</b>	<b>Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health, Centers for Disparities in Oral Health (March)</b>
<b>2008</b>	<b>Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health (March, March [separate panels])</b>
<b>2008-2009</b>	<b>Vice-President, Kansas-Western Missouri Chapter of the American Statistical Association</b>
<b>2008</b>	<b>Co-Chair, Regional Symposium: “Innovations in Design, Analysis, and</b>

**Dissemination: Frontiers in Biostatistical Methods” held May 8-9, 2008 in Kansas City, Missouri**

**2008 Member, Data Safety and Monitoring Board, University of Kansas Cancer Center**

**Academic Service**

- 2004-2007 Member, Masters of Public Health program Admissions Committee, University of Kansas Medical Center
- 2004-Present Chair, Masters of Science in Clinical Research program Admissions Committee, University of Kansas Medical Center**
- 2004-Present Assistant Director, Masters of Science in Clinical Research program Executive Committee, University of Kansas Medical Center**
- 2005-2006 Member, Search Committee for Preventive Medicine and Public Health faculty position in biostatistics, University of Kansas Medical Center
- 2007-Present Non-Voting Member, Graduate Council, University of Kansas Medical Center**
- 2007 Chair, Search Committee for Biostatistics faculty position, University of Kansas Medical Center
- 2007-2008 Co-Chair, Biostatistics Graduate Degree Program Development Committee, University of Kansas Medical Center**
- 2008 Member, Biostatistics Graduate Degree Program Development Committee, University of Kansas Medical Center**
- 2008 Mentor to ???, Departmental Faculty Development Program**
- 2008 Mentor to ???, Departmental Faculty Development Program**
- 2008 Member, Search Committee for Program Director of the Comprehensive Research Information System (CRIS)**

**UNIVERSITY OF KANSAS SCHOOL OF MEDICINE  
FACULTY CURRICULUM VITAE**

**I. PERSONAL DATA**

Name: Hung-Wen (Henry) Yeh, PhD  
Current Academic Rank: Assistant Professor  
Department(s): Biostatistics

Office Address: University of Kansas Medical Center  
5028K Robinson, Mailstop 1026  
3901 Rainbow Blvd.  
Kansas City, Kansas 66160-7312

Phone: (913) 588-0531  
Fax: (913) 588-0252  
E-Mail: hyeh@kumc.edu

**PROFESSIONAL DEVELOPMENT**

Undergraduate and Graduate Education

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
1991-1995	BS (Chemical Engineering)	National Taiwan University, Taiwan
1996-2002	MS (Chemical Engineering)	Texas A&M University
2003-2007	PhD (Biostatistics)	University of Texas Health Science Center at Houston

Postgraduate Education:

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
N/A		

Academic and Professional Appointments and Activities. (List in chronological order. Please explain any discontinuity in professional experience)

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
Feb. 2007 – Present	Assistant Professor	University of Kansas Medical Center

Professional Registration/Licensure:

<u>Year</u>	<u>Number</u>	<u>State</u>
N/A		

Professional Certification(s):

<u>Date</u>	<u>Board</u>
N/A	

Professional Societies and Affiliations:

<u>Year</u>	<u>Organization (including offices held)</u>
2005 – Present	Member, American Statistical Association

Honors and Awards: (honorary societies, research awards, teaching and other awards.)

<u>Year</u>	<u>Award</u>
2004	James Emerson Award for Outstanding Teaching Assistant
2004	Richard D. Remington Scholarship
2006	Nominee of Outstanding Teaching Assistant
2006	M. Stewart West Scholarship
2007	Elected member, Delta Omega Honorary Society in Public Health

**III. TEACHING ACTIVITIES** (Evaluations and other evidence of quality of teaching must be attached; this represents the teacher's portfolio and should accurately summarize ALL of your teaching activities)

Brief statement of areas of teaching interest

I have interests in teaching biostatistics courses at various levels, ranging from introductory to intermediate biostatistics and to advanced applied statistical courses such as Multivariate methods.

5. Instruction:

Didactic (e.g.: lectures and formal presentations)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2007	PRVM 814	Fundamentals of Biostatistics I	Lecture	48	15	Graduate
2008	PRVM 814	Fundamentals of Biostatistics I	Lecture	48		Graduate

Nondidactic (e.g.: workshops, labs and discussion groups)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
N/A						

Clinical

<u>Year</u>	<u>Hours</u>	<u>Student</u>		<u>Length of Service</u>
		<u>No</u>	<u>Type</u>	
N/A				

Master's Theses and PhD. Dissertations directed

<u>Year</u>	<u>Student Name</u>	<u>Thesis title</u>	<u>Degree (Completed /In process)</u>
2008	Robin L. Aupperle	An fMRI study examining the effects of acute D-cycloserine administration on brain activations and cognitive functioning in spider phobia	Completed
2008	Benjamin B. Cronk	Body Weight and Cognitive Decline in MCI	Completed

Supervision of Postdoctoral fellows

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
N/A		

Advising (Thesis or dissertation committees: student academic group/individual)

<u>Date</u>	<u>Student or group name</u>	<u>Type of Student/group</u>
N/A		

Other teaching activities

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching function</u>
N/A			

6. Development of Educational Materials

(course materials e.g. syllabi, educational software packages, Web sites, films, educational tapes and evaluation tools)

<u>Year</u>	<u>Title Description</u>	<u>Intended Audience</u>
2007	Course development for PRVM 887 Applied Multivariate Methods	

7. Educational Leadership

(responsibility for courses and other leadership activities including mentoring of junior faculty. Please list faculty members mentored – letters from mentorees may be provided.)

N/A

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### III. RESEARCH and SCHOLARLY ACTIVITIES:

Brief statement of areas of research and scholarly interest, including current projects:

My research interests focus on handling missing data and/or surrogate variables in longitudinal studies using the EM algorithm in Markov chain models. The methods have applications to modeling progression and/or reoccurrence of chronic diseases, especially when the diagnoses involve biomarkers or surrogate variables.

1. Grants and contracts

(Information must include whether the nominee is the principal investigator or a co-investigator, names of all investigators, title of grant, funding source, dollar amount in direct costs, and years during which grant applies. Co-investigators must specify role). Provide four copies of abstracts and award notice or renewal for all grants or contracts awarded in last five years.

Grants and contracts awarded:  
(List in chronological order)

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
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<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Fabian	Petroff, Kimler, Yeh	QM-MSP, Ki-67, and Cytomorphology of RPFNA Specimens from High Risk Women	NIH/NCI via subcontract from University of Alabama Birmingham	\$330,100	09/26/2005 - 08/13/2007	Completed
Engleman	Ellerbeck, Greiner, James, Daley, Yeh	Use of Novel tailored Reminders in Rural Primary Care	NIH	\$149,750	05/04/2006-03/31/2008	Completed
Fabian	Kimler, Yeh, Anderson	Flaxseed Lignan for Breast Cancer Chemoprevention	NIH	\$104,974	05/12/2005 - 04/30/2009	Ongoing
Choi	Daley, Richter, Yeh	Targeted Smoking Cessation Program for Native Americans	American Cancer Society	\$280,900	07/01/2006 - 06/30/2009	Ongoing
Burns		Longitudinal Study of Cardiorespiratory Fitness in Alzheimer's Disease	NIH	\$110,250	07/15/2007 - 04/30/2009	Ongoing
Fabian		Breast Cancer Risk Biomarkers and Improved Energy Balance	NIH	\$100,000	04/01/2007 - 03/31/2009	Ongoing
Fabian		Breast Cancer Prevention by Letrozole in High Risk Women	NIH	\$335,918	09/20/2007 - 07/31/2011	Ongoing
Greiner	Buckles, Ellerbeck, Engleman, James, Yeh	Tailored Touchscreen Colorectal Cancer Prevention in Urban Core Clinics	NIH	\$354,951	05/11/2007 - 01/31/2011	Ongoing
Engleman	Ellerbeck, Gibson, Greiner, Yeh	Implementation Intentions to Promote Colon Cancer Screening in Rural Primary Care	NIH	\$301,215	09/01/2007 - 07/31/2011	Ongoing
Buch		Morphine and the Neuropathogenesis of SIV in Macaques	NIH	\$361,509	09/30/2007 - 08/31/2012	Ongoing
Choi		Quantitative in Vivo Biomarkers of Oxidative Stress in Diabetes	NIH	\$150,000	04/01/2008 - 03/31/2010	Ongoing
Savage	Befort, Brooks, Mayo, Sullivan, Yeh	Brain function predictors and outcome of weight loss maintenance	NIH	\$1,167,936	2008-2011	Ongoing

Grants and contracts submitted:

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Mayo		Data Coordinating Center for the Effect of Exercise on Weight Loss Maintenance and CVD Risk Factors Trial	NIH	\$399,930	12/01/2007 - 11/30/2012	Not funded

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Burns	Gallagher, Yeh	Insulin and Insulin-Like Growth Factors in Alzheimer Disease	NIH	\$125,000	04/01/2008 - 03/31/2010	Pending
Parmely		Pathogenesis of Tissue Injury in Tularemia	NIH	\$250,000	07/01/2008 - 06/30/2013	Pending
Barohn		Heartland Institute for Clinical and Translational Research	NIH	\$6,616,362	07/01/2008 - 06/30/2013	Pending
Choi		Culturally-tailored Smoking Cessation for American Indians: A Multi-site Trial	NIH	\$570,130	12/01/2008 - 11/30/2013	Not funded
Mayo		Data Coordinating Center for the Effect of Exercise on Weight Loss Maintenance	NIH	\$387,204	12/01/2008 - 11/30/2013	Pending
Richter		The Impact of a Campus-Wide Hospital Smoking Ban on Patient Discharge Against Medical Advice	Robert Wood Johnson Foundation	\$90,061	09/01/2008 - 08/31/2009	Pending
Hellings		Genes Impacting Serotonin, Hyperphagia and fMRI Activity in Prader-Willi Syndrome	NIH	\$186,000	12/01/2008 - 11/30/2010	Not funded
Savage		Brain Mechanisms Underlying Impulsivity in Binge Eating Disorder	Klarman Family Foundation	\$178,435	06/01/2008 - 05/31/2010	Not funded
Berman		Inflammation and traumatic brain injury in the elderly	NIH	\$250,000	12/01/2008 - 11/30/2013	Pending
Choi		Neuroimaging biomarker of cerebral oxidative stress	NIH	\$150,000	04/01/2009 - 03/31/2011	Pending
Parmely		Novel Inhibitors of Programmed Cell Death for Treating Tularemia	NIH	\$484,636	06/01/2009 - 05/31/2013	Pending
Gustafson		The effects of docosahexaenoic acid (DHA) on fetal cardiac outcomes	NIH	\$150,000	04/01/2009 - 03/31/2011	Pending

## 2. Scholarly Publications

Full length, peer-reviewed articles in scientific journals: (Provide names of all authors, year, title, journal, volume, and inclusive pages. List in chronological order.)

Articles published: **(Provide 4 copies of each peer-reviewed article published within the last five years. Other articles may be provided at the applicant's discretion.)**

N/A

1. Hong KJ, Wickstrum JR, **Yeh H**, Parmely MJ. TLR2 Controls the Interferon- $\gamma$  Response to Francisella

tularensis by Mouse Liver Lymphocytes. *Infection and Immunity*. 75 (11), 2007.

2. Bokhari, S.M., K.-J. Kim, D.M. Pinson, J. Slusser, **H. Yeh**, and M.J. Parmely. NK cells and gamma interferon coordinate the formation and function of hepatic granulomas in mice infected with *Francisella tularensis* LVS. *Infect. and Immun.* 76 (4), 2008

Manuscripts in press: (Provide names of all authors, title, journal, and **4 photocopies of manuscript plus evidence of acceptance by journal**)

1. Davis C, Kancherla V, Reddy A, **Yeh H**, Noroski LM, Rosenblatt H, Shearer WT, Chinen J. Development of Specific T cell responses to Candida and Tetanus Antigens in Partial DiGeorge Syndrome. *The Journal of Allergy and Clinical*. Accepted, 2008.
2. Yeh C, Chan W, **Yeh H**. "Some equivalent forms of the arithmetic-geometric mean inequality in probability: A survey". *Journal of Inequalities and Applications*. Accepted, 2008.

Manuscripts submitted but not yet accepted: (Provide names of all authors, title, journal, and **4 photocopies plus evidence of receipt of manuscript by journal.**)

Invited or non-peer-reviewed articles or reviews: (**Provide names of all authors, year, title, journal, volume, and pages. If in press, provide documentation and 4 photocopies if published within the last five years.**)

N/A

Books and book chapters: (**Provide names of all authors, year, book title, chapter title, edition, publisher, and pages. If in press, provide documentation and 4 photocopies if published the last five years.**)

N/A

Published abstracts: (Provide names of all authors, year, title, where published, volume, and pages.)

N/A

Other scholarly publications

N/A

### 3. Presentations and posters

Oral paper presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review, and location and date of presentation.)

Scientific papers presented at national and international meetings:

Faseru B, **Yeh H**, Ellerbeck E, Befort C, Richter K. "Referral and Treatment for Tobacco Dependence among Hospitalized Smokers". 2008 AMERSA National Conference, Washington DC, November 6-8, 2008. Yearly Best Abstract Award reviewed by the 2008 AMERSA Executive Board, Abstract Review and Program Committees. (Presented by ). (accepted)

Wambach K, Aaronson L, Breedlove G, Williams Domian E, Rojjanasrirat W, and **Yeh H**: "A Test of a Theory Based Intervention to Improve Breastfeeding Outcomes in Adolescent Mothers". 2008 National State of the Science Congress in Nursing Research, Washington D.C., October 2-4, 2008. Reviewed by The Council for the Advancement of Nursing Science Abstract Review Committee. (Podium presentation given by Wambach K.) (accepted)

Rojjanasrirat W, Wambach K, and **Yeh H**: "Effects of a Peer Counselor and Lactation Consultant Team on

Breastfeeding Initiation and Duration.” International Lactation Consultant Association (ILCA), Las Vegas, Nevada, 23-27 July, 2008. In a blind review process, the committee chose 6 oral presentations from all the abstracts submitted. Presented by Wambach K.

Rojjanasrirat W, Wambach K, and **Yeh H**: “Impact of Lactation Consultant and Peer Counselor Team Interventions on Exclusive Breastfeeding Rates among Adolescent Mothers.” Sigma Theta Tau International Honor Society of Nursing (STTI). The 19th International Nursing Research Congress Focusing on Evidence-Based Practice, Singapore, 7-11 July 2008. (Presented by Rojjanasrirat W)

Rojjanasrirat W, Wambach K, and **Yeh H**: “Impact of Lactation Consultant and Peer Counselor Team Interventions on Exclusive Breastfeeding Rates among Adolescent Mothers.” The 2008 International Conference: Healthy People for the Healthy World at Bangkok, Thailand, June 25-27, 2008. (Presented by Rojjanasrirat W)

Engelman K, Greiner A, James A, Daley C, **Yeh H**, Long T, and Ellerbeck E: “Electronic Colorectal Cancer Screening Patient Prompts in Rural Primary Care”. the Society of Behavioral Medicine's 29th Annual Meeting and Scientific Sessions, San Diego, California, March 26-29, 2008. (Presented by Engelman K.)

Chan W, **Yeh H**, Symanski E: “Recovering the Estimated Slope of an Unobservable Predictor in a Simple Regression” Joint Statistical Meetings, Salt Lake City, UT, July 29 - August 2, 2007. (Presented by **Yeh H**)

Chan W, **Yeh H**, Symanski E: “Estimation of transition probabilities in a discrete-time Markov chain with missing observations” Joint Statistical Meetings, Seattle, WA, August 6-10, 2006. (Presented by **Yeh H**)

Scientific papers presented at local and regional meetings:

Wambach K, Rojjanasrirat W, Aaronson L, Williams Domian E, Breedlove G, and **Yeh H**: “Randomized Clinical Trial to Promote and Support Breastfeeding in Adolescent Mothers”. Midwest Nursing Research Society (MNRS) 2008 Annual Conference, Indianapolis, Indiana, March 28-31, 2008. (Presented by Wambach K.)

Poster presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review and location and date of presentation.)

Poster presentations at national and international meetings:

N/A

Poster presentations at local and regional meetings:

N/A

Invited seminars at other universities: (Provide title, sponsoring organization or institution, and date of presentation.)

“Navigating Nondetectable Data: Meet Halfway?” University of Texas Health Science Center at Houston, October 15, 2007

#### 8. Other evidence of scholarship

(includes clinical guidelines, policy documents, contributions to significant position statements by professional organizations, and development of national examinations)

Visiting Fellowship in Functional MRI at MGH at the Athinoula A. Martinos Center for Biomedical Imaging, March 10-14, 2008 (attendee)

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**IV. SERVICE ACTIVITIES:**

See guidelines and instructions to applicants for definitions and suggested documentation of professional and academic service.

Professional Service:

N/A

Academic Service:

Institutional Animal Care and Use Committee (IACUC) at KUMC (August 2007 to present)

Faculty Council (Fall 2007 to present)

Faculty Search Committee for Department of Biostatistics (September 2007 to present)

# The University of Kansas Medical Center

School of Medicine  
Department of Health Policy and Management

November 21, 2008

Dr. Matthew S. Mayo  
Chair, Department of Biostatistics  
The University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my full support for the M.S. and Ph.D. programs in biostatistics. The field of biostatistics is extremely important to the research carried out in the Department of Health Policy and Management and is vital to the success of the Public Health initiative taking place on the campus of KUMC. The addition of these programs will help fulfill the increasing demand for biostatisticians.

I am looking forward to the success of your program, and look forward to working with you on this exciting new venture.

Sincerely,

A handwritten signature in black ink, appearing to read 'Glen Cox', with a stylized flourish at the end.

Glen Cox, M.D., M.B.A., M.H.S.A.  
Interim Chair, Department of Health Policy and Management  
Director, Institute for Community and Public Health



December 10, 2008

Matthew S. Mayo, PhD  
Chair, Department of Biostatistics  
University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my full support for the M.S. and Ph.D. programs in Biostatistics at the University of Kansas Medical Center. The addition of these programs will provide a much needed service to local employers such as Cerner Corporation and will help address the increasing demand for well-trained biostatisticians in the Kansas City metropolitan area.

I look forward to working with you and your faculty on this exciting development at KUMC.

Sincerely,

A handwritten signature in black ink that reads 'Douglas S. McNair'.

Douglas S. McNair, MD, PhD  
Sr. Vice President, Research  
Cerner Corporation

# The University of Kansas Medical Center

School of Medicine  
Department of Health Policy and Management

November 21, 2008

Dr. Matthew S. Mayo  
Chair, Department of Biostatistics  
The University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my full support for the M.S. and Ph.D. programs in biostatistics. The field of biostatistics is extremely important to the research carried out in the Department of Health Policy and Management and is vital to the success of the Public Health initiative taking place on the campus of KUMC. The addition of these programs will help fulfill the increasing demand for biostatisticians.

I am looking forward to the success of your program, and look forward to working with you on this exciting new venture.

Sincerely,

A handwritten signature in black ink, appearing to read 'Glen Cox', written in a cursive style.

Glen Cox, M.D., M.B.A., M.H.S.A.  
Interim Chair, Department of Health Policy and Management  
Director, Institute for Community and Public Health

February 18, 2009

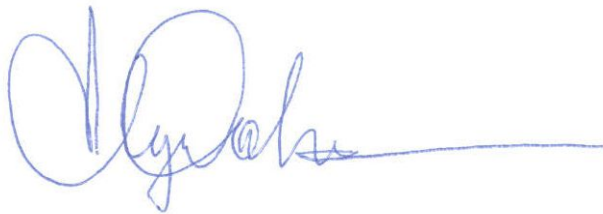
Matthew S. Mayo, PhD  
Chair, Department of Biostatistics  
University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

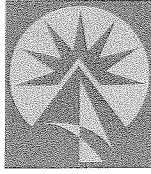
I am writing to express my support for the M.S. and Ph.D. programs in Biostatistics at the University of Kansas Medical Center. After reviewing your program proposal, I found no overlap in the core requirements of your program with those of our proposed Bioinformatics program. In fact, I feel that the addition of the graduate programs in Biostatistics will provide synergistic electives for the students enrolled in our program, and that both Biostatistics and Bioinformatics students will benefit from the opportunity to be exposed to more topics.

I look forward to working with you and your faculty on this exciting development at KUMC.

Sincerely,



Ilya Vakser, PhD  
Director and Professor



KANSAS HEALTH INSTITUTE

March 11, 2009

Matthew S. Mayo, PhD  
Chair, Department of Biostatistics  
University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my full support for the creation of an M.S. and Ph.D. program in Biostatistics at the University of Kansas Medical Center. Biostatistics is a required core discipline in an accredited School of Public Health. Additionally, implementing graduate programs in biostatistics at KUMC will help meet an ever-increasing demand for biostatisticians and will support the public health infrastructure of the State of Kansas. Biostatistics is an indispensable tool in improving health and reducing illness.

I am pleased to see such an initiative at KUMC and I look forward to the success of your programs.

Sincerely,

Robert F. St. Peter, M.D.  
President and CEO



December 8, 2008

Matthew S. Mayo, PhD  
Chair, Department of Biostatistics  
University of Kansas Medical Center  
3901 Rainbow Blvd. MS 1026  
Kansas City, KS 66160

Dear Dr. Mayo:

I am writing to express my full support for the MS and PhD programs in Biostatistics. Both degree programs are important to many initiatives, including the School of Public Health, taking place at the Medical Center campus. The courses that will be offered in your department for these degree programs will be important not only for your department but for students from other departments, including students in our MPH and MS programs who wish to gain additional training in biostatistics.

I look forward to the success of your programs and look forward to working with you and your faculty.

Sincerely,

A handwritten signature in black ink, appearing to read "W. S. Choi". The signature is fluid and cursive, with a large initial "W" and "S".

Won S. Choi, PhD MPH  
Associate Professor and Executive Director  
KU-MPH Program

## CURRICULUM VITAE

MATTHEW STUART MAYO, Ph.D.

### HOME ADDRESS / PHONE:

4440 W. 131<sup>st</sup> Terrace  
Leawood, Kansas 66209  
(913) 851-8777

### BUSINESS ADDRESS / PHONE:

University of Kansas Medical Center  
3901 Rainbow Boulevard  
Kansas City, Kansas 66160-7312  
(913) 588-4735 (tel)/4790 (fax)

### EDUCATION:

Baker University, Baldwin, KS

MBA - 2004

University of Alabama, Tuscaloosa, Alabama

Ph.D. - 1995 - Applied Statistics

University of Missouri, Columbia, Missouri

M.A. - 1990 - Statistics

University of Missouri, Columbia, Missouri

B.A. - 1986 - Statistics

### POSITIONS HELD (Current positions in bold):

***Professor and Chair, Department of Biostatistics***, University of Kansas Medical Center, Kansas City, KS  
(February 2007 – present)

- Establish new department within the School of Medicine
- Ensure that the research, teaching and service needs related to biostatistics are met at the Medical Center which includes the Schools of Allied Health, Medicine and Nursing
- Consolidate faculty across the three schools into a single department
- Lead the development of a graduate degree program in biostatistics

***Director, Center for Biostatistics and Advanced Informatics***, University of Kansas Medical Center, Kansas City, KS (July 2004 – present)

- Provide a leadership role in all biostatistical and bioinformatics research initiatives across the medical center
- Provide the infrastructure and expertise for centralized and project specific database development, management, and analysis
- Consolidate resources pertaining to biostatistics and bioinformatics
- Provide the ability to establish biostatistics and bioinformatics cores
- Ensure that researchers have ready access to biostatistical and bioinformatics resources and support

***Associate Director, Shared Resources, University of Kansas Cancer Center***, University of Kansas Medical Center, Kansas City, Kansas (August 2008 – present)

- Provide oversight, coordination, and strategic guidance to Shared Resources
- Provide guidance on Shared Resources' scope of services, utilization, performance, and cost effectiveness

- Oversee us of KUCC funds by reviewing annual budgets and business plans for each Shared Resource and making recommendations to the KUCC Director, Associate Director of Administration, and Leadership Council
- Advise on adherence to the National Cancer Institute Cancer Cents Support Grant guidelines for Shared Resources and development of the Shared Resource sections of the application
- Work with the Shared Resources Scientific Directors to establish the following: annual business plan and budget, charge-back system, measures and metrics to track utilization and improve performance, and Internal and External Advisory Boards that meet periodically during the year
- Conduct annual review of Shared Resources and Scientific Directors and provide recommendations to the KUCC Director

**Director, Biostatistics/Informatics Core, Kansas Masonic Cancer Research Institute**, University of Kansas Medical Center, Kansas City, Kansas (August 1998 – August 2008)

- Responsible for building a biostatistics core within the Cancer Institute to aid in attainment of eventual comprehensive status, recently received notification of award for over 1.4 million in total costs from NCI for Biostatistics/Informatics Shared Resource
- Collaborate with oncology investigators in Cancer Institute on study design, database design, statistical analysis, along with grant and manuscript writing
- Review and approve oncology-related studies conducted within the Institute via Protocol Review and Monitoring Committee
- Member of Executive, Internal Advisory and Program Directors committees which provide guidance to direction and conduct of Institute
- Provide statistical training for clinical investigators
- Member of Multidisciplinary Cancer Committee

*Director, Clinical Trials Office, Kansas Masonic Cancer Research Institute*, University of Kansas Medical Center, Kansas City, Kansas (February 2001 – May 2006)

- Responsible for operations of research clinical trials conducted within the Kansas Masonic Cancer Research Institute in collaboration with oncology investigators
- Chair Institutes Protocol Review and Monitoring Committee
- Supervise project director, research nurses, study coordinators and recruiters

*Director, Medical Statistics and Research Design Unit, Department of Preventive Medicine and Public Health*, University of Kansas Medical Center, Kansas City, Kansas (November 2002 – July 2004)

*Professor, Department of Preventive Medicine and Public Health*, University of Kansas Medical Center, Kansas City, Kansas (July 2006 – January 2007)

*Associate Professor with tenure, Department of Preventive Medicine and Public Health*, University of Kansas Medical Center, Kansas City, Kansas (July 2003 – June 2006)

*Assistant Professor, Department of Preventive Medicine and Public Health*, University of Kansas Medical Center, Kansas City, Kansas (August 1998 – June 2003)

- Developed and coordinate biostatistics journal club to enhance statistical methodologic research and knowledge within the department
- Collaborate with investigators in department on study design, database design, statistical analysis, along with grant and manuscript writing

- Provide statistical training for clinical investigators and public health students
- Develop advanced statistical coursework for Masters in Public Health (MPH) program
- Co-Director MS in Clinical Research Degree Program
- Elected Member of Faculty Council
- Member of University Data and Safety Monitoring Board
- Member of Admissions and Strategic Planning Committee for MPH Program
- Member and Chair search committees
- Mentor other statistical faculty and support personnel
- Advisor for MPH students and member on research committees
- Perform statistical methodological research

*Research Assistant Professor, Medical Statistics Section, Division of Hematology/Oncology, Department of Medicine, University of Alabama at Birmingham, Birmingham, Alabama (January 1996 - August 1998)*

- Collaborated primarily with oncology and infectious diseases investigators on study design, database design, statistical analysis, along with grant and manuscript writing
- Supervised data entry and data management personnel within the section
- Co-Chair of data management and quality committee
- Member and chair of search committees
- Reorganized charge-back system within section
- Train clinical investigators in statistical methodology
- Perform statistical methodological research

*Associate Scientist, Experimental Therapeutics, Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, Alabama (November 1996 - August 1998)*

*Biostatistician, Biostatistics Unit, Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, Alabama (January 1996 - August 1998)*

*Post-Doctoral Fellow, Biostatistics Unit, Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, Alabama (July 1995 - December 1995)*

*Instructor, Department of Management Science and Statistics, University of Alabama, Tuscaloosa, Alabama (August 1991 - July 1995)*

*Director of Undergraduate Statistics Tutors, Department of Management Science and Statistics, University of Alabama, Tuscaloosa, Alabama (August 1991 - May 1993)*

*Instructor, Statistics Department, University of Missouri, Columbia, Missouri (January 1987 - May 1991)*

*Researcher, USDA Crop and Livestock Reporting Office, Columbia, Missouri (June 1989 - August 1989)*

## BIBLIOGRAPHY

### MANUSCRIPTS - PUBLISHED/IN PRESS:

1. Rosenfeld SS, Rener B, Correia JJ, **Mayo M**, Cheung HC: "Equilibrium Studies of Kinesin: Nucleotide Intermediates". **Journal of Biological Chemistry**, **271**(16), 9473-82, 1996.
2. Bell DSH and **Mayo MS**: "Outcome of Metformin-Facilitated Reinitiation of Oral Diabetic Therapy in Insulin-Treated Patients With Non-Insulin-Dependent Diabetes Mellitus". **Endocrine Practice**, **3**(2), 73-76, 1997.
3. **Mayo MS** and Gray JB: "Elemental Subsets: The Building Blocks of Regression". **The American Statistician**, **51**(2), 122-129, 1997.
4. Janowski KM, Ledbetter S, **Mayo MS**, and Hockett Jr. RD: "Identification of a DNA Segment Exhibiting Rearrangement Modifying Effects upon Transgenic  $\delta$  Deleting Elements". **Journal of Experimental Medicine**, **186**(1), 91-100, 1997.
5. Domingues RB, Tsanaclis AMC, Pannuti CS, **Mayo MS**, and Lakeman FD: "Evaluation of the Range of Clinical Presentations of Herpes Simplex Encephalitis Using Polymerase Chain Reaction Assay of Cerebrospinal Fluid Samples". **Clinical Infectious Diseases**, **25**(1), 86-91, 1997.
6. Domingues RB, Muniz MR, Jorge MLC, **Mayo MS**, Saez-Asquezar A, Chamone DF, Scaff M, and Marchiori PE: "Human T Cell Lymphotropic Virus Type-1-Associated Myelopathy/Tropical Spastic Paraparesis in Sao Paulo, Brazil: Association with Blood Transfusion". **American Journal of Tropical Medicine and Hygiene**, **57**(1), 56-59, 1997.
7. Rosenfeld ME, Rogers BE, Khazaeli MB, Mikheeva G, Raben D, **Mayo MS**, Curiel DT, and Buchsbaum DJ: "Adenoviral Mediated Delivery of Gastrin Releasing Peptide Receptor Results in Specific Tumor Localization of a Bombesin Analogue In Vivo". **Clinical Cancer Research**, **3**, 1187-1197, 1997.
8. Rogers BE, Curiel DT, **Mayo MS**, Laffoon KK, Bright SJ, and Buchsbaum DJ: "Tumor Localization of a Radiolabeled Bombesin Analogue in Mice Bearing Human Ovarian Tumors Induced to Express the Gastrin-Releasing Peptide Receptor by an Adenoviral Vector". **Cancer**, **80**(12 Suppl), 2419-2424, 1997.
9. Safavy A, Khazaeli MB, **Mayo MS**, and Buchsbaum DJ: "Synthesis, Rhenium - 188 Labeling and Biodistribution Studies of a Pholic Ester Derivative of Trisuccin." **Cancer Biotherapy and Radiopharmaceuticals**, **12**, 375-384, 1997.
10. Pederson LC, Buchsbaum DJ, Vickers SM, Kancharla SR, **Mayo MS**, Curiel DT, and Stackhouse MA: "Molecular Chemotherapy Combined with Radiation Therapy Enhances Killing of Cholangiocarcinoma Cells In Vitro". **Cancer Research**, **57**(19), 4325-4332, 1997.
11. Bell DSH and **Mayo MS**: "Improved Glycemic Control on Oral Hypoglycemic Therapy with or without Insulin". **Endocrine Practice**, **4**, 82-85, 1998.
12. Pederson LC, Vickers SM, Buchsbaum DJ, Kancharla SR, **Mayo MS**, Curiel DT, and Stackhouse MA: "Combined Cytosine Deaminase Expression, 5-Fluorocytosine Exposure, and Radiotherapy Increases Cytotoxicity to Cholangiocarcinoma Cells". **Journal of Gastrointestinal Surgery**, **2**, 283-291, 1998.

13. Figueroa-Colon R, **Mayo MS**, Treuth MS, Aldridge RA, and Weinsier RL: "Reproducibility of Dual Energy X-ray Absorptiometry Measurements in Prepubertal Girls". **Obesity Research**, 6(4), 262-267, 1998.
14. Domingues RB, Lakeman FD, **Mayo MS**, and Whitley RJ: "Application of Competitive Polymerase Chain Reaction to Cerebrospinal Fluid Samples from Patients with Herpes Simplex Encephalitis". **Journal of Clinical Microbiology**, 36(8), 2229-2234, 1998.
15. Figueroa-Colon R, **Mayo MS**, Aldridge RA, Winder T, and Weinsier RL: "Body Composition Changes in Caucasian and African-American Children and Adolescents with Obesity Using Dual-Energy X-ray Absorptiometry Measurements After a 10-week Weight Loss Program". **Obesity Research**, 6(5), 326-331, 1998.
16. Dominiques RB, Fink MCD, Tsanaclis AMC, DeCastro CC, Cerri GC, **Mayo MS**, and Lakeman FD: "Diagnosis of Herpes Simplex Encephalitis by Magnetic Resonance Imaging and Polymerase Chain Reaction Assay of Cerebrospinal Fluid". **Journal of the Neurologic Sciences**, 157(7), 148-153, 1998.
17. Hedges SR, Silby DA, **Mayo MS**, Hook III EW, and Russell MW: "Cytokine and Antibody Responses in Women Infected with Neisseria Gonorrhoeae: Effects of Concomitant Infections." **Journal of Infectious Diseases**, 178(3), 742-751, 1998.
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19. Harrison GP, **Mayo MS**, Hunter E, and Lever AML: "Pausing of Reverse Transcriptase on Retroviral RNA Templates is Influenced by Secondary Structures Both 5' and 3' of the Catalytic Site". **Nucleic Acids Research**, 26(14), 3433-3442, 1998.
20. Saleh MN, Lalisian DY Jr, Pride MW, Solinger A, **Mayo MS**, LoBuglio AF, and Murray JL: "Immunologic Response to the Dual Murine Anti-Id Vaccine Melimmune-1 and Melimmune-2 in Patients with High-Risk Melanoma without Evidence of Systemic Disease". **Journal of Immunotherapy**, 21(5), 379-388, 1998.
21. Hedges SR, **Mayo MS**, Kallman L, Mestecky J, Hook III EW, and Russell MW: "IgA1 Protease and IgA1 Protease-Inhibitory Activity In Human Female Genital Infection with Neisseria Gonorrhoeae". **Infection and Immunity**, 66(12), 5826-5832, 1998.
22. Stackhouse MA, Buchsbaum DJ, Grizzle WE, Bright SJ, Olsen CC, Kancharla S, **Mayo MS**, Curiel DT: "Radiosensitization Mediated by a Transfected Anti-erbB-2 Single Chain Antibody in Vitro and In Vivo". **International Journal of Radiation Oncology, Biology, Physics**, 42, 817-822, 1998.
23. Bell DSH and **Mayo MS**: "Weight Loss in Diabetic Patients Treated with a Metformin/Sulfonylurea Combination Compared with a Twice Daily Mixed Insulin." **Endocrine Practice**, 4(6), 360-364, 1998.
24. Miller CR, Buchsbaum DJ, Reynolds PN, Douglas JT, Gillespie GY, **Mayo MS**, Raben D, Curiel DT: "Differential Susceptibility of Primary and Established Human Glioma Cells to Adenovirus Infection:

Targeting via the Epidermal Growth Factor Receptor Achieves Fiber Receptor-Independent Gene Transfer". **Cancer Research**, **58**(24), 5738-5748, 1998.

25. **Mayo MS**, Paramithiotis E, and Cooper MD: "B Lymphocyte Migration to the Bone Marrow of Humans is Not Random". **Statistics in Medicine**, **18**, 223-231, 1999.
26. **Mayo MS** and Conerly MD: "Evaluating Overall Significance Levels in Multi-Factor ANOVA". **Journal of Biopharmaceutical Statistics**, **9**(1), 129-143, 1999.
27. Krontiras H, Roye GD, Beenken SE, Myers RB, **Mayo MS**, Peters GE, and Grizzle WE: "Fatty Acid Synthase Expression in the Epithelium of the Oral Tongue May Predict Neoplastic Phenotypes". **Head and Neck**, **21**(4), 325-329, 1999.
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#### **BOOK and BOOK CHAPTERS:**

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90. Lee RE, Harris KJ, Catley D, Shostrom V, Choi S, **Mayo MS**, Okuyemi K, Ahluwalia HK, and Ahluwalia JS: "BMI, Perceived Overweight and Trying to Lose Weight in African American Smokers". Society of Behavioral Medicine's 24<sup>th</sup> Annual Meeting, Salt Lake City, UT, March 19-22, 2003. **Annals of Behavioral Medicine**, **25**(2003 Supplement), S18, 2003.
91. Pulvers KM, Lee RE, Ahluwalia HK, **Mayo MS**, Fitzgibbon ML, and Ahluwalia JS: "Reliability of a Culturally Sensitive Body Image Instrument Among Urban African Americans". Society of Behavioral Medicine's 24<sup>th</sup> Annual Meeting, Salt Lake City, UT, March 19-22, 2003. **Annals of Behavioral Medicine**, **25**(2003 Supplement), S165, 2003.

92. **Mayo MS** and Gajewski BJ: "Sample Size Calculations in Phase II Clinical Trials Using Informative Conjugate Priors". International Biometric Society Eastern North American Region Spring Meeting, Tampa, FL, March 30- April 2, 2003.
93. **Mayo MS** and Gajewski BJ: "Incorporating Investigator Confidence in the Design of Bayesian Phase II Clinical Trials". International Society for Clinical Biostatistics and Society for Clinical Trials 3<sup>rd</sup> Joint Meeting, London, UK, July 20-24, 2003. **Controlled Clinical Trials**, **24**(2S), 104-105S, 2003.
94. **Mayo MS**, Reed G, McDowd J, and Hurwitz A: "Effects of Ginseng and Gingko on Drug Disposition in Man: Design and Analysis Plan". International Society for Clinical Biostatistics and Society for Clinical Trials 3<sup>rd</sup> Joint Meeting, London, UK, July 20-24, 2003. **Controlled Clinical Trials**, **24**(2S), 150S, 2003.
95. Smith HJ and **Mayo MS**: "Development of the Kansas Cancer Institute's Comprehensive Web-Based Data Collection System". International Society for Clinical Biostatistics and Society for Clinical Trials 3<sup>rd</sup> Joint Meeting, London, UK, July 20-24, 2003. **Controlled Clinical Trials**, **24**(2S), 120-121S, 2003.
96. Gajewski BJ and **Mayo MS**: "Incorporating Pessimistic and Optimistic Priors into the Design of Bayesian Phase II Clinical Trials". Joint Statistical Meetings, San Francisco, CA, August 3-7, 2003.
97. Nollen N, Snow T, Okuyemi KS, **Mayo MS**, Choi W, Nazir N, Kaur H, and Ahluwalia JS: "Estimation of the Sensitivity of Carbon Monoxide and Serum Cotinine among African American Light Smokers". Society for Research on Nicotine and Tobacco Annual Meeting. Phoenix, AZ, February 18-21, 2004.
98. Bond R, Okuyemi KS, Nollen N, **Mayo MS**, and Ahluwalia JS: "Nicotine Dependence among African American Light Smokers". Society for Research on Nicotine and Tobacco Annual Meeting, Phoenix, AZ, February 18-21, 2004.
99. Hall M and **Mayo M**: "Robust Regression with Neural Networks Using Iterative Learning Trimmed Elemental Estimators". Joint Statistical Meetings, Toronto, Ontario, Aug. 8-12, 2004.
100. Hall S, Ahluwalia J and **Mayo M**: "A Method for Imputing Missing Correlated Binary Responses". Joint Statistical Meetings, Toronto, Ontario, Aug. 8-12, 2004.
101. Divecha V, Krishnan L, Smith HJ, and **Mayo MS**: "Prediction of Axillary Nodal Metastasis in Breast Cancer by Patient and Tumor Characteristics, Including Biomarkers". American Society of Therapeutic Radiology and Oncology, Atlanta, GA, Oct. 3-7, 2004.
102. Ahluwalia JS, Nollen NL, Okuyemi KS, Resnicow K, and **Mayo MS**: "Pathways to Health: A Randomized Trial of Dietary Change and Smoking Cessation Among Smokers in Public Housing". North American Association for the Study of Obesity, Las Vegas, NV, Nov. 14-18, 2004. **Obesity Research**, **12**, A239, 2004.
103. Okuyemi KS, James AS, Nollen N, Choi W, **Mayo M**, and Ahluwalia JS: "Pathways to Health (PATH): Cluster Randomized Trial of Nicotine Gum and Motivational Interviewing for Smoking Cessation in Low-Income Housing". Society for Research on Nicotine and Tobacco 11<sup>th</sup> Annual Meeting and the 7<sup>th</sup> Annual SRNT European Conference, Prague, Czech Republic, March 20-23, 2005.

104. Thomas JL, Ahluwalia JS, Choi WS, Nollen NL, Okuyemi K, Haire-Joshu D, and **Mayo MS**: "Smoking Cessation in African Americans with Diabetes: Secondary Analyses of Three Randomized Trials". Society for Research on Nicotine and Tobacco 11<sup>th</sup> Annual Meeting and the 7<sup>th</sup> Annual SRNT European Conference, Prague, Czech Republic, March 20-23, 2005.
105. Nollen N, Ahluwalia J, Okuyemi K, Choi W, Kaur H, and **Mayo M**: "Kick it at Swope II (KIS II): Baseline Data from a Smoking Cessation Trial Among African American (AA) Light Smokers". Society for Research on Nicotine and Tobacco 11<sup>th</sup> Annual Meeting and the 7<sup>th</sup> Annual SRNT European Conference, Prague, Czech Republic, March 20-23, 2005.
106. Catley D, Manning BK, Harris KJ, **Mayo MS**, and Ahluwalia JS: "Stress and Quitting Among African American Smokers". Society for Research on Nicotine and Tobacco 11<sup>th</sup> Annual Meeting and the 7<sup>th</sup> Annual SRNT European Conference, Prague, Czech Republic, March 20-23, 2005.
107. Fabian CJ, Kimler BF, Anderson JR, Chamberlain CS, **Mayo MS**, Khan SA, Dooley WC, Krontiras H, Browne D: "Comparison of Random Periareolar Fine Needle Aspiration vs. Ductal Lavage for Acquisition of Breast Tissue in Meeting Eligibility Requirements for a Phase II Chemoprevention Study". Fourth Annual AACR International Conference on Frontiers in Cancer Prevention Research, p. 83 (abstract A56), Baltimore, MD, October 30 – November 2, 2005.
108. Ahluwalia JS, Okuyemi KS, Nollen N, Choi WS, Kaur H, Pulvers K, and **Mayo MS**: "The Effects of Nicotine Gum and Counseling Among African-American Light Smokers". Society for Research on Nicotine and Tobacco 12 Annual Meeting, Orlando, FL, February 15-18, 2006.
109. Bronars CA, Cox LS, Thomas JL, Okuyemi KS, King G, **Mayo MS**, and Ahluwalia JS: "Correlates of Consenting to Genetic Testing Among African American Smokers". Society for Research on Nicotine and Tobacco 12 Annual Meeting, Orlando, FL, February 15-18, 2006.
110. Okuyemi KS, Pulvers KM, Cox LS, Thomas JL, Kaur H, **Mayo MS**, Nazir N, Etter J-F, and Ahluwalia JS: "Nicotine Dependence Among African American Light Smokers". Society for Research on Nicotine and Tobacco 12 Annual Meeting, Orlando, FL, February 15-18, 2006.
111. Fabian CJ, Kimler BF, Anderson JR, Chamberlain C, **Mayo MS**, Zalles CM, O'Shaughnessy JA, Lynch HT, Johnson KA, and Browne D: "Phase II Breast Cancer Chemoprevention Trial of the Third Generation Selective Estrogen Receptor Modulator Arzoxifene". American Society of Clinical Oncology Annual Meeting, Atlanta, GA, June 2 – June 6, 2006.
112. Kimler BF, Ursin G, Fabian CJ, Anderson JR, Chamberlain C, **Mayo MS**, O'Shaughnessy JA, Lynch HT, Johnson KA, Browne D: "Effect of the Third Generation Selective Estrogen Receptor Modulator Arzoxifene on Mammographic Breast Density". American Society of Clinical Oncology Annual Meeting, Atlanta, GA, June 2 – June 6, 2006.
113. Simmons AR, Likert BP, Fox KC, **Mayo MS**, and Graves L: "Osteoporosis in Men, a Similar Prevalence to Women but at a Younger Mean Age, Supporting the Need for Screening Guidelines". American Society for Bone and Mineral Research, Philadelphia, PA, September 15, 2006. **Journal of Bone and Mineral Research**, 21(S1), 2006.

## TECHNICAL REPORTS

1. **Mayo MS** and Turk A: "The Effects of a Juice on Blood Cholesterol", Statistical Report for Third Option Laboratories, May 6, 1996.
2. **Mayo MS**, Soong S-j, and Austin LP: NIAID CASG DSMB Open Report, "A Phase III Study to Evaluate the Safety and Efficacy of Ganciclovir (Dihydroxypropoxymethyl guanine [DHPG]) Treatment of Symptomatic Central Nervous System (CNS) Congenital Cytomegalovirus (CMV) Infections". #DAB-AL-55-8607 Open Session, September 23, 1996.
3. **Mayo MS**, Soong S-j, and Austin LP: NIAID CASG DSMB Closed Report, "A Phase III Study to Evaluate the Safety and Efficacy of Ganciclovir (Dihydroxypropoxymethyl guanine [DHPG]) Treatment of Symptomatic Central Nervous System (CNS) Congenital Cytomegalovirus (CMV) Infections". #DAB-AL-55-8607 Closed Session, September 23, 1996.
4. **Mayo MS** and Soong S-j: "An investigator blinded interim analysis of 'Perceived Risk in Rural Minorities'". Study Advisory Committee Report, March 1997.
5. **Mayo MS**: "A Laboratory and Adverse Event Summary for Protocol CV123-137: Comparison of Pravastatin and Niacin in Hypertriglycerdemic Patients with Elevated Plasma Cholesterol". Statistical Report for Bristol-Myers Squibb, September 30, 1997.
6. **Mayo MS** and Slaughter M: "An Efficacy, Safety and Adverse Event Summary for Protocol CV123-157: The Comparative Effects of Pravastatin and Lovastatin on Psychomotor Performance". Statistical Report for Bristol-Myers Squibb, March 25, 1998.
7. **Mayo MS** and Harrison RA: "Perceived Risk and Cancer Control in Rural Minorities". Final Analysis Report, 1998.
8. **Mayo MS**: "An investigator blinded preliminary analysis of 'A Phase II Clinical Trial of the Chemopreventive Agent Difluoromethylornithine (DFMO) in Breast Dysplasia with Biomarker Abnormalities'". Review Committee Report, December 14, 1999.
9. **Mayo MS** and Schmelzle K: "An Investigator Blinded Data and Safety Monitoring Report of 'A Phase II Clinical Trial of a Selective Estrogen Receptor Modulator (LY353381•HCl) in High Risk Women with Fine Needle Aspiration Cytologic Evidence of Hyperplasia'". Data and Safety Monitoring Board Report, August 31, 2001.
10. **Mayo MS**, Nazir N, and Ge B: "The Second Investigator Blinded Data and Safety Monitoring Report of 'A Phase II Clinical Trial of a Selective Estrogen Receptor Modulator (LY353381•HCl) in High Risk Women with Fine Needle Aspiration Cytologic Evidence of Hyperplasia'". Data and Safety Monitoring Report, October 16, 2002.
11. **Mayo MS**, Nazir N, and Smith HJ: "Data and Safety Monitoring Report for WS-76: 'A study to Identify Biomarker Modulation by a Cyclooxygenase-2 (COX-2) Inhibitor in Breast Tissue of Premenopausal Women at High Risk for Estrogen Receptor Negative (ERN) Breast Cancer'". Data and Safety Monitoring Report, March 24, 2005.

## PRESENTATIONS

1. "Elemental Subsets: The Building Blocks of Regression", *Colloquim*, Department of Mathematics, James Madison University, March 18, 1995. (*Invited Speaker*)
2. "The Leverage-Residual Weighted Elemental (LRWE) Class of Regression Estimators", Joint Statistical Meetings, Orlando, FL, August 15, 1995.
3. "Power and Sample Size", General Clinical Research Center, CAP/MCAP Education Seminar, University of Alabama at Birmingham, May 1, 1996. (*Invited Speaker*)
4. "The Role of a Biostatistician in a Comprehensive Cancer Center", The Alabama Quantitative Literacy Workshop, July 16, 1996. (*Invited Speaker*)
5. "A Phase III Study to Evaluate the Safety and Efficacy of Ganciclovir (Dihydroxypropoxymethyl guanine [DHPG]) Treatment of Symptomatic Central Nervous System (CNS) Congenital Cytomegalovirus (CMV) Infections", #DAB-AL-55-8607 Open Session, Birmingham, AL, September 23, 1996.
6. "A Phase III Study to Evaluate the Safety and Efficacy of Ganciclovir (Dihydroxypropoxymethyl guanine [DHPG]) Treatment of Symptomatic Central Nervous System (CNS) Congenital Cytomegalovirus (CMV) Infections", #DAB-AL-55-8607 Closed Session, Birmingham, AL, September 23, 1996.
7. "Probability Distributions and Statistical Tests", Hematology/Oncology Grand Rounds, University of Alabama at Birmingham, Birmingham, AL, February 7, 1997. (*Invited Speaker*)
8. "An investigator blinded interim analysis of 'Perceived Risk in Rural Minorities'". Study Advisory Committee Report, Birmingham, AL, March 1997.
9. "Reproducibility of Treadmill Assessments in Prepubertal Girls measured 6 Weeks Apart", FASEB Annual Meeting, New Orleans, LA, April 8, 1997.
10. "Regression and Correlation", General Clinical Research Center, CAP/MCAP Education Seminar, University of Alabama at Birmingham, July 16, 1997. (*Invited Speaker*)
11. "The Necessity of Statistics in Pre-clinical and Clinical Studies", The Alabama Quantitative Literacy Workshop, Tuscaloosa, AL, July 22, 1997. (*Invited Speaker*)
12. "The Effect of Multiple F-Tests on the Overall Significance Level", Joint Statistical Meetings, Anaheim, CA, August 12, 1997.
13. "Disjoint Individual Confidence Intervals and Two-Sample Tests for Means / Evaluating Overall Significance Levels in Multi-Factor ANOVA Problems", Biostatistics Unit Seminar, Comprehensive Cancer Center, University of Alabama at Birmingham, Birmingham, AL, September 23, 1997. (*Invited Speaker*)
14. "General Concept and Use of Statistics in Clinical Investigations", Clinical Investigator Training Course, University of Alabama at Birmingham Department of Medicine, Birmingham, AL, October 6, 1997. (*Invited Speaker*)

15. "Comparison of Modeling the Median Versus the Average Concentration in Tissue Specific Pharmacokinetics", 1997 Annual Research Retreat, University of Alabama at Birmingham, Comprehensive Cancer Center, Birmingham, AL, October 27, 1997. (*Invited Speaker*)
16. "B Lymphocyte Migration to the Bone Marrow in Humans is Not Random". *Seminar*, University of Kansas Medical Center, Department of Preventive Medicine, Kansas City, Kansas, May 7, 1998. (*Invited Speaker*)
17. "A Simulation Study of the Robustness and Efficiency of LRWE Estimators", Joint Statistical Meetings, Dallas, TX, August 9, 1998.
18. "Role of Biostatistics in a Cancer Center", Kansas Cancer Institute Research Round Table, University of Kansas Medical Center, Kansas City, Kansas, October 6, 1998. (*Invited Speaker*)
19. "Utilizing Time to Event Endpoints in Smoking Cessation Studies: An Introduction", Tobacco Control Projects Seminar, Department of Preventive Medicine, University of Kansas Medical Center, Kansas City, Kansas, December 8, 1998. (*Invited Speaker*)
20. "Biostatistics Seminar: Clinical Trials", Oncology Didactics, Kansas Cancer Institute and University of Kansas Medical Center, Kansas City, Kansas, January 8, 1999. (*Invited Speaker*)
21. "Biostatistics Seminar: Epidemiologic Issues", Oncology Didactics, Kansas Cancer Institute and University of Kansas Medical Center, Kansas City, Kansas, January 15, 1999. (*Invited Speaker*)
22. "Statistical Power and Sample Size", Community Health Seminar, University of Kansas Medical Center, Kansas City, Kansas, January 22, 1999. (*Invited Speaker*)
23. "A Randomized Two-Arm Phase II Clinical Trial Design Using Constrained Optimization", International Biometric Society Eastern North American Spring Meeting, Atlanta, Georgia, March 31, 1999.
24. "Disjoint Individual Confidence Intervals and Two-Sample Hypothesis Tests for Means", Joint Statistical Meetings, Baltimore, MD, August 9, 1999.
25. "Modifications of Gail Risk Assessment Utilizing Fine Needle Aspirations for Prediction of Breast Cancer Development in Women at High Risk of Breast Cancer", 20<sup>th</sup> Annual Conference of the International Society for Clinical Biostatistics, Heidelberg, Germany, September 15-16, 1999.
26. "A Comparison of Power Calculation Techniques for Group Randomized Trials with Dichotomous Outcomes", Medical Statistics Section, *Seminar*, University of Alabama at Birmingham, Birmingham, AL, September 30, 1999. (*Invited Speaker*)
27. "A Comparison of Power Calculation Techniques for Group Randomized Trials with Dichotomous Outcomes", Department of Statistics, *Statistics Colloquium*, University of Missouri-Columbia, Columbia, MO, October 12, 1999. (*Invited Speaker*)
28. "An investigator blinded preliminary analysis of 'A Phase II Clinical Trial of the Chemopreventive Agent Difluoromethylornithine (DFMO) in Breast Dysplasia with Biomarker Abnormalities'". Review Committee Report, Kansas City, KS, December 14, 1999.

29. "Biostatistics Seminar: An Introduction", Oncology Didactics, Kansas Cancer Institute and University of Kansas Medical Center, Kansas City, Kansas, March 31, 2000. (*Invited Speaker*)
30. "Kansas Cancer Institute Biostatistics Core", Greater Kansas City Cancer Research Group, Kansas City Area Life Sciences Institute, Inc., Stowers Institute, Kansas City, Missouri, April 7, 2000. (*Invited Speaker*)
31. "A Comparison of Power Calculations Techniques for Group Randomized Trials with Dichotomous Outcomes." 21<sup>st</sup> Annual Meeting of the Society for Clinical Trials, Toronto, Canada, April 17, 2000.
32. "Research Synthesis and Meta-Analysis: An Overview", Kansas Cancer Institute Research Roundtable, University of Kansas Medical Center, Kansas City, Kansas, May 16, 2000. (*Invited Speaker*)
33. "The Robustness and Efficiency of Trimmed Elemental Estimation (TEE) in Regression Analysis: A Monte Carlo Simulation Study", International Conference on Monte Carlo Simulation, Monte Carlo, Monaco, June 20, 2000.
34. "Developing and Teaching a Second Level Biostatistics Course in a Masters in Public Health (MPH) Program". Joint Statistical Meetings, Indianapolis, IN, August 15, 2000.
35. "Biostatistics: Handling Repeated Measures Over Time". Central States Chapter / American College of Sports Medicine Annual Meeting, Kansas City, MO, October 20, 2000. (*Invited Speaker*)
36. "Review of Phase IA Results". Breast Cancer Prevention Consortium, Orlando, FL, January 13, 2001. (*Invited Speaker*) with Bruce Kimler, Ph.D.
37. "Appropriate Methods for Analyzing the Results of Clinical Trials". Kansas Medical Education Foundation Combined Grand Rounds, Topeka, KS, January 27, 2001. (*Invited Speaker*)
38. "Design of a Cluster Randomized Smoking Cessation Trial in Kansas City Metropolitan Area Housing Developments". 22<sup>nd</sup> Annual Meeting of the Society for Clinical Trials, Denver, CO, May 21, 2001.
39. "Statistics Worksession". Department of Pharmacology, Toxicology & Therapeutics, University of Kansas Medical Center, Kansas City, KS, June 27, 2001. (*Invited Speaker*)
40. "An Investigator Blinded Data and Safety Monitoring Report of 'A Phase II Clinical Trial of a Selective Estrogen Receptor Modulator (LY353381•HCl) in High Risk Women with Fine Needle Aspiration Cytologic Evidence of Hyperplasia'". Data and Safety Monitoring Board Report, Kansas City, KS, August 31, 2001.
41. "Introduction to Biostatistics". Department of Pathology, University of Kansas Medical Center, Kansas City, KS, October 24, 2001. (*Invited Speaker*)
42. "How to Handle Uncertainty". Department of Pathology, University of Kansas Medical Center, Kansas City, KS, October 31, 2001. (*Invited Speaker*)
43. "Clinical Trials Office Protocol Review and Monitoring Committee". Kansas Cancer Institute External Advisory Committee Meeting, Kansas City, KS, August 23, 2002.

44. "The Role of a Clinical Trials Office in a Cancer Center". Kansas Cancer Institute Mason's Day, Kansas City, KS, September 21, 2002. (*Invited Speaker*)
45. "Introduction to Biostatistics and Probability". Department of Pathology, University of Kansas Medical Center, Kansas City, KS, October 2, 2002. (*Invited Speaker*)
46. "Hypothesis Testing". Department of Pathology, University of Kansas Medical Center, Kansas City, KS, October 9, 2002. (*Invited Speaker*)
47. "The Second Investigator Blinded Data and Safety Monitoring Report of 'A Phase II Clinical Trial of a Selective Estrogen Receptor Modulator (LY353381•HCl) in High Risk Women with Fine Needle Aspiration Cytologic Evidence of Hyperplasia'". Data and Safety Monitoring Report, Boston, MA, October 16, 2002.
48. "Biostatistics". Division of Dermatology, Department of Internal Medicine, University of Kansas Medical Center, Kansas City, KS, May 22, 2003. (*Invited Speaker*)
49. "Current and Future Directions of the Clinical Trials Office". Kansas Cancer Institute Research Roundtable, University of Kansas Medical Center, Kansas City, Kansas, September 9, 2003. (*Invited Speaker*)
50. "A Randomized Two-Arm Phase II Clinical Trial Design Using Multiple Constraints". *Colloquium*, Department of Statistics, Southern Methodist University, Dallas, TX, September 19, 2003. (*Invited Speaker*)
51. "Current and Future Objectives in Obtaining NIH Designation as a Comprehensive Cancer Center". Clinical Trials Education Lecture Series, KUMC Research Institute, Kansas City, KS, October 13, 2003. (*Invited Speaker*) with Holly Smith, BA.
52. "Methods of Randomization". Gastroenterology Grand Rounds, University of Kansas Medical Center, Kansas City, KS, December 16, 2003. (*Invited Speaker*)
53. "Statistical Issues Important to the Interpretation of Clinical Trials". Surgery Grand Rounds, University of Kansas Medical Center, Kansas City, KS, September 14, 2004. (*Invited Speaker*)
54. "A Method for Imputing Missing Correlated Binary Responses". Stochastic Adaptive Control Seminar, Department of Mathematics, University of Kansas, Lawrence, KS, October 4, 2004. (*Invited Speaker*)
55. "Clinical Trials Overview". American Cancer Society Heartland Division Board Meeting, Kansas City, MO, October 22, 2004. (*Invited Speaker*)
56. "Clinical Trials Issues Important for Interpreting Emerging Data". School of Breast Oncology, Atlanta, GA, November 12, 2004. (*Invited Speaker*)
57. "Bayesian Sample Size Calculations in Phase II Clinical Trials Using a Mixture of Informative Priors". Medical Statistics Section Seminar Series, University of Alabama at Birmingham, Birmingham, AL, January 13, 2005. (*Invited Speaker*)

58. "Biostatistics at KUMC", Health Policy and Management Research Seminar, University of Kansas Medical Center, Kansas City, KS, February 11, 2005. (*Invited Speaker*)
59. "Biomarkers: What do they Contribute to Breast Cancer Risk Assessment and Prevention?" Frontiers in Cancer Prevention Research, Fourth Annual American Association for Cancer Research International Conference, Baltimore, MD, November 1, 2005. (*Invited Speaker*)
60. "Biostatistics", Rockhurst University, Division of Sciences, Kansas City, MO, November 3, 2005. (*Invited Speaker*)
61. "Clinical Trials Issues Important for Interpreting Emerging Data". School of Breast Oncology, Atlanta, GA, November 11, 2005. (*Invited Speaker*)
62. "Handling Multiplicity and Discerning if Subset Analyses are Appropriate in Clinical Trials", Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, Kansas City, KS, August 22, 2006.
63. "Clinical Trials Issues Important for Interpreting Emerging Data". School of Breast Oncology, Atlanta, GA, October 27, 2006. (*Invited Speaker*)
64. "Biostatistics in Medical Research", Missouri Section of the Mathematical Association of America Annual Meeting, Branson, MO, March 20, 2007. (*Invited Speaker*)
65. "The Comprehensive Clinical Trials Management Initiative of the University of Kansas Cancer Center", Medical Statistics Section, University of Alabama at Birmingham, Birmingham, AL, August 29, 2007. (*Invited Speaker*)
66. "Clinical Trials Issues Important for Interpreting Emerging Data". School of Breast Oncology, Atlanta, GA, November 8, 2007. (*Invited Speaker*)
67. "What is CRIS and What are its Benefits", Heartland Institute of Clinical and Translational Research Meeting, University of Kansas Medical Center, Kansas City, KS, February 13, 2008.
68. "Teaching Biostatistics to Non-statisticians: Podcasts & Student Groups", KU Teaching Summit, University of Kansas, Lawrence, KS, August 19, 2008.

### **GRANT SUPPORT (KUMC):**

Does Bupropion Help African American Quit Smoking?, P.I. Jasjit Ahluwalia, M.D., NIH/NCI, \$251,582  
September 1998-June 2001 10% effort and support

Chemoprevention by Selective Estrogen Receptor Modulator, P.I. Carol J. Fabian, M.D. and Bruce F. Kimler, Ph.D.,  
NIH/NCI, \$1,162,315  
October 1998-December 1999 5% effort and 0% support

Investigation of Brain Cancer Incidence and Mortality In and Around Sugar Creek, MO, P.I. John Neuberger, Ph.D.,  
Jackson County, MO, \$29,884  
January 1999-July 1999 10% effort and support

Phase II Clinical Trial of Difluoromethylornithine (DFMO) in Breast Dysplasia with Biomarkers Abnormalities, P.I. Carol J. Fabian, M.D. and Bruce F. Kimler, Ph.D., NIH/NCI, \$506,185  
October 1998-January 2000 5% effort and 0% support

Chemoprevention for Women at High Risk of Breast Cancer, P.I. Carol J. Fabian, M.D. and Bruce F. Kimler, Ph.D.,  
NIH/NCI, \$517,633  
October 1998-December 1999 5% effort and support  
January 2000- December 2002 10% effort and support  
January 2003- June 2003 8% effort and support

Phase I Non-Randomized Study of an Antiestrogen in Women with Newly Diagnosed Breast Cancer, P.I. Carol J. Fabian, M.D. and Bruce F. Kimler, Ph.D.,  
NIH/NCI, \$1,162,315  
October 1998-December 1999 5% effort and 0% support  
January 2000-December 2002 5% effort and support

Addressing Nicotine Addiction in Drug Abuse Patients, P.I. Kimber Richter, Ph.D., NIH/NIDA, \$568,479  
February 2000-December 2002 2% effort and support  
Due to overfunding support shifted to another statistician

Psychological, Cognitive, & Physical Effects of a Selective Estrogen Receptor Modulator: A Randomized, Controlled Trial with Women at Risk, P.I. Annette Stanton, Ph.D.,  
DOD, \$259,087  
July 2000-June 2002 2% effort and support

Health Behaviors of Smokers in Public Housing Developments, P.I. Jasjit Ahluwalia, M.D., NIH/NCI, \$1,299,449  
April 2000-March 2005 10% effort and support

Prevention of Obesity by Alteration of Dietary Fat, P.I. Joseph Donnelly, Ed.D., NIH/NIDDK, \$2,158,002  
January 2001-December 2002 12% effort and support  
January 2003-December 2006 9% effort and support

Effects of Ginseng and Ginkgo on Drug Disposition in Man, P.I. Aryeh Hurwitz, MD, NIH/NCAM, \$1,634,967  
September 2001- July 2002 15% effort and support  
August 2002 - August 2004 10% effort and support

A Study to Identify Biomarker Modulation by Cyclooxygenase-2 (COX-2) Inhibitors in Breast Tissue of Premenopausal Women at High Risk for Estrogen Receptor Negative (ERN) Breast Cancer, P.I. Carol Fabian, MD,  
NIH/NCI, \$2,993,736  
September 2001-September 2004 4% effort and support

Prevalence of COX-2 Expression in Breast FNA and Modulation with Celecoxib, P.I. Carol Fabian, M.D.,  
Susan B Komen Breast Cancer Foundation, \$246,339  
October 2001-September 2003 5% effort and support

Diaphragm Fatigue: Mechanisms of Treatment by Dopamine, P.I. Janet Pierce, Ph.D., NIH/NINR, \$982,552  
Funded with 10% effort and support which was shifted to another statistician due to overfunding

Biostatistics/Informatics Shared Resource, P.I. **Matthew S. Mayo, Ph.D.**,  
NIH/NCI, \$1,400,000  
April 2002 - December 2002 40% effort and support  
January 2003 - July 2003 27% effort and support  
August 2003 - March 2007 22% effort and support  
Currently in no-cost extension

The Role of Mammography Facilities in Mammography Service Satisfaction, P.I. Kimberly Engelman,  
Ph.D.,  
ACS, \$200,615  
June 2002 - June 2006 5% effort and support

Dopamine Alleviation of ROS Medicated Diaphragm Fatigue, P.I. Janet Pierce, Ph.D.,  
DOD, \$299,980  
Funded with 5% effort and support which was shifted to another statistician due to overfunding

Physical Activity Across the Curriculum, P.I. Joseph Donnelly, Ed.D.,  
NIH, \$450,000  
September 2002 - present 10% effort and support

Promoting and Supporting Breast Feeding in Adolescents, P.I. Karen Wambach, Ph.D., NINR, \$1,101,264  
April 2003 - December 2006 5% effort and support

Phase I Ascending Single Dose and Pharmacokinetic Study of Di-indolylmethane (DIM), P.I. Aryeh  
Hurwitz, M.D.,  
NCI/NIH, \$596,031  
April 2003 - March 2005 5% effort and support

Kansas Mental Retardation Research Center, P.I. Steven Warren, Ph.D.,  
NICHD/NIH, \$6,810,352  
July 2003 - February 2007 10% effort and support

Kansas Native American Breast and Cervical Cancer Outreach, P.I. **Matthew S. Mayo, Ph.D.**,  
Kansas Department of Health and Environment (KDHE), \$24,293  
July 2004 - June 2005, 2% effort and 0% support  
July 2005 - June 2006, \$10,818 renewal

Motor Performance and Cortical Changes, P.I. Barbara Quaney, Ph.D.,  
NIH, \$103,400  
December 2004 - November 2009  
Scientific Advisor/Mentor no effort or support

Enhancing Nutrition and Activity of Rural Children, P.I. Ann McGrath Davis, Ph.D.,  
NIH, \$108, 200  
April 2005 – March 2010  
Scientific Advisor/Mentor no effort of support

Effects of Menthol on Bupropion, P.I. Kola Okuyemi, MD,  
NIH, \$150, 000  
May 2005 – March 2007, 10% effort and support

The Effects of Dairy Intake on Weight Maintenance and Metabolic Profile, P.I. Joseph Donnelly, DrEd  
Dairy Mgt. \$297,071  
March 2005 – June 2006, 5% effort and support

Merging Imaging Modalities, P.I. Sandra Hall, Ph.D.,  
NIH \$770,760  
April 2005 – March 2010  
Scientific Advisor/Mentor no effort of support

Flaxseed Lignan for Breast Cancer Chemoprevention, P.I. Carol Fabian, MD,  
NIH \$499,362  
May 2005 – April 2008  
Funded with 4% effort and support which was shifted to another statistician due to overfunding

Long-term Exercise, Weight Loss and Energy Balance, P.I. Joseph Donnelly, DrEd  
NIH \$435,835  
July 2005 – June 2010, 10% effort and support

KU Medical Center Clinical Research Curriculum Program (k30), P.I. Ed Ellerbeck, MD,  
NIH \$278,741  
July 2005 – August 2010, 10% effort and support

Cardiorespiratory Fitness in Alzheimer's Disease, P.I. Jeff Burns, MD,  
NIH \$119,956  
August 2005 – June 2007  
Funded with 10% effort and support which was shifted to another statistician due to overfunding

Substrate Oxidation in Children in Response to Exercise with High and Low Intakes, P.I. Joseph Donnelly,  
DrEd,  
Dairy Mgmt. \$251,473  
August 2005 – August 2006, 5% effort and support

QM-MSP, Ki-67, and Cytomorphology of RPFNA Specimens from High Risk Women, P.I. Carol Fabian,  
MD  
NIH \$163,064  
July 2005 – June 2007  
Funded with 5% effort and support which was shifted to another statistician due to overfunding

Long Term Exercise, Weight Loss and Energy Balance, P.I. Joseph Donnelly, DrEd,

NIH \$435,835  
July 2005 – June 2010, 10% effort and support

Dairy Foods and Blood Pressure in Multi-Ethnic Children, P.I. Debra Sullivan, Ph.D.,  
NIH \$421,700  
January 2006 – December 2008  
Funded with 15% effort and support which was shifted to another statistician due to overfunding

Targeted Smoking Cessation Program For Native Americans, P.I. Won Choi, Ph.D.,  
ACS \$279,148  
July 2006 – June 2009  
Funded with 15% effort and support which was shifted to another statistician due to overfunding

Perceptions of Colorectal Cancer Screening Among Low Income Adults, P.I. Aimee James, Ph.D.,  
ACS \$727,000  
January 2006 – December 2011  
Scientific Advisor/Mentor no effort and support

Training Program in Environmental Toxicology, P.I. Curtis Klaassen, Ph.D.,  
NIH \$268,188  
July 2006 – June 2011  
Original 2% effort, but then reduced to no effort and support

Breast Cancer Risk Biomarkers and Improved Energy Balance, P.I. Carol Fabian, MD,  
NIH \$125,000  
April 2006 – March 2008  
Funded with 5% effort and support which was shifted to another statistician due to overfunding

Probe Drugs for Botanical-Drug Interactions, P.I. Greg Reed, Ph.D.,  
NIH \$125,000  
April 2006 – March 2009  
Funded with 5% effort and support which was shifted to another statistician due to overfunding

Enhancing Tobacco Use Treatment for African American Light Smokers, P.I. Lisa Cox, Ph.D.,  
NIH \$421,040  
April 2006 – March 2011, 7% effort and support

Cux-1 and Cell Cycle Regulation in Kidney Development, P.I. Greg Vanden Heuvel, Ph.D.,  
NIH \$210,860  
September 2006 – August 2011, 4% effort and support

Energy Metabolism and Brain Changes with NIH Age and Alzheimer's Disease, P.I. Jeff Burns, MD,  
NIH  
September 2006 – June 2011  
Scientific Advisor/Mentor no effort and support

Planning the Heartland Institute for Clinical Research, P.I. Barbara Atkinson, MD,  
NIH \$150,000

April 2007 – March 2010, 5% effort and 0% support

General Clinical Research Center, P.I. Barbara Atkinson, MD,  
NIH \$1,938,267  
April 2007 – March 2010, 25% effort and support

Oral/Pharyngeal Cancer Incidence from Medicare Claims, P.I. Jonathan Mahnken, Ph.D.,  
NIH \$100,000  
June 2007 – May 2009, 15% effort and support

Longitudinal Study of Cardiorespiratory Fitness in Alzheimer's Disease, P.I. Jeff Burns, MD,  
NIH  
July 2007 – April 2009  
Funded with 10% effort and support which was shifted to another statistician due to overfunding

Prevention of Obesity in YMCA After School Programs, P.I. Joseph Donnelly, DrEd,  
NIH \$143,971  
July 2007 – June 2012, 10% effort and support

Equivalent Weight Loss for Phone and Clinic Weight Management Program, P.I. Joseph Donnelly, DrEd,  
NIH \$406,654  
July 2007 – June 2012, 10% effort and support

Breast Cancer Prevention by Letrozole in High Risk Women, P.I. Carol Fabian, MD,  
NIH \$335,918  
September 2007 – July 2011  
Funded with 5% effort and support which was shifted to another statistician due to overfunding

### CONTRACTS (KUMC):

Phase I and IIA Trial of Capecitabine in Combination with Oral Cyclophosphamide in Elderly Patients with Metastatic Breast Cancer:

Roche  
October 2000 – November 2001, Biostatistician, \$2650

Clinical Phase IA Trial of Letrozole in Women at High Risk of Breast Cancer:

Novartis  
April 2002 – present, Biostatistician, \$33,469

DCIS Celecoxib:

Pharmacia  
April 2002 – present, Biostatistician, \$67,127

A Phase II Trial of Neoadjuvant Docetaxel, Capecitabine Followed by Sequential Adjuvant Adrimycin/Cytosin in Locally Advanced Breast Cancer:

Roche  
March 2004 – present, Biostatistician, \$24,250

A Phase II Trial of Neoadjuvant Docetaxel, Capecitabine Followed by Sequential Adjuvant Adrimycin/Cytosar and Trastuzumab in Locally Advanced Breast Cancer:

Genetech

March 2004 – present, Biostatistician, \$24,250

Doxil, Dexamethasone Plus Thalidomide in Previously Untreated Multiple Myeloma:

Ortho-Biotech

July 2003 – December 2007, Biostatistician, \$15,000

Phase II Study of Gemcitabine Plus Irinotecan Plus Celecoxib in Patients with Hepatobiliary Cancer:

Pfizer/Lilly

August 2003 – April 2007, Biostatistician, \$32,750

Phase II Study of Gleevec and Taxotere in Recurrent Non-Small Cell Lung Cancer:

Novartis

November 2004 – present, Biostatistician, \$46,000

Health Policy Fellowship Survey:

National Medical Fellowships, Inc.

September 2004 – February 2005, Biostatistician, \$7,000

Imatinib Mesylate (Gleevec) and Docetaxel (Taxotere) with or without Trastuzumab (Herceptin) in the Treatment of Metastatic Breast Cancer: A Pilot Study

Novartis

August 2005 – November 2006, Biostatistician \$15,000 (Originally \$30,000 but due to limited accrual trial was closed early)

Combined Use of Multi-Day Doses of Palonosetron and Aprepitant with Low Dose Dexamethasone in Prevention of Nausea and Emesis Among Patients with Multiple Myeloma and Lymphoma Undergoing Autologous Stem Cell Transplant: A Pilot Study

MGI Pharma

October 2007 – present, Biostatistician, \$25,000

### **GRANT SUPPORT (UAB):**

Cancer Center Core Support Grant, P.I. Albert F. LoBuglio, M.D.,

NIH/NCI, \$15,772,455

October 1995-September 1996 35% effort and support

October 1996 15% effort and support

November 1996-May 1997 10% effort and support

June 1997-September 1997 5% effort and support

October 1997-December 1997 30% effort and support

January 1998-August 1998 5% effort and support

Clinical Trials of Therapies for Severe Herpesvirus Infection, P.I. Richard Whitley, M.D., NIH/NIAID, \$11,107,790

October 1995-September 1996 30% effort and support  
October 1996-September 1997 35% effort and support  
October 1997-August 1998 30% effort and support

General Clinical Research Center, P.I. Harold Fallon, M.D.,  
NIH, \$12,000,000  
October 1995-September 1996 20% effort and support  
October 1996 40% effort and support  
November 1996-September 1997 30% effort and support  
October 1997-August 1998 10% effort and support

Mucosal Immunity in Gonococcal Infection, P.I. Michael Russell, Ph.D.,  
NIH, \$609,627  
October 1995-June 1998 5% effort and support

Radioimmunotoxin Therapy of Experimental Human Gastrointestinal Cancer, P.I. Donald J. Buchsbaum, Ph.D.,  
DOE, \$430,270  
November 1996-August 1998 5% effort and support

Tumor Vaccine CATBRM, P.I. Albert F. LoBuglio, M.D.,  
NIH, \$1,352,721  
November 1996-August 1998 10% effort and support

New BCAs for Radioimmunotherapy with Radiometals, P.I. Donald J. Buchsbaum, Ph.D., NIH, \$387,345  
November 1996-August 1998 5% effort and support

Radiopharmaceutical and Gene Therapy Program, P.I. Donald J. Buchsbaum, Ph.D.,  
DOE, \$451,389  
October 1997-August 1998 5% effort and support

Smoking Cessation to Reduce Cervical Cancer Risk, P.I. Paul Greene, Ph.D.,  
NIH, \$1,622,501  
January 1998-August 1998 20% effort and support

Genetic Radioimmunotherapy of Pancreatic Cancer, P.I. Donald J. Buchsbaum, Ph.D.,  
NIH, \$201,712  
January 1998-August 1998 5% effort and support

### CONTRACTS (UAB):

Comparison of Pravastatin and Niacin in Hypertriglyceridemic Patients with Elevated Plasma Cholesterol Levels:

UCCR/BMS  
December 1995 - July 1996, Biostatistician, \$3,000

The Effects of a Juice Product on Blood Cholesterol:  
UCCR/Third Options Labs.

July 1995 - March 1996, Biostatistician, \$13,500

The Comparative Effects of Pravastatin and Lovastatin on Psychomotor Performance: UCCR/BMS

July 1995 - July 1996, Biostatistician, \$22,312.50

A Randomized Open Comparative Multicenter Study of Initial Treatment with Intravenous Itraconazole versus Amphotericin B followed by Consolidation Treatment with Itraconazole Capsules in Patients with Blastomycosis or Histoplasmosis:

FTSG/Janssen

December 1995 - January 1998, Biostatistician, \$20,000

A Two-arm, Double-blind, Randomized, Parallel Group Study to Evaluate Two Doses (500mg vs. 1000mg) of Lamisil® in Subjects with Cutaneous or Lymphocutaneous Sporotrichosis During a Treatment Period of up to 6 Months Maximum, with a 6 Month Follow-up:

FTSG/Novartis

December 1995 - January 1998, Biostatistician, \$20,000

Comparison of Pravastatin and Niacin in Hypertriglyceridemic Patients with Elevated Plasma Cholesterol Levels:

HRDG/BMS

November 1996 - January 1998, Principal Investigator, \$11,160

The Comparative Effects of Pravastatin and Lovastatin on Psychomotor Performance: HRDG/BMS

November 1996 - January 1998, Principal Investigator, \$13,608

Comparison of Weight Loss for Type II Diabetes Patients Taking Metformin vs. Controls: UCCR/BMS

July 1997, Biostatistician, \$6,600.00

#### **MEMBERSHIPS IN PROFESSIONAL AND SCHOLARLY ORGANIZATIONS:**

Member, American Statistical Association (ASA) (1995-present)

Member, International Biometric Society (ENAR) (1998-present)

Member, Society for Clinical Trials (SCT) (1997-present)

Member, Society for Research on Nicotine and Tobacco (SRNT) (1999-2002)

Member, American Association of Cancer Research (AACR) (2000-present)

Member, Society of Behavioral Medicine (SBM) (1999)

Member, Association of GCRC Statisticians (AGS) (1996-1998)

Member, Beta Gamma Sigma, National Business Honorary

Member, Mu Sigma Rho, National Statistics Honor Fraternity

#### **SERVICE IN PROFESSIONAL AND SCHOLARLY ORGANIZATIONS:**

Reviewer, **The American Journal of Medicine** (1997)

Beta-tester, MINITAB version 12 software, Minitab Inc. (1997)

Ad hoc Reviewer, **Cancer Research** (1998-2000)

Ad hoc Reviewer, **Clinical Cancer Research** (1998-2000)

Ad hoc Reviewer, **International Journal of Radiation Oncology, Biology, Physics** (1998-2000)

Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 1999  
Session Chair, Joint Statistical Meeting, August 1999  
Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 2000  
Beta-tester, nQuery 4.0 software, Statistical Solutions, Inc. (2000)  
Beta-tester, Patient Profiler software, Statistical Solutions, Inc. (2000)  
Session Chair, International Conference on Monte Carlo Simulation, June 2000  
Session Chair, Joint Statistical Meeting, August 2000  
Reviewer, **Toxicological Sciences** (2000)  
Member, American Association for Cancer Research (AACR) Breast Cancer Subcommittee of the Intraepithelial Neoplasia (IEN) Task Force (2000-2001)  
Reviewer, Department of Defense Congressionally Directed Medical Research Programs, Prostate Cancer Research Program, May 2001  
Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 2001  
Member, Colorado Tobacco Research Program Epidemiology Study Section, May 2001  
Reviewer, **Radiation Research** (2001)  
Editorial Review Board, **Journal of Applied Research** (2002 – 2004)  
Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 2002  
Member, Colorado Tobacco Research Program Epidemiology Study Section, May 2002  
Member, R24 Review Committee, National Center on Minority Health and Health Disparities Special Emphasis Panel, National Center on Minority Health and Health Disparities, July 2002  
Reviewer, **Computational Statistics and Data Analysis** (2002)  
Beta-tester, nQuery 5.0 software, Statistical Solutions, Inc. (2002)  
Reviewer, **Applied Occupational and Environmental Hygiene** (2003)  
Member, SPS3 DSMB, NINDS/NIH (2003 – present)  
Founding Editor, **Evidence-Based Preventive Medicine** (2003 – 2004)  
Member, Tobacco Related-Diseases Research Program Epidemiology Study Section, May 2003  
Member, Colorado Tobacco Research Program Epidemiology Study Section, May 2003  
Member, R24 Review Committee, National Center on Minority Health and Health Disparities Special Emphasis Panel, National Center on Minority Health and Health Disparities, July 2003  
Session Chair, Joint Statistical Meeting, August 2003  
Reviewer, **Journal of Clinical Oncology** (2003)  
Member, Review Panel, Transdisciplinary Tobacco Use Research Centers, National Cancer Institute, June 2004  
Reviewer, **Clinical Cancer Research** (2004)  
Session Coordinator, M2004 7<sup>th</sup> Annual Data Mining Technology Conference, October 2004  
Member, CAM314 Data Safety Monitoring Board, Genzyme Oncology, (2004 – present)  
Member, Cancer Biomarkers Study Section, National Cancer Institute, October 2004, February 2005, June 2005, October 2005, February 2006, June 2006, October 2006, February 2007  
Reviewer, **Journal of Clinical Oncology** (2005)  
Reviewer, **Clinical Trials** (2005)  
Member, Clinical Oncology Study Section, National Cancer Institute, November 2006  
Reviewer, National Cancer Institute Special Emphasis Panel, AIDS Malignancy Clinical Trials Consortium, November 2005  
Member, American Joint Committee on Cancer Statistical Task Force, 2006 – present  
Reviewer, **Clinical Trials** (2006)  
Member, American Joint Committee on Cancer Grant Review Panel, March 2006  
Permanent Member, Cancer Biomarkers Study Section, National Cancer Institute, June 2007 – June 2010

### **CLINICAL AND COLLABORATIVE AFFILIATIONS (KUMC):**

Kansas Masonic Cancer Research Institute, August 1998 - present  
Tobacco Control Projects, August 1998 - present  
High Risk Breast Cancer Projects, September 1998 - present  
Breast Cancer Prevention Consortium, September 1998 - present  
Chemoprevention Contract, October 1998 - present  
Multipurpose Clinical Research Center for Rheumatic Diseases and Musculoskeletal Disorders, 1999  
Mental Retardation Research Center, July 2003 - present

### **CLINICAL AND COLLABORATIVE AFFILIATIONS (UAB):**

General Clinical Research Center, October 1995 - August 1998  
Collaborative Antiviral Study Group, October 1995 - August 1998  
Cancer Center Core Support Grant, October 1995 - August 1998  
Mucosal Immunity in Gonococcal Infections, October 1995 - August 1998  
Pediatric IgA Nephropathy Study Group, October 1995 - September 1996  
Fungal Trials Study Group, October 1995 - December 1997  
Radioimmunotoxin Therapy of Experimental Human Gastrointestinal Cancer, Nov. 1996 - August 1998  
Phase I/II Clinical Trial of Biological Response Modifiers, November 1996 - August 1998  
New BCA's for Radioimmunotherapy with Radiometals, November 1996 - August 1998  
Perceived Risk and Cancer Control in Rural Minorities, January 1997 - June 1998  
Radiopharmaceutical and Gene Therapy Program, October 1997 - August 1998  
Genetic Radioimmunotherapy Pancreatic Cancer, January 1998 - August 1998  
Smoking Cessation to Reduce Cervical Cancer Risk, January 1998 - August 1998

### **COMMITTEES (KUMC):**

#### University:

Member, University of Kansas Medical Center Multidisciplinary Cancer Committee, April 1999 - present  
Member, School of Medicine Faculty Council, 1999 - 2002  
Member, University of Kansas Medical Center Data and Safety Monitoring Board, 2001 - 2002  
Member, Internal Advisory Board, Molecular Informatics Center Planning Committee, July 2002 - July 2003  
Member, General Clinical Research Center Planning Committee, October 2002 - June 2004  
Member, School of Medicine Deans Research Advisory Group, Biomedical Research Building, University of Kansas Medical Center, November 2002 - March 2003  
Member, School of Medicine Deans Research Advisory Committee, November 2002 - December 2003  
Member, Director of Kansas Masonic Cancer Research Institute, Search Committee, University of Kansas Medical Center, November 2002 - February 2004  
Member, Pediatric Chair and Department Review Committee, School of Medicine, November 2003 - June 2004  
Member, Clinical Research Advisory Committee, KU Medical Center Research Institute, April 2004 - October 2006  
Co-Chair, General Clinical Research Center Advisory Committee, July 2004 - March 2007  
Member, School of Medicine By-Laws Revision Committee, 2007  
Member, Bioinformatics Degree Program Review Committee (KU-L), 2007-2008

University of Kansas Cancer Center and Kansas Masonic Cancer Research Institute:

Member, Internal Advisory Committee, November 1998 – 2002  
Member, Program Directors Committee, November 1998 – 2002  
Member, Protocol Review and Monitoring Committee, September 1998 – November 2006  
Chair, Protocol Review and Monitoring Committee, February 2001 – November 2006  
Member, Executive Committee, December 2000 – 2002  
Chair, Sr. Research Analyst Search Committee, Biostatistics/Informatics Core, 2002  
Chair, Project Manager Search Committee, Biostatistics/Informatics Core and Clinical Trials Office, 2002  
Member, Membership Committee, 2002 - present  
Member, Leadership Council, 2003 – present  
Member, Directors Committee – 2006 - present  
Member, Deputy Director Search Committee, 2004 – 2006  
Member, Director of Therapeutics Discovery and Development Search Committee, 2004 – 2006  
Member, Data and Safety Monitoring Board, July 2007 - present

Department of Preventive Medicine and Public Health:

Member, Masters in Public Health Admissions Committee, 1998 – 2004  
Member, Masters in Public Health Steering Committee, 1998 – 2000  
Chair, Research Analyst/Data Manager Search Committee, 1999  
Ad hoc Member, Epidemiologist Search Committee, 1999-2000  
Chair, Biostatistics Faculty Search Committee, 2000  
Chair, Research Analyst Search Committee, 2001  
Chair, Biostatistics Faculty Search Committee (2 positions), 2001  
Chair, Research Instructor Search Committee, 2001  
Chair, Research Analyst Search Committee (2 positions), 2002  
Member, Vice Chair Search Committee, 2002- present  
Chair, Biostatistics Faculty Search Committee, 2003 – 2004  
Member, Department Promotion and Tenure Committee, 2003 – 2006  
Member, MS in Clinical Research Degree Program Executive Committee, 2003 - present  
Co-Director, MS in Clinical Research Degree Program, 2003 – present  
Member, Joint Faculty Search Committee (5 faculty and 6 post-doc), 2003 – 2004  
Member, Executive Committee, MS in Clinical Research Degree Program, 2004 – present  
Member, Vice Chair, Faculty and Post-doctoral Search Committee, 2004 – 2005  
Chair, Biostatistics Faculty Search Committee, 2005

Department of Biostatistics:

Chair, Educational Subcommittee  
Chair, Graduate Program Development Committee

Dissertation, Thesis, Practicum and Advising:

Member, Jennifer Klemp Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 1999  
Member, Rebecca Hegarty Masters in Public Health Practicum Committee, Department of Preventive Medicine, Defended April 2000 (Graduated with Honors)  
Member, Monica Gorbandt, M.D. Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 2000 (Graduated with Honors)  
Member, Malaika N. Woods Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended June 2000

Member, John Martin Masters in Public Health Practicum Committee, Department of Preventive Medicine, Defended October 2000

Member, Lore Naylor, Masters in Public Health Practicum Committee, Department of Preventive Medicine, Defended June 2001 (Graduated with Honors)

Member, Walter Dalitsch III, M.D. Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended July 2001

Member, Brian Whitley, Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended December 2001

Member, Harsohena Ahluwalia, M.D., Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 2002

Member, Erin Eberle, Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 2002

Chair, Melissa Marvel, Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended May 2002 (Graduated with Honors)

Member, Kate Heelan, Doctorate of Philosophy Dissertation Committee, Department of Health, Sport & Exercise Science, Defended Fall 2002

Member, Brian Manning, Masters in Public Health Thesis Committee, Department of Preventive Medicine, Defended April 2003 (Graduated with Honors)

Chair, Sarah Moreland, Masters in Public Health Thesis Committee, Department of Preventive Medicine and Public Health, Defended April 2004

Advisor, Carol Moyer, MPH Student, 1999 - 2000

Advisor, John Martin, MPH Student, 1999 - 2000

Advisor, Richard Dubinsky, MD, MPH Student, 2001 - 2004

Advisor, Muhammed Zulfiqar, MD, MPH Student, 2001 - 2002

Advisor, Robin Ryan, MPH Student, 2002 - present

Advisor, Sarah Moreland, MPH Student, 2003 - 2004

Advisor, Ben Cronk, MPH Student, 2005 - present

Advisor, Jeff Burns, MD, MS in Clinical Research Student, 2004 - present

Advisor, James Wetmore, MD, MS in Clinical Research Student, 2005 - present

Chair, Emily Duethmann, Masters in Public Health Practicum Committee, Department of Preventive Medicine and Public Health, 2007-present

### **BIOSTATISTICS UNIT / COMPREHENSIVE CANCER CENTER / UNIVERISITY COMMITTEES (UAB):**

Co-chairman, Data Management and Quality Committee, January 1996 - August 1998

Ad hoc member, GCRC Scientific Advisory Council, January 1996 - August 1998

Member, Protocol Review Committee, January 1996 - August 1998

Member, Computer and Information Management Committee, October 1996 - August 1998

Research Competition and Ballot Coordinator, 1996 Comprehensive Cancer Center Annual Research Retreat

Auditor, Comprehensive Cancer Center Internal Audits, January 1997 - August 1998

Chair, Faculty Search Committee, Biostatistics Unit, December 1997 - April 1998

Member, Sharina Person's Dissertation Committee, Dept. of Biostatistics, Jan. 1998 - August 1998

Member, Collaborative Antiviral Study Group Website Committee, April 1998 - August 1998

### **AWARDS:**

1988 Statistics Graduate Instructor of the Year, University of Missouri.  
1992 Outstanding Performance on Ph.D. Comprehensive Exam, University of Alabama.  
1993 Outstanding Graduate Student in Applied Statistics, University of Alabama.  
1995 Outstanding Instructor in Statistics, University of Alabama.  
2007 University of Kansas School of Medicine Excellence in Mentoring Award

### **TEACHING EXPERIENCE:**

First and Second Level Undergraduate Statistics, University of Missouri, January 1987 - May 1991  
First and Second Level Undergraduate Statistics, University of Alabama, August 1991 - June 1995  
Biostatistics Seminar Series, University of Alabama at Birmingham, 1996  
Clinical Investigator Training Course, University of Alabama at Birmingham, October 6-10, 1997  
Oncology Didactics, University of Kansas Medical Center, 1999 - present  
Biostatistics Laboratory, University of Kansas Medical Center, 1999 - 2000  
Course Coordinator, Biostatistics Laboratory, University of Kansas Medical Center, 2001 - 2002  
Fundamentals of Biostatistics II, University of Kansas Medical Center, 2000 - 2002  
Special Topics in Community Health (Stat Software), University of Kansas Medical Center, Summer 2000  
Biostatistics for Oncology Researchers, University of Kansas Medical Center, Summer 2000, 2002, 2004  
Clinical Trials, University of Kansas Medical Center, 2002 - present  
Special Topics in Community Health (Evidence-Based Preventive Medicine), University of Kansas Medical Center, Fall 2003  
Conference Director, Continuing Education Conference, Biostatistics for the Nonstatistician, University of Kansas Medical Center, October 4, 2003  
Clinical Trials, Continuing Education Conference, Biostatistics for the Nonstatistician, University of Kansas Medical Center, October 4, 2003  
Conference Director, Continuing Education Conference, Biostatistics for the Nonstatistician, University of Kansas Medical Center, October 9, 2004  
Faculty Member, School of Breast Oncology, Emory Conference Center Hotel, Atlanta, GA, 2004 - present

### **PROFESSIONAL MEETINGS ATTENDED:**

Joint Statistical Meetings, Orlando, FL, August, 1995  
First Seattle Symposium in Biostatistics: Survival Analysis, Seattle, WA, November, 1995  
Collaborative Antiviral Study Group Annual Meeting, Bethesda, MD, March, 1996  
The Alabama Quantitative Literacy Workshop, Tuscaloosa, AL, July, 1996  
Association of GCRC Statisticians Annual Meeting, Chicago, IL, August, 1996  
Joint Statistical Meetings, Chicago, IL, August, 1996  
UAB Comprehensive Cancer Center Annual Retreat, Birmingham, AL, October, 1996  
Collaborative Antiviral Study Group Meeting, Bethesda, MD, March, 1997  
FASEB Annual Meeting, New Orleans, LA, April, 1997  
The Alabama Quantitative Literacy Workshop, Tuscaloosa, AL, July, 1997  
Society for Clinical Trials and Int. Assoc. of Clinical Biostatisticians, 2<sup>nd</sup> Joint Meeting, Boston, MA, July, 1997  
Association of GCRC Statisticians Annual Meeting, Anaheim, CA, August, 1997  
Joint Statistical Meetings, Anaheim, CA, August, 1997  
UAB Comprehensive Cancer Center Annual Retreat, Birmingham, AL, October, 1997

Collaborative Antiviral Study Group Annual Meeting, Bethesda, MD, February, 1998  
 International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March, 1998  
 Joint Statistical Meetings, Dallas, TX, August, 1998  
 The Society of Behavioral Medicine Twentieth Annual Scientific Sessions, San Diego, CA, March, 1999  
 Society for Research on Nicotine and Tobacco Annual Meeting, San Diego, CA, March, 1999  
 International Biometric Society Eastern North American Region Spring Meeting, Atlanta, GA, March, 1999  
 National Conference on Health Statistics, Washington D.C., August, 1999  
 Association of GCRC Statisticians Annual Meeting, Baltimore, MD, August, 1999  
 Joint Statistical Meetings, Baltimore, MD, August, 1999  
 International Society for Clinical Biostatistics, Heidelberg, Germany, September, 1999  
 1999 S-PLUS International User Conference, New Orleans, LA, October, 1999  
 ASA Kansas-Western Missouri Chapter Meeting, Kansas City, KS, January, 2000  
 Society for Research on Nicotine and Tobacco Annual Meeting, Arlington, VA, February, 2000  
 Society for Clinical Trials 21<sup>st</sup> Annual Meeting, Toronto, Canada, April, 2000  
 American Society of Clinical Oncology Annual Meeting, New Orleans, LA, May, 2000  
 International Conference on Monte Carlo Simulation, Monte Carlo, Monaco, June, 2000  
 Joint Statistical Meetings, Indianapolis, IN, August, 2000  
 Central States Chapter / American College of Sports Medicine Annual Meeting, Kansas City, MO, October, 2000  
 Breast Cancer Prevention Consortium Annual Meeting, Orlando, FL, January, 2001  
 American Association for Cancer Research Annual Meeting, New Orleans, LA, March, 2001  
 Society for Clinical Trials 22<sup>nd</sup> Annual Meeting, Denver, CO, May, 2001  
 International Biometric Society Eastern North American Region Spring Meeting, Arlington, VA, March, 2002  
 Cancer Center Biostatistics Directors Meeting, Manhattan, NY, August, 2002  
 Joint Statistical Meetings, Manhattan, NY, August, 2002  
 3<sup>rd</sup> Joint Meeting of the International Society for Clinical Biostatistics and Society for Clinical Trials, London, UK, July, 2003  
 Cancer Center Biostatistics Directors Meeting, San Francisco, CA, August, 2003  
 Joint Statistical Meetings, San Francisco, CA, August, 2003  
 Society for Clinical Trials 25<sup>th</sup> Annual Meeting, New Orleans, LA, May, 2004  
 Cancer Center Biostatistics Directors Meeting, Toronto, Canada, August, 2004  
 Joint Statistical Meetings, Toronto, Canada, August, 2004  
 M2004 7<sup>th</sup> Annual Data Mining Technology Conference, Las Vegas, NV, October 2004  
 Cancer Biomedical Informatics Grid Annual Meeting, Arlington, VA, April 9, 2006.  
 M2006 9<sup>th</sup> Annual Data Mining Technology Conference, Las Vegas, NV, October 2006  
 Association of GCRC Statisticians Annual Meeting, Salt Lake City, Utah, July, 2007  
 Joint Statistical Meetings, Salt Lake City, Utah, July/August 2007

### **CONTINUING EDUCATION COURSES:**

*Analysis of Longitudinal Data:* Joint Statistical Meeting, Orlando, FL, August, 1995  
*Survival Analysis Methods and Software:* First Seattle Symposium in Biostatistics: Survival Analysis, Seattle, WA, November, 1995  
*Updates on Statistical Methods for Longitudinal Studies:* International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March, 1998

*Using Mixed Models and PROC MIXED for Repeated Measures and Random Effects Data:* International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March, 1998

*LaTeX for Statisticians:* International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March, 1998

*Practical Aspects of Mixed Model Analysis Using the SAS System:* International Biometric Society Eastern North American Region Spring Meeting, Atlanta, GA, March, 1999

*Analysis of Repeated Measurements Using the GEE Method:* International Biometric Society Eastern North American Region Spring Meeting, Atlanta, GA, March, 1999

*Introduction to Receiver Operating Characteristic (ROC) Methodology, with Application to the Evaluation of Diagnostic Medical Products:* International Biometric Society Eastern North American Region Spring Meeting, Atlanta, GA, March, 1999

*Design and Analysis of Cluster Randomization Trials:* Joint Statistical Meeting, Indianapolis, IN, August, 2000

*Fitting Nonlinear and Generalized Mixed Models with PROC NLMIXED:* Joint Statistical Meeting, Indianapolis, IN, August, 2000

*Valid "As-treated" Analysis in Clinical Trials:* Society for Clinical Trials Annual Meeting, Denver, CO, May, 2001

*Essentials of Clinical Trials:* Society for Clinical Trials Annual Meeting, Denver, CO, May, 2001

*Statistical Analysis of Microarray Data:* International Biometric Society Eastern North American Region Spring Meeting, Arlington, VA, March, 2002

*Handling Missing Data in Longitudinal Studies: An Imputation Approach:* International Biometric Society Eastern North American Region Spring Meeting, Arlington, VA, March, 2002

*Microarray Data Analysis:* International Biometric Society Eastern North American Region Spring Meeting, Arlington, VA, March, 2002

*Coping with Missing Outcome Data:* 3<sup>rd</sup> Joint Meeting of the International Society for Clinical Biostatistics and the Society for Clinical Trials, London, UK, July, 2003

*Analysis of Genetic, Microarray, and Proteomic Data within a Comprehensive SAS Solution Software Environment:* Joint Statistical Meetings, Toronto, Canada, August, 2004

### **ALUMNAE AND COMMUNITY ORGANIZATIONS AND ACTIVITIES:**

Coach, Columbia Youth Football League, 1988 - 1990

Member, Board of Directors, Columbia Youth Football League, 1989-1991

Life Member, University of Missouri Alumni Association

President, Birmingham & North Alabama Region of MU Alumni Association (1997-1998)

Member, University of Alabama Alumni Association, 1995 - present

Member, VinKC, 2001 - 2004

Member, Shawnee Mission Labrador Retriever Club, 2003 - 2006

Member, Board of Directors, Shawnee Mission Labrador Retriever Club, 2003 - 2006

Date: September 24, 2008

**UNIVERSITY OF KANSAS SCHOOL OF MEDICINE**  
**FACULTY CURRICULUM VITAE**

**PERSONAL DATA**

Name: Jo Adrienne Edmonds, Ph.D.  
Current Academic Rank: Assistant Professor  
Department(s): Biostatistics

Office Address: University of Kansas Medical Center  
5028 Rainbow, MS 1026  
3901 Rainbow Blvd.  
Kansas City, KS 66160-7312

Phone: (913) 588-4790  
Fax: (913) 588-0252  
E-mail: jedmonds2@kumc.edu

**PROFESSIONAL DEVELOPMENT**

**Undergraduate and Graduate Education**

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
2006 - 2008	Ph.D. (Statistics)	Baylor University
2004 - 2005	M.S. (Statistics)	Baylor University
2002 - 2003	B.S. (Mathematics, Computer Science)	University of Mary Hardin-Baylor

**Postgraduate Education**

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
N/A		

**Academic and Professional Appointments and Activities** (List in chronological order. Please explain any discontinuity in professional experience)

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
January 1999 – May 2000	Research Assistant	Arkansas State University Engineering Department, Jonesboro, AR
May 2002 – December 2003	Teaching Assistant	University of Mary Hardin-Baylor Department of Mathematics, Belton, TX
January 2004 – December 2005	Teaching Assistant	Baylor University Department of Statistical Science, Waco, TX
May 2005 – May 2007	Statistical Consultant	Baylor University Department of Social Work, Waco, TX
May 2005 – December 2007	Statistical Consultant	Baylor University Department of Statistical Science, Waco, TX
March 2006	Statistical Consultant	Darnall Army Community Hospital, Fort Hood, TX
April 2006 – August 2007	Statistical Consultant	Eli Lilly & Company, Indianapolis, IN
May 2006 – May 2007	Teacher of Record	Baylor University, Waco, TX
November 2006 – August 2007	Statistical Consultant	Martin Audiology, Waco, TX
April 2007 – August 2007	Biostatistics Intern	Eli Lilly & Company, Indianapolis, IN

January 2008 – Present	Assistant Professor	Department of Biostatistics, University of Kansas Medical Center, Kansas City, KS
January 2008 – Present	Member	Center for Biostatistics and Advanced Informatics, University of Kansas Medical Center, Kansas City, KS
January 2008 – Present	Member	University of Kansas Cancer Center, Kansas City, KS

### Professional Registration/Licensure

<u>Year</u>	<u>Number</u>	<u>State</u>
N/A		

### Professional Certification(s)

<u>Date</u>	<u>Board</u>
N/A	

### Professional Societies and Affiliations

<u>Year</u>	<u>Organization</u> (including offices held)
2002	Kappa Mu Epsilon Mathematics Society, UMHB Chapter President
2004	American Statistical Association, Member

### Honors and Awards (honorary societies, research awards, teaching and other awards.)

<u>Year</u>	<u>Award</u>
2005	Interdisciplinary Research and Scholarship Appointment, Baylor University
2007	Outstanding Graduate Student, Baylor University
2007	Cambridge Who's Who Among Professional Women in Teaching and Education

### TEACHING ACTIVITIES

#### Brief statement of areas of teaching interest

#### Didactic

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2004	PSY2380	Elementary Statistics	Lecture	3	30	Undergraduate
2004	PSY2380	Elementary Statistics	Lecture	3	31	Undergraduate
2005	PSY2380	Elementary Statistics	Lecture	3	27	Undergraduate
2005	PSY2380	Elementary Statistics	Lecture	3	31	Undergraduate
2006	PSY2380	Elementary Statistics	Lecture	3	30	Undergraduate
2006	STA1380	Elementary Statistics	Lecture	3	30	Undergraduate
2007	STA1380	Elementary Statistics	Lecture	3	31	Undergraduate

**Nondidactic**

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2004	PSY2380	Elementary Statistics	Lab	1.5	30	Undergraduate
2004	PSY2380	Elementary Statistics	Lab	1.5	31	Undergraduate
2005	PSY2380	Elementary Statistics	Lab	1.5	27	Undergraduate
2005	PSY2380	Elementary Statistics	Lab	1.5	31	Undergraduate
2006	PSY2380	Elementary Statistics	Lab	1.5	30	Undergraduate
2006	STA1380	Elementary Statistics	Lab	1.5	30	Undergraduate
2007	STA1380	Elementary Statistics	Lab	1.5	31	Undergraduate

**Clinical**

<u>Year</u>	<u>Hours</u>	<u>Student</u>		<u>Length of Service</u>
		<u>No</u>	<u>Type</u>	
N/A				

**Master's Theses and PhD. Dissertations directed**

<u>Year</u>	<u>Student Name</u>	<u>Thesis title</u>	<u>Degree (Completed/In process)</u>
N/A			

**Supervision of Postdoctoral fellows**

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
N/A		

**Advising**

<u>Date</u>	<u>Student or group name</u>	<u>Type of Student/group</u>
N/A		

**Other teaching activities**

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching function</u>
March 2008	Statistical Considerations for Grant writing	University of Kansas Medical Center	Invited lecture for NRSG 890: Grant writing
June 2008	Basic Clinical Biostatistics	University of Kansas Medical Center	USMLE Step 1 Prep Program biostatistics review lecture for 68 medical students (co-taught with Jonathan D. Mahnken, PhD)
September 2008	Biostatistics for Oncology Researchers	University of Kansas Medical Center Fellows	An introductory survey lecture course in biostatistics for 10 KU Oncology
October 2008	Designing a Clinical Research Protocol	University of Kansas Medical Center	PRVM 803/IDSP 850 & 950: Introduction to Clinical Research, invited lecture

## Educational Materials

<u>Year</u>	<u>Title Description</u>	<u>Intended Audience</u>
2004	Elementary Statistics lectures This consisted of the development of a series of lectures, homework, and quizzes for a class meeting three times weekly for a semester (PSY 2402)	Undergraduate quantitative psychology students for degree requirement
2006	Elementary Statistics class development This consisted of the development of a course plan, syllabus, didactic lectures, homework, quizzes, and examinations for a class meeting three times weekly for a semester (STA 1380)	Undergraduate pre-medicine and -nursing students for degree requirement
2008	Biostatistics for Oncology class development This consisted of the development of course plan, syllabus, and four didactic lectures for a survey course in biostatistics for Oncology Fellows	Oncology Fellows
2008	Analysis of Variance class development This consisted of the development of a course plan, syllabus, didactic lectures, homework, quizzes, and examinations for a class meeting once weekly for a semester (NRSG )	
2008	Clinical Trials class development This consisted of the development of a course plan, syllabus, didactic lectures, homework, quizzes, and examinations for a class meeting once weekly for a semester (PRVM 810)	

## Educational Leadership

N/A

## RESEARCH and SCHOLARLY ACTIVITIES:

### Brief Statement of Areas of Research Interest and Current Projects Underway

**Grants and Contract Support** (Information must include whether the nominee is the principal investigator or a co-investigator, names of all investigators, title of grant, funding source, dollar amount in direct costs, and years during which grant applies. Please describe in sufficient detail your contribution as co-investigator.)

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
M. Mayo		<i>Biostatistics/Informatics Shared Resource</i>	NIH		6	Funded
G. Reed		<i>Workstatement 45: Phase I Multiple-Dose Safety, PK, and Drug Interaction Clinical Study of Diindolymethane</i>	NIH/NCI		5	Funded
S. Kambhampati	J. Edmonds	<i>A Phase II trial with Azacitidine single agent in</i>	Pharmion/VA		4	Funded

*newly-diagnosed AML  
VA elderly patients who are  
ineligible for standard for  
induction therapy*

J. Drisko	J. Edmonds	<i>Phase II study evaluating safety and efficacy of IV AA in combination with Gemcitabine in the treatment of pancreatic cancer</i>	Marcus Foundation	3	Funded
J. Drisko	J. Edmonds	<i>Pharmacokinetic Evaluation of IV AA</i>	Marcus Foundation	3	Funded
J. Drisko	J. Edmonds	<i>Pilot study evaluating safety and efficacy of IV AA in combination with conventional therapy in the treatment of renal cell carcinoma</i>	Marcus Foundation	3	Funded
S. Kambhampati	J. Edmonds	<i>Design of 2-Methoxyestradiol Pro-drug and evaluation of its anti-cancer potential in xenografts</i>	NIH/COBRE	3	Funded

**Full Length, Peer-Reviewed Articles in Scientific Journals** (Provide names of all authors, year, title, journal, volume, and inclusive pages. List in chronological order.)

Articles published

Divita, L.R. and **Edmonds, J.A.** (2006), "Elimination of Apparel Quotas and Consumer Expenditures, *Texas Association of Family and Consumer Sciences Research Journal*, 2, 9-11.

Garland, D. and **Edmonds, J.A.** (2007), "Family Life of Baptists," *Family and Community Ministries: Empowering Through Faith*, 21 (1), 6-21.

Manuscripts in press

N/A

Manuscripts submitted but not yet accepted

**Edmonds, J.A.**, Seaman, J., and Stamey, J. (2008), "Correcting for Misclassified Response in a Bayesian Response-Adaptive Clinical Trial Design," *Clinical Trials*.

Invited or non-peer-reviewed articles or reviews

**Edmonds, J.A.**, Seaman, J., and Stamey, J. (2008), "Impact of Misclassified Outcomes on a Bayesian Response-Adaptive Design," *Proceedings of the 2008 Joint Statistical Meetings*.

Books and book chapters

N/A

Published abstracts

**Edmonds, J.A.** and Seaman, J. (2007), "Semiparametric Smoothing for Scintigraphy Data from a Three-Period Crossover Design," *Proceedings of the 2007 Joint Statistical Meetings*.

**Edmonds, J.A.**, Seaman, J., and Stamey, J. (2008), "Impact of Misclassified Outcomes on a Bayesian Response-Adaptive Design," *Proceedings of the 2008 Joint Statistical Meetings*.

Other scholarly publications

N/A

**Oral Paper Presentations** (Provide names of all authors, title, sponsoring organization, extent of peer-review, and location and date of presentation.)

Scientific papers presented at national and international meetings:

**Edmonds, J.A.**, Seaman, J., and Stamey, J. (2008), "Impact of Misclassified Outcomes on a Bayesian Response-Adaptive Design," *Proceedings of the 2008 Joint Statistical Meetings*.

Scientific papers presented at local and regional meetings:

**Edmonds, J.A.** and Millen, B.A. (2008), "A Bayesian Approach to Benefit-Risk Assessment," (invited) Symposium on Innovations in Design, Analysis, and Dissemination: Frontiers in Biostatistical Methods, Kansas City, MO, May 8 – 9, 2008.

Poster presentations at national and international meetings:

**Edmonds, J.A.** and Seaman, J. (2007), "Semiparametric Smoothing for Scintigraphy Data from a Three-Period Crossover Design," Joint Statistical Meetings, Salt Lake City, UT, July 29 – August 2, 2007.

Poster presentations at local and regional meetings:

**Edmonds, J.A.** and Seaman, J. (2006), "Semiparametric Smoothing for Scintigraphy Data from a Three-Period Crossover Design," Baylor University/Eli Lilly & Company Research Symposium, Indianapolis, IN, November 6 – 7, 2006.

**Edmonds, J.A.** (2007), "Scatterplot Smoothing using Semiparametric Regression," Conference of Texas Statisticians, Waco, TX, March 30 – 31, 2007.

**Edmonds, J.A.** (2007), "Bayesian Approaches to Problems in Drug Safety," The Lilly Summer Research Symposium, Indianapolis, IN, August 26, 2007.

Invited seminars at other universities: (Provide title, sponsoring organization or institution, and date of presentation.)

N/A

## **Other Evidence of Scholarly Activities**

**Edmonds, J.A.**: "Bayesian Methods and Adaptive Clinical Trial Designs," Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, April 1, 2008.

**Edmonds, J.A.**: "Recent Advancements in Benefit-Risk Analysis," Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, September 16, 2008.

**ACADEMIC ACTIVITIES** (See attached guidelines for definitions of professional and academic activities.)

## **Brief Statement of Service Activities**

### **Professional Service**

2008 Ad Hoc Reviewer, *Contemporary Clinical Trials*  
2008 Member, Protocol Review and Monitoring Committee, Kansas Masonic Cancer Research Institute

**Academic Service**

2008 Co-Chair, Biostatistics Graduate Degree Program Development Committee, University of Kansas Medical Center

**Byron J. Gajewski, Ph.D.**

**ADDRESS**

MS 1026  
The University of Kansas Medical Center  
3901 Rainbow Blvd.  
Kansas City, KS 66160  
913-588-1603  
Email: [bgajewski@kumc.edu](mailto:bgajewski@kumc.edu)

**EDUCATION**

Aug. 2000     Doctor of Philosophy: Statistics, Texas A&M University  
                  Advisor: Dr. C.H. Spiegelman  
Dec. 1995     Master of Science: Mathematics, Marquette University  
                  Advisor: Dr. S. Merrill  
Dec. 1993     Bachelor of Science: Civil Engineering and Mathematics, Marquette University

**PROFESSIONAL EXPERIENCE**

2008-present   Associate Professor w/ tenure, Department of Biostatistics, University of Kansas  
                  School of Medicine, secondary appointment School of Nursing  
2006-2008     Assistant Professor, University of Kansas, Schools of Allied Health and Nursing  
2005-present   Member, Center for Biostatistics and Advanced Informatics, University of Kansas  
2007-present   Full Member, Kansas Cancer Center, University of Kansas  
2002-2006     Research Assistant Professor, University of Kansas, Schools of Allied Health and  
                  Nursing  
2000-2002     Statistical Consultant, University of Florida School of Medicine  
2000-2002     Assistant Professor of Statistics, St. Cloud State University  
1998-2000     Research Assistant, Texas Transportation Institute, Texas A&M University  
1996-1998     Teaching Assistant, Department of Statistics, Texas A&M University  
1996           GED Instructor, Career Youth Development, Milwaukee, WI  
1994-1995     Teaching Assistant, Department of Mathematics, Marquette University  
1994-1995     (Summer) Junior Civil Engineer, CRW Engineering, Anchorage, AK  
1990-1993     (Summer) Junior Civil Engineer Tech., Indian Health Service, Anchorage, AK

**CURRENT RESEARCH INTERESTS**

Bayesian methods  
Latent Variable Modeling  
Inter Rater Agreement  
Bayesian Clinical Trials  
Models for Health Policy  
Applications in medicine, nursing, and allied health  
Undergraduate and Graduate education research

**CONSULTING INTERESTS**

Health experiments and retrospective studies

**GRANTS/CONTRACTS APPLIED AND AWARDS**

**Awarded**

**Project Title:**                    **National Database of Nursing Quality Indicators (NDNQI)**  
**PI:**                                   **Nancy Dunton**  
**Period:**                            **07/15/2002- 01/01/2010**

Funding Agency: American Nurses Association  
Role (% Contribution): Statistician (25%)  
Amount: \$ 753,621 Total Direct Costs per year

**Project Title: Methods Development Contract**  
**PI: Nancy Dunton**  
Period: 02/01/2008- 07/31/2009  
Funding Agency: American Nurses Association  
Role (% Contribution): Consultant (3%)  
Amount: \$ 69,259 Total Direct Costs per year

**Project Title: Kansas Nursing Facility Project**  
**PI: Marge Bott**  
Period: 07/01/2003- 07/01/2008  
Funding Agency: Kansas Department on Aging  
Role (% Contribution): Statistician (20%)  
Amount: \$ 306,018 Total Direct Costs per year

**Project Title: Effects of modified T'ai Chi on health-related outcomes in older adults with OA**  
**PI: Jacque Carpenter**  
Period: 8/1/2008 – 7/31/2010  
Funding Agency: NIH  
Role (% Contribution): Statistician (2%)  
Amount: \$ 50,000 Total Direct Costs per year

**Project Title: Elderspeak: Impact on Dementia Care**  
**PI: Kristine Williams**  
Period: 8/1/2005 – 7/31/2007  
Funding Agency: NIH  
Role (% Contribution): Statistician (5%)  
Amount: \$ 50,000 Total Direct Costs per year

**Project Title: A CDSS to Translate Pressure Ulcer Prediction and Prevention to Home Health Care**  
**PI: Sandra L Bergquist-Beringer**  
Period: 10/01/07 – 10/01/2008  
Funding Agency: NIH  
Role (% Contribution): Statistician (2.5%)  
Amount: \$36,783 Total Direct Costs per year

**Project Title: Promoting Stroke Caregiver Health via Self Care Talk: Education and Support Telephone Partnerships with Nurses**  
**PI: Cynthia Teel**  
Period: 07/01/05 - 06/30/07  
Funding Agency: American Heart Association  
Role (% Contribution): Statistician (2%)  
Amount: \$ 71,500 Total Direct Costs per year

**Project Title: Hemorrhagic Shock: Effects of Dopamine on the Diaphragm**  
**PI: Janet Pierce**  
Period: 15/2005 - 07/14/2007  
Funding Agency: Department of Defense  
Role (% Contribution): Statistician (10%)  
Amount: \$171,147 Total Direct Costs per year

**Project Title: Technological Home Care: Improving Care Giving**  
**PI: Carol Smith**

Period: 09/29/2005 - 06/30/2010  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (5%)  
Amount: \$516,630 Total Direct Costs per year

**Project Title: Rural Dwelling Older Adults: CPAP Adherence Support**  
**PI: Carol Smith**  
Period: 1/2000 – 03/31/2007  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (10%) – for one year only  
Amount: \$501,225 Total Direct Costs per year

**Project Title: DHA Supplementation and Pregnancy Outcomes**  
**PI: Susan Carlson**  
Period: 04/2006 - 01/31/2011  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (10%)  
Amount: \$ 352,891 Total Direct Costs per year

**Project Title: Immuno-modulatory Effects of Parenteral Nutrition After Intestinal Failure**  
**PI: Mary Hise**  
Period: 01/2006 - 06/30/2008  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (2%)  
Amount: \$ 147,000 Total Direct Costs per year

**Project Title: HF Group Clinic Appointments: Rehospitalization Prevention Clinical Trial**  
**PI: Carol Smith**  
Period: 9/1/2006 - 05/31/2011  
Funding Agency: National Institutes of Health  
Role (% Contribution): Statistician (5%)  
Amount: \$720,640 Total Direct Costs per year

**Project Title: The Impact of Quality End of Life Care in Nursing Homes**  
**PI: Sarah Thompson**  
Period: 04/01/2007 - 10/31/2011  
Funding Agency: National Institutes of Health  
Role (% Contribution): Co-Investigator (10%)  
Amount: \$356,528 Total Direct Costs per year

**Project Title: HIPAA Transactions & Code Sets: Have the Standards Been Successful? A Hospital Financial Manager Perspective**  
**PI: Julie Roth**  
Period: 06/01/2006 - 11/30/2007  
Funding Agency: Am Health Information Management Association  
Role (% Contribution): Statistician (5%)  
Amount: \$24,204 Total Direct Costs per year

**Project Title: Self-Care TALK to Promote AD Spousal Caregiver Health**  
**PI: Cynthia Teel**  
Period: 04/01/2006 - 03/31/2008  
Funding Agency: NIH  
Role (% Contribution): Statistician (2% - Donated)  
Amount: \$196,433 Total Direct Costs per year

**Project Title: Kansas Nursing Home Care Planning**

**PI:** **Roma Lee Taunton & Marge Bott**  
Period: 7/1/2002-4/30/2005 (no cost extension presently)  
Funding Agency: NIH  
Role (% Contribution): Statistician (10% for last funding year)  
Amount: \$456,583 Total Direct Costs per year

**Project Title:** **Welfare Reform**  
**PI:** **Nancy Dunton**  
Period: 8/1/02-10/1/02  
Funding Agency: US Health and Human Services  
Role (% Contribution): Statistician (15%)  
Amount: \$112,458 Total Direct Costs per year

**Project Title:** **Chronic Stroke Survivor's Cardiovascular Fitness Response to an Aerobic Based Exercise Program**  
**PI:** **James K. Cho**  
Period: 1/1/02-12/1/02  
Funding Agency: US Health and Human Services  
Role (% Contribution): Statistician (\$500)

**Project Title:** **Travel Award to The International Environmetrics Society Annual Meeting**  
**PI:** **Gajewski**  
Period: 11/03  
Funding Agency: NSF  
Role (% Contribution): Travel & Speak  
Amount: \$ 1,500 Total Direct Costs per year

**Project Title:** **A Psychiatric Rehabilitation Approach to Weight Loss**  
**PI:** **Tana Brown**  
Period: 12/1/06-11/30/09  
Funding Agency: NIH  
Role (% Contribution): Statistician (5%)  
Amount: \$ 139,500 Total Direct Costs per year

**Project Title:** **Effects of delivery mode of cognitive intervention in early AD**  
**PI:** **Patricia Pohl**  
Period: 7/1/07 - 6/30/10  
Funding Agency: Alzhemeir Foundation  
Role (% Contribution): Statistician (3%)  
Amount: \$78,445 Total Direct Costs per year

**Project Title:** **Multidisciplinary Education: Improving Elder Heart Failure Patients' Self-Management**  
**PI:** **Ubolrat Piamjariyakul**  
Period: 7/1/2006 - 6/30/2008  
Funding Agency: AHA Heartland - Beginning Grant in Aid  
Role (% Contribution): Statistician (5%)  
Amount: \$65,883 Total Direct Costs per year

**Project Title:** **Describing and Measuring Treatment in Drug Treatment**  
**PI:** **Kimber Richter**  
Period: 07/01/07-06/31/09  
Funding Agency: NIH  
Role (% Contribution): Statistician (10%)  
Amount: \$150,000 Total Direct Costs per year

**Project Title:** Effects of Fast ForWord on Language Processing  
**PI:** **Marc E. Fey**  
**Period:** 9/1/05-8/31/07  
**Funding Agency:** NIH  
**Role (% Contribution):** Statistician (10%)  
**Amount:** \$ 150,000 Total Direct Costs per year

**Project Title:** **Effects of intense cognitive training in mild AD: performance and brain activity**  
**PI:** **Patricia Pohl**  
**Period:** 12/1/07 - 11/30/09  
**Funding Agency:** NIH  
**Role (% Contribution):** PI (5%)  
**Amount:** \$ 134,504 Total Direct Costs per year

2003 KUMC Travel Fund, award  
2000 St. Cloud State Grant-Getters' Support, award for transportation statistics  
2001 St. Cloud State Foundation, award for receptor modeling  
2001 St. Cloud State Faculty Development, award for receptor modeling  
1998-2000 Texas Transportation Institute Research Assistant  
1997 Kosciusko Foundation Fellowship  
1996 Texas A&M University Regents Fellowship

#### **Pending**

**Project Title:** **Play Preferences of Preschool-aged Children with Autism Spectrum Disorder**  
**PI:** **Lisa Mische Lawson**  
**Period:** 07/01/2008 - 7/31/2009  
**Funding Agency:** Department of the Army  
**Role (% Contribution):** Statistician (1%)  
**Amount:** \$75,000 Total Direct Costs per year

**Project Title:** **Communication in AD: Behavioral and Pharmacotherapy**  
**PI:** **Susan Jackson**  
**Period:** 07/01/2007 – 6/30/2010  
**Funding Agency:** Alzheimer's Association  
**Role (% Contribution):** PI (5%)  
**Amount:** \$81,718 Total Direct Costs per year

#### **Applied but not Awarded**

**Project Title:** **Bayesian planning tools for accrual rates in clinical trials**  
**PI:** **Byron Gajewski**  
**Period:** 12/01/2007 - 11/31/2008  
**Funding Agency:** Children's Mercy Hospital and Clinics  
**Role (% Contribution):** PI (17%)  
**Amount:** \$14,205 Total Direct Costs per year

2007 Applied, National Institutes of Health, Dopaminergic Modulation of Cognitive Motor Programming in Parkinson Disease, (PI – Dr Susan Jackson)  
2007 Applied, Children's Mercy Hospital and Clinics, Early Detection of Accrual Problems in Clinical Trials, (PI – Dr Byron Gajewski)  
2007 Applied, Robert Wood Johnson Foundation, Investigator, The Economic Value of Nursing in the Prevention of Pressure, (PI – Dr Nancy Dunton, KU Nursing)  
2006 Applied, co- Investigator, National Institutes of Health, Dopaminergic Modulation of Cognitive Motor Programming in Parkinson Disease, (PI, Brenda Hanna-Pladdy, Center on Aging, University of Kansas)

- 2006 Applied, Co-Investigator, Robert Wood Johnson Foundation, Effects of Nursing Workforce Attributes on Selected Nursing-Sensitive Outcome Indicators, (PI: Nancy Dunton)
- 2006 Applied, Co-Investigator, National Institutes of Health, Effects of Aging and Activity on Myocellular Responses to Acute Exercise, (PI: Phillip Gallagher)
- 2005 Applied, Contract Statistician, AHRQ, Patient Perceptions of Hospital Safety Instrument Development, (PI: Connelly, KU Nursing)
- 2005 Applied, National Institutes of Health, Statistician, Quantitative Evaluation of DBS for Parkinson's Disease (PI – Dr. Wen Liu, University of Kansas Department of Rehabilitative Sciences)
- 2005 Applied, Contract Statistician, American Health Assistance Foundation, Communication in AD: Pharmacologic & behavioral therapy, (PI: Susan Jackson, KU Hearing and Speech)
- 2005 Applied, National Institutes of Health, Investigator, Measurement of articulatory contact pressure (ACP), (PI – Dr. Jeffrey Searl, University of Kansas Department of Hearing and Speech)
- 2005 Applied, American Diabetes Association, Statistician, Ankle Joint Mobilization in Subjects with Diabetic Neuropathy, (PI – Dr. Patricia Kluding, University of Kansas Department of Rehabilitative Sciences)**
- 2005 Applied, National Institutes of Health, Statistician, Combine Acupuncture and Robot in Stroke Rehabilitation, (PI – Dr. Wen Liu, University of Kansas Department of Rehabilitative Sciences)**
- 2005 Applied, National Institutes of Health, Statistician, Does STN DBS affect the postural control of patients with PD long-term?, (PI – Dr. Wen Liu, University of Kansas Department of Rehabilitative Sciences)**
- 2005 Applied, National Institutes of Health, Investigator, Clinical Measures of Auditory Linear/Nonlinear Processes, (PI – Dr. Mark Chertoff, University of Kansas Department of Hearing and Speech)**
- 2005 Applied, National Institutes of Health, Investigator, End-of-Life Decision Making for Children and Their Family, (PI – Dr. Peggy Ward-Smith, University of Missouri Kansas City School of Nursing)**
- 2005 Applied, National Institutes of Health, Statistician, Describing and Measuring Treatment in Drug Treatment, (PI – Dr. Kimber P. Richter, KU Preventive Medicine)**
- 2005 Applied, National Institutes of Health, Investigator, End-of-Life Decision Making In ICUs: Improving Clinician Communication, (PI – Dr. Diane Boyle, KU Nursing)**
- 2004 Applied, Contract Statistician, National Institutes of Health, Statistician, Pressure Ulcer Prediction in Home Care, Best Practice, (PI: Dr. Sandra Bergquist, KU School of Nursing)
- 2004 Applied, National Multiple Sclerosis Society, Co-Investigator, A systematic evaluation of MS day programs: Organization, Funding, and Patient Outcomes, (PI – Dr. Katherine Grobe, KU Occupational Therapy)
- 2003 Applied, Alzheimer's Association, Contract Statistician, Promoting Health and Well-being in Caregivers of Persons with Early Dementia, (PI: Cynthia S. Teel, KU Nursing)
- 2003 Applied, Co-Investigator, National Institutes of Health, Immunity of Long-Term Parenteral Nutrition (LTPN) for Patients in the Home, (PI: Dr. Mary Hise, KU Dietetics and Nutrition)
- 2003 Applied, Contract Statistician, National Institutes of Health, Internet Intervention of Depressed Caregiver's, (PI: Dr. Carol Smith, KU School of Nursing)
- 2003 Applied, Contract Statistician, National Institutes of Health, Meditation-based Spiritual Obesity Intervention, (PI: Sue Popkess-Vawter, KU Nursing)
- 2003 Applied, Co-Investigator, National Institutes of Health, Elderspeak and Dementia, (PI: Kristine Williams, KU School of Nursing)
- 2003 Applied, Contract Statistician, American Heart Association, Effect of Isometrics on Stroke Patients, (PI: Emmanuel John, KU Physical Therapy)
- 2003 Applied, US Department of Defense, Contract Statistician, Sleep Study Intervention for Military Truckers, (co-PI: Dr. Carol Smith and Helen Schaag, KU Nursing)
- 2003 Applied, Co-Investigator, University Healthsystem Consortium, Nurse Residency Program Research Database, (PI: Nancy Dunton, KU Nursing)
- 2002 U.S. Health and Human Services Grant, Contract Statistician, welfare reform (PI-

- 2002 Dr. Nancy Dunton, KU Nursing, 15%, two months, Aug-Sep. 2002)  
 2002 Kansas Research Institute, Contract Statistician, Chronic Stroke Survivor's Cardiovascular Fitness Response to an Aerobic Based Exercise Program (PI- Dr. James K. Cho, KU Physical Therapy, 5%, October 2002)
- 2002 St. Cloud State Short-Term Grant, travel award
- 2002 St. Cloud State Faculty Development, applied for transportation statistics
- 2002 St. Cloud State Foundation, award for student travel to give talks
- 2002 Applied, Principal Investigator, BTS Grant, US DOT, applied for transportation statistics
- 2001 Applied, Principal Investigator, BTS Grant, US DOT, applied for transportation statistics

## DSMB

- 2007-2008 "Donepezil Effects on Cocaine Craving and Pharmacokinetics," VA Medical Center, Kansas City, MO
- 2007-present "DHA Supplementation and Pregnancy Outcomes," KU Medical Center, Kansas City, KS

## PROFESSIONAL SERVICE

- 2008-present Chair, Department of Biostatistics Promotion and Tenure Committee
- 2008-present Chair, Search Committee for Therapeutics, Discovery & Development Faculty Member, Department of Biostatistics
- 2007-present KU Center for Biostatistics and Advanced Informatics Membership Application Committee
- 2007-present Member, KU Biostatistics Graduate Degree Program Development Committee
- 2007-present American Statistical Association, Joint Statistical Meetings, Continuing Education Course Evaluation Subcommittee
- 2008-present ex-officio Member, School of Allied Health Research Committee, University of Kansas
- 2007-2008 Member, School of Allied Health Research Committee, University of Kansas
- 2007 Session Chair, Contributed Papers: Health Policy Statistics, JSM
- 2007 Session Chair, Contributed Papers: Causal Inference, Eastern North American Regional Meeting, International Biometrics Society
- 2006 The Agency for Healthcare Research Quality (AHRQ) Quality Indicators Risk Adjustment Workgroup Member
- 2005-2006 Chapter Representative, American Statistical Association, Kansas – Western Missouri Chapter
- 2005 Session Chair, Functional Data Analysis, Western North American Regional Meeting, International Biometrics Society
- 2005-2006 President, American Statistical Association, Kansas – Western Missouri Chapter
- 2005 Session Chair, Contributed Papers: Cox Regression Models, Eastern North American Regional Meeting, International Biometrics Society
- 2004-Present Protocol Review and Monitoring Committee (PRMC) of the Kansas Masonic Cancer Research Institute
- 2004-2005 Vice President, American Statistical Association, Kansas – Western Missouri Chapter
- 2002-2007 Chair, KU Biostatistics Journal Club, Department of Biostatistics
- 2002 Co-Editor Mathematics Contest, St. Cloud State University
- 2001-2002 Search Committee, Department of Statistics, St. Cloud State University
- 2001-2002 Promotion Committee, Department of Statistics, St. Cloud State University
- 2001-2002 Curriculum Committee, Department of Statistics, St. Cloud State University
- 2001 Session Chair, Teaching Statistics Using Sports, Joint Statistical Meetings
- 2000-2001 Search Committee, Department of Statistics, St. Cloud State University
- 2000-2001 Co-Editor Mathematics Contest, St. Cloud State University
- 2000-2002 Assistant Coordinator for the Statistics Club at St. Cloud State University
- 1999-2000 Coordinator of "Brown Bag Series" at Texas A&M University

## MEMBERSHIPS

- 2002-present Member, The International Biometrics Society

1996-present Member, American Statistical Association

#### REVIEWER (number of reviews)

*Chemometrics and Intelligent Laboratory Systems* (3)  
*Communications in Statistics* (2)  
*Hawaii International Conference of Statistics* (1)  
*Journal of Transportation and Statistics* (5)  
*The American Statistician* (4)  
ad hoc Associate Editor *The American Statistician* (1)  
*Transportation Research Board* (3)  
*Evidence-Based Preventive Medicine Journal*(1)  
*Ear and Hearing* (3)  
*Western Journal of Nursing Research* (1)  
*Clinical Trials* (1)  
*Nursing Research* (12)  
*Journal of Quantitative Analysis in Sports* (5)  
*Text: Basic Statistics for Nursing & Health Professions* (1)  
*Statistics in Medicine* (4)  
*Pharmaceutical Statistics* (1)  
*Journal of the American Statistical Association (Case Studies)* (1)  
*Health Services and Outcomes Research Methodology* (1)  
*Research in Nursing and Health* (3)  
*BMC Medical Research Methodology*(1)  
*Statistics in Biopharmaceutical Research* (1)  
*Nicotine and Tobacco Research* (1)  
*Journal of Statistics Education* (1)

#### PUBLICATIONS

##### Refereed (peer reviewed)

1. **Gajewski, B.J.**, Turner, S.M., Eisele, W.L., and Spiegelman, C.H. (2000), "Intelligent Transportation System Data Archiving: Statistical Techniques for Determining Optimal Aggregation Widths for Inductance Loop Detector Speed Data," *Transportation Research Record*, 1719, 85-93.
2. Turner, S., Albert, L. **Gajewski, B.**, and Eisele, W. (2000), "Archived Intelligent Transportation System Data Quality: Preliminary Analyses of San Antonio TransGuide Data," *Transportation Research Record*, 1719, 77-84.
3. Sedwick, J.D., **Gajewski, B.J.**, Prevatt, A.R., and Antonelli, P.J. (2001), "Magnetic Resonance Imaging in the Search for Retrocochlear Pathology," *Otolaryngology-Head and Neck Surgery*, 124(6), 652-655.
4. Westine, J.G., Giannoni, C.M., **Gajewski, B.** and Antonelli, P.J. (2002), "Opening Plugged Tympanostomy Tubes," *The Laryngoscope*, 112, 1342-1345.
5. **Gajewski, B.J.**, Rilett, L., Dixon, M., and Spiegelman, C.H. (2002), "Robust Estimation of Origin-Destination Matrices," *Journal of Transportation and Statistics* 5(2/3), 37-56.
6. Richardson, M. and **Gajewski, B.J.**, (2003), "Archaeological Sampling Strategies," *Journal of Statistics Education*, 11(1).
7. Lindberg, P.E., Parell, G.J., **Gajewski, B.J.**, Prevatt, A.R. and Antonelli, P.J. (2003), "Hyperbaric Compression in the Guinea Pig with Perilymph Fistula," *Otolaryngology Head and Neck Surgery*, 129(3), 259-264.
8. **Smith, C.E., Leenerts, M.H., and Gajewski, B.J.** (2003), "A Systematically Tested Intervention To Manage A Common Adverse Symptom: Reactive Depression," *Nursing Research*, 52(6), 401-409.

9. Gomes, Shaheen, Truong, Brown, Beasley and **Gajewski** (2003), "The Incidence of Venous Thromboembolic Events Among Nursing Home Residents: A Database Cohort study," *Journal of General Internal Medicine*, 18, 934-936.
10. Falcolne, **Gajewski** and Antonelli (2003), "Hearing Loss With Stepedotomy in Otitis Media," *Otolaryngology – Head and Neck Surgery*, 129(6), 666-673.
11. Yunus, T.M., Molina, R.M., Prevatt, A.R., **Gajewski, B.J.**, Sedwick, J.D., and Antonelli, P.J. (2003), "Hearing Loss with Canal Fistula in Exotoxin A Deficient Pseudomonas Otitis Media," *Otolaryngology Head and Neck Surgery*, 130(4), 430-436.
12. Dunton, N., **Gajewski, B.**, Taunton, R.L., and Moore, J. (2004), "Nurse Staffing and Patient Falls on Acute Care Hospital Units," *Nursing Outlook*, 52(1), 53-59.
13. Prevatt, A.R., Sedwick, J.D., **Gajewski, B.J.** and Antonelli, P.J. (2004), "Hearing Loss with Labyrinthine Fistula and *Pseudomonas aeruginosa* Otitis Media," *Otolaryngology Head and Neck Surgery*, 131(3), 248-252..
14. Mayo, M.S., and **Gajewski, B.J.** (2004), "Bayesian sample size calculations in phase II clinical trials using informative conjugate priors," *Controlled Clinical Trials*, 25, 157-167.
15. Bishop, T. and **Gajewski, B.J.** (2004), "Drafting a Career in Sports: Determining Underclassmen College Players' Stock in the NBA Draft," *Chance*, 17(12), 12-15.
16. Gajewski, B.J., Sedwick, J.D., and Antonelli, P.J. (2004), "A Log-Normal Distribution Model of the Effect of Bacteria and Ear Fenestration on Hearing Loss: A Bayesian Approach," *Statistics in Medicine*, 23(3), 493-508.
17. Gajewski, B.J., and Spiegelman, C.H. (2004), "Correspondence Estimation of the Source Profiles in Receptor Modeling," *Environmetrics*, 15, 613-634.
18. **Gajewski, B.J.** and Rilett, L.R. (2004), "Estimating Link Travel Time Correlation: an Application of Bayesian Smoothing Splines," *Journal of Transportation and Statistics*, 7(2/3), 53-70.
19. Loudon, J.K., **Gajewski, B.**, Goist-Foley, H.L. and Loudon, K.L. (2004), "The Effectiveness of Exercise for Treatment of Patellofemoral Pain Syndrome," *Journal of Sports Rehabilitation*, 13(4), 323-342.
20. Richardson, M., Rogness, N. and **Gajewski, B.** (2005), "4 out of 5 Students Surveyed Would Recommend this Activity (Comparing Chewing Gum Flavor Durations)," *Journal of Statistics Education*, 13(5).
21. Scheibmeir, M.S, O'Connell, K.A., Aaronson, L.S., and **Gajewski, B.** (2005), "Smoking Cessation Strategy Use Among Pregnant Ex-smokers," *Western Journal of Nursing Research*, 24(4), 411-427.
22. Popkess-Vawter, S. Yoder, E., and **Gajewski, B.** (2005), "The Role of Spirituality in Holistic Weight Management," *Clinical Nursing Research*, 14(2), 158-174.
23. Sedwick, J., Lopez, A.B., **Gajewski, B.**, and Simons, R. (2005), "Caudal Septoplasty: Is it effective in the treatment of aesthetic and functional problems of the nasal base created by septal deviation?" *Archives of Facial Plastic*, 7(3), 158-162.
24. Cagle, **Gajewski**, Dyson, and Lukert (2007), "Can quantitative ultrasound biomicroscopy predict bone density?," *Skin Research and Technology*, 13, 95-100.
25. **Gajewski, B.J.**, Thompson, S., Dunton, N., Becker, A. and Wrona, M. (2006), "Inter-rater Reliability of Nursing Home Surveys: A Bayesian Latent Class Approach," *Statistics in Medicine*, 25(2), 325-344.

26. Hise, ME, Compher, C, Harlan, L, Kohlmeier, J, Benedict, SH, **Gajewski, B.** and Brown, JC (2006), "Inflammatory Mediators and Immune Function Are Altered in Home Parenteral Nutrition Patients," *Nutrition- International Journal of Applied and Basic Nutritional Sciences*, 22(2), 97-103.
27. **Gajewski, B.J.** and Mayo, M.S. (2006), "Bayesian sample size calculations in phase II clinical trials using a mixture of informative priors," *Statistics in Medicine*, 25(15), 2554-2566.
28. **Gajewski B.J.** (2006) "There's No Place Like Home: Estimating Intra-Conference Home Field Advantage in College Football Using a Bayesian Piecewise Linear Model", *Journal of Quantitative Analysis in Sports*, 2(1), Article 1.  
<http://www.bepress.com/jqas/vol2/iss1/1>.
29. **Gajewski, BJ**, Lee, R, Thompson, S, Dunton, N, Becker, A, Wells, V (2006), "Non-Normal Path Analysis in the Presence of Measurement Error and Missing Data: A Bayesian Analysis of Nursing Homes' Structure and Outcomes," *Statistics in Medicine*, 25(21), 3632-3647.
30. Hart, S., Bergquist, S, **Gajewski, B**, Dunton, N (2006) Reliability Testing of the National Database of Nursing Quality Indicator's Pressure Ulcer Indicator, *Journal of Nursing Care Quality*, 21(3), 256-265.
31. Forbes-Thompson, S, **Gajewski, BJ**, Scott-Cawiezell, J & Dunton, N (2006), "An Exploration of Nursing Home Organizational Processes," *Western Journal of Nursing Research*, 28(8), 935-954.
32. Boyle, DK, Miller, PA, **Gajewski, BJ**, Hart, S, & Dunton, N (2006), "Nurse Satisfaction Differences among Practice Specialties," *Western Journal of Nursing Research*, 28(6), 622-640.
33. Kluding, P, Swafford, BB, Cagle, P, **Gajewski, BJ** (2006), "Reliability, Responsiveness and Validity of The University of Kansas Standing Balance Scale," *Journal of Geriatric Physical Therapy*, 29(3), 93-9.
34. Bott, M, **Gajewski B**, Lee, R, Piamjariyakul, U, & Taunton, RL (2007), "Care Planning Efficiency for Nursing Facilities," *Nursing Economics*, 25 (2), 85-94.
35. Lee, RH, **Gajewski, BJ**, and Thompson, S (2006), "Reliability of the Nursing Home Survey Process: A Simultaneous Survey Approach," *The Gerontologist*, 46, 772-779.
36. Shefelbine, SE, Anthony A. Mancuso, AA, **Gajewski, BJ**, Ojiri, H, Stringer, S, Sedwick, JD (2007), "Pediatric Retropharyngeal Lymphadenitis: Differentiation from Retropharyngeal Abscess and Treatment Implications," *Otolaryngology, Head and Neck Surgery*, 136(2), 182-188
37. Hise ME, Halterman K, Parkhurst M, **Gajewski B**, Moncure M, and Brown J. (2007), "Feeding Practices of Severely Ill ICU Patients: An Evaluation of Energy Sources and Clinical Outcomes," *Journal of the American Dietetic Association*, 107, 458-465.
38. **Gajewski, B.**, Hall, M., and Dunton, N. (2007), "Summarizing Benchmarks in the National Database of Nursing Quality Indicators using Bootstrap Confidence Intervals," *Research in Nursing & Health*, 30, 112-119.
39. Ammouri, A, Kaur, H, Neuberger, G, **Gajewski, B**, Choi, W (2007) "Correlates of Exercise Participation in Adolescents," *Public Health Nursing*, 24 (2), 111-120.
40. Neuberger, GB, Aaronson, LS, **Gajewski, B**, Embretson, S, Cagle, PE, Loudon, JK, Miller, P (2007), "Effects of an Exercise Intervention on Symptoms, Function, and Disease Outcomes of Rheumatoid Arthritis", *Arthritis Care and Research*, 57(6), 943-952.
41. **Gajewski, BJ**, Hart, S, Bergquist, S, & Dunton, N (2007), "Inter-rater Reliability of Pressure Ulcer Staging: Probit Bayesian Hierarchical Model that allows for Uncertain Rater Response," *Statistics in Medicine*, 26(25), 4602-4618.

42. **Gajewski B** & Simon S (2008), "A One-Hour Training Seminar on Bayesian Statistics for Nursing Graduate Students," *The American Statistician*, 62(3), 190-194.
43. **Gajewski, B.J.**, Nicholson, N. and Widen, J.E. (2007), "Predicting Hearing Threshold in Non-Responsive Subjects Using a Log-Normal Bayesian Linear Model in the Presence of Left Censored Covariates," Accepted by *Statistics in Biopharmaceutical Research*.
44. **Gajewski, B**, Simon, S, and Carlson, S (2008), "Predicting Accrual in Clinical Trials with Bayesian Posterior Predictive Distributions," *Statistics in Medicine*, 27(13), 2328-2340.
45. Billinger, S, Loudon, J, and **Gajewski B** (2008), "Validity of a Total Body Recumbent Stepper (TBRS) to Assess Cardiorespiratory Fitness," *Journal of Strength and Conditioning Research*, 22(5), 1556-1562.
46. Carpenter, J, **Gajewski, B**, Teel, C, and Aaronson, LS (2008), "Bayesian Data Analysis: Estimating the Efficacy of Tai Chi as a Case Study," *Nursing Research*, 57(3), 214-219.
47. Williams, KN, Herman, R, **Gajewski, B**, Wilson, K (2008), "Elderspeak Communication: Impact on Dementia Care," Accepted by *American Journal of Alzheimer's Disease and Other Dementias*.
48. Taunton, RL, Piamjariyakul, U, **Gajewski, B**, Lee, RH, Reker, D, Bott, MJ (2008), "Care Planning Integrity in Nursing Facilities," *Nursing Research*, 57(4), 271-282.
49. Lee, R, **Gajewski, B**, Taunton, RL, Bott, M (2008), "Modeling Efficiency at the Process Level: An Examination of the Care Planning Process in Nursing Homes," Accepted by *Health Services Research Journal*.
50. Kluding, P, and **Gajewski, B** (2008), "Relationship between Impairments of Body Function and Activity Limitations in People with Chronic Stroke," Accepted by *Physical Therapy*.
51. Dunton, N., **Gajewski, B.**, Klaus, S., and Pierson, B. (2006), "Do Magnet facilities maintain their workforce 'magnetism'?" *American Nurse Today*, 1(3), 22-23.

***Invited (peer reviewed)***

52. Mayo, MS, **Gajewski, BJ**, and Morris, J (2006), "Some Statistical Issues in Microarray Gene Expression Data," *Radiation Research*, 165(6), 745-8.
53. Winkler, MF, Ross, VM, Piamjariyakul, U, **Gajewski, B**, and Smith, C (2006), "Technology Dependence in Home Care: Impact on Patients and their Family Caregivers," *Nutrition in Clinical Practice*, 21(6), 544-556.
54. Dunton, N., **Gajewski, B.**, Klaus, S., Pierson, B. (2007), "The Relationship of Nursing Workforce Characteristics to Patient Outcomes" *OJIN: The Online Journal of Issues in Nursing*, 12 (3), Manuscript 4.

***Letters to the Editor (peer reviewed)***

55. **Gajewski, B.J.**, Petroski, G., Thompson, S, Dunton, N, Wrona, M, Becker, A, Coffland, V (2006), "Letter to the editor: the effect of provider-level ascertainment bias on profiling nursing homes by Roy J, Mor V," *Statistics in Medicine*, 25(11), 1976-1977.

**Refereed Submitted (peer reviewed)**

1. Swift, M, Spake, E, and **Gajewski, B** (2006), "The Reliability of Musculoskeletal Objective Clinical Examination in Professional Therapist Programs," Submitted to *Journal of Physical Therapy Education*.
2. Swift, M, Spake, E, and **Gajewski, B** (2007), "Do Exam Preparation Methods Affect Student Performance and Satisfaction for a Musculoskeletal Objective Clinical Examination?," Submitted to *Journal of Physical Therapy Education*.

3. **Gajewski, BJ**, Lee, R, Bott, M, Piamjariyakul, U, Taunton, RL (2007), "On Estimating the Distribution of Data Envelopment Analysis Efficiency Scores: An Application to Nursing Homes' Care Planning Process," Submitted to *Journal of Applied Statistics*.
4. Hou, Q, Mahnken, JD, **Gajewski, B**, Dunton, N (2008), "The Box-Cox power transformation on nursing sensitive indicators: Does it matter if structural effects are omitted during the estimation of the transformation parameter?" Submitted to *The Journal of Nursing Measurement*.
5. **Gajewski, BJ**, Coffland, V, Boyle, D, Bott, MJ (2008), "Integrated Analysis of Content and Construct Validity of Psychometric Instruments," Submitted to *Psychological Methods*.
6. **Gajewski, BJ**, Mahnken, JD, Dunton, N, (2008), "Is the Sky Really Falling? Model-Based Report Cards for Nursing Outcomes," Submitted to *BMC Medical Research Methodology*.
7. Al-momani, MO, Ferraro, JA, **Gajewski, BJ**, Ator, G (2008), "Improved Sensitivity of ECoChG in the Diagnosis of Meniere's Disease," Submitted to *International Journal of Audiology*.
8. Bott, M, **Gajewski, BJ**, Boyle, DK, Becker, A, Coffland, V, Lee, R, Averett, E, Bonnel, W, Dunton, N (2008), "Psychometric Assessment of Staff and Leader Instruments of Culture Change in Nursing Homes," Submitted to *The Journal of Nursing Measurement*.
9. Duncan, J, Bott, M, Forbes-Thompson, S, **Gajewski, B** (2008), "Relative Rates of Symptom Occurrence and Associated Clinical Factors in Nursing Home Residents with Cancer," Submitted to *Research in Nursing and Health*.
10. **Gajewski, BJ**, Boyle, DK, and Thompson, S, (2008) "On Estimating the Distribution of a Covariance Matrix from Ordinal-Dynamic Scaled Data: A Case Study Measuring Nursing Home Residents Quality of Life," Submitted to *Methodology: European Journal of Research Methods for the Behavioral and Social*.

### In Preparation

1. Nicholson N, Widen JE, **Gajewski BJ**, and Chertoff M (2006), "Systematic Investigation of Filtering and Re-Windowing TEOAE Waveforms," In Preparation.
2. Duncan J, Forbes-Thompson S, and **Gajewski B** (2006), "Measuring Palliative Care in Nursing Homes: Development and Initial Validation of the Palliative Care Process Measure," In Preparation.
3. Liu, W., Mukherjee, M. and **Gajewski, B.** (2005), "The effect of tactile feedback on the accuracy of hand movement while performing tracking tasks," In Preparation.
4. Swift, MC, Connors, H, **Gajewski, BJ**, and Spake, E (2007), "Lay Persons Verse Students Trained As Standardized Patients In OSCE Exams," In Preparation.
5. Sharma, N, Ryals, JM, **Gajewski, BJ**, and Wright, DE (2008), "Exercise-Induced Analgesia and NT-3 Synthesis in an Animal Model of Chronic Muscular Pain," In Preparation.

### Proceedings

1. Rilett, L.R., Park, D.J., and **Gajewski, B.J.** (1999), "Estimating Confidence Intervals for Freeway Corridor Travel Time Forecasts," paper number 1154 6<sup>th</sup> *World Congress on ITS*.
2. **Gajewski, B.J.** (2001), "Applications of Robust Multivariate Receptor Modeling," *Proceedings of the Joint Statistical Meetings of the American Statistical Association*.
3. **Gajewski, B.J.** and Mayo, M.S. (2003), "[Incorporating Pessimistic and Optimistic Priors into the Design of Bayesian Phase II Clinical Trials](#)," *Proceedings of the Joint Statistical Meetings of the American Statistical Association: Bayesian Statistical Science*, 1549-1563.

4. John EB, **Gajewski B**, Gobert D, Bouckhout V, Billinger S A, Cho JK (2003) "Cardiovascular Response of Chronic Stroke-Survivors to an Aerobic Exercise Training Program" *Medicine & Science in Sports & Exercise*, 35(Supplement): S195.
5. Richardson, M, Rogness, N., and **Gajewski, B.** (2003), "Using Chewing Gum to Illustrate Introductory Statistical Concepts," *Proceedings of the Joint Statistical Meetings of the American Statistical Association: Statistical Education*, 3460-3466.
6. Rogness, N., Richardson, M. and **Gajewski, B.** (2003) "Using Chewing Gum to Illustrate Intermediate Statistical Concepts," *Proceedings of the Joint Statistical Meetings of the American Statistical Association: Statistical Education*, 3545-3547.
7. **Gajewski, B.J.**, Nicholson, N. and Widen, J.E. (2004), "Predicting Hearing Threshold in Non-Responsive Subjects Using a Log-Normal Bayesian Linear Model in the Presence of Left Censored Covariates," *Proceedings of the American Statistical Association, Statistics in Epidemiology Section [CD-ROM]*, Alexandria, VA: American Statistical Association.

## PRESENTATIONS

- 2008 Cerner Corporation, Innovations in Design, Analysis, and Dissemination: Frontiers in Biostatistical Methods, "On Estimating the Distribution of Data Envelopment Analysis Efficiency Scores: An Application to Nursing Homes' Care Planning Process," North Kansas City, MO, *Invited*.
- 2008 University of Kansas Medical Center, Statistics Seminar Series, "Predicting Accrual in Clinical Trials with Bayesian Posterior Predictive Distributions," Kansas City, KS.
- 2008 2008 Bayesian Biostatistics Conference, "Integrated Analysis of Content and Construct Validity of Psychometric Instruments," *MD Anderson Cancer Center, Houston, TX*.
- 2008 7<sup>th</sup> International Conference on Health Policy Statistics, "[Introducing Bayesian Data Analysis to Non-Statisticians in a Frequentist Course: Illustration with NDNQI Data](#)," Philadelphia, PA.
- 2007 Faculty Research Day, University of Kansas Medical Center, "Predicting Accrual in Clinical Trials: A Bayesian Based Approach," Kansas City, KS
- 2007 The Joint Statistical Meetings, "Distribution of Cronbach's Alpha for Ordinal Data A Bayesian Based Approach," Salt Lake City, UT.
- 2007 Department of Psychology, University of Kansas, Quantitative Psychology Program, "Distribution of Cronbach's Alpha for Ordinal Data A Bayesian Based Approach," Lawrence, KS.
- 2007 International Biometrics Society, Eastern North American Region Spring Meeting, "Distribution of Data Envelopment Analysis Efficiency Scores: An Application to Nursing Homes' Care Planning Process," Atlanta, GA.
- 2007 Sigma Xi: The Scientific Research Society, "Modeling Healthcare Efficiency," w/ Robert H. Lee, KU Medical Center, Kansas City, KS.
- 2007 National Database of Nursing Quality Indicators: Transforming Nursing Data into Quality Outcomes The First National Conference, "What are the Odds and Max Your Bet! NDNQI Research Methods," Las Vegas, NV.
- 2006 Faculty Research Day, University of Kansas Medical Center, "Inter-rater Reliability of Pressure Ulcer Staging: Ordinal Probit Bayesian Hierarchical Model that allows for Uncertain Rater Response," Kansas City, KS
- 2006 The National State of the Science Congress in Nursing Research, "Symposium: Complexity Science and Analysis: Emerging Methods to Discern Patterns of Organizational Outcomes in Long Term Care; Non-Marginal Analytic Techniques: An Introduction to the use of Statistical Methods in Organizational Research," Washington DC.
- 2006 Gastrointestinal Grand Rounds, University of Kansas Medical Center, "Four S's: Sensitivity, Specificity, Significance, and Sample Size," Kansas City USA
- 2006 University of Kansas Medical Center, Statistics Seminar Series, "Is the Sum of Two Studies Better than Their Parts?," Kansas City USA
- 2006 The Joint Statistical Meetings: Section on Biometrics and Bayesian Statistical Modeling, "Inter-rater Reliability of Pressure Ulcer Staging: Ordinal Probit Bayesian Hierarchical Model that Allows for Uncertain Rater Response," Seattle, WA, USA

- 2006 International Biometrics Society, Western North American Region Spring Meeting, "Non-Normal Path Analysis in the Presence of Measurement Error and Missing Data: A Bayesian Analysis of Nursing Homes' Structure and Outcomes," Flagstaff, AZ
- 2006 University of Missouri Kansas City, Mathematics and Statistics Department, "There's No Place Like Home: Estimating Intra-Conference Home Field Advantage in College Football," Kansas City, MO.
- 2005 The 58<sup>th</sup> Annual Scientific Meeting of the Gerontological Society of America, "Relationship of Nursing Home Staff Turnover and Deficiencies: A Regression Tree", Orlando, FL.
- 2005 Biostatistics External Advisory Board, University of Kansas Medical Center, "Bayesian Sample Size Calculations in Phase II Clinical Trials Using a Simple Mixture of Informative Priors: Incorporating Pessimistic and Optimistic Opinions Simultaneously," Kansas City, KS
- 2005 International Biometrics Society, Western North American Region Spring Meeting, "Inter-rater Reliability of Nursing Home Surveys: A Bayesian Latent Class Approach," Fairbanks, AK
- 2005 Falls and Wandering Conference, "Nurse Staffing and Patient Falls in US Hospitals," Tampa, FL
- 2005 International Biometrics Society, Eastern North American Region Spring Meeting, "Bayesian Sample Size Calculations in Phase II Clinical Trials Using a Simple Mixture of Informative Priors: Incorporating Pessimistic and Optimistic Opinions Simultaneously," Austin, TX
- 2004 University of Kansas, Biostatistics Journal Club, "A Robust Multivariate Statistical Method with an Application to Receptor Modeling: A Robust Structural Equation Model," Kansas City, KS
- 2004 Pittsburg State Department of Mathematics, "Predicting Hearing Threshold in Nonresponsive Subjects Using a Bayesian Linear Model in the Presence of Left-censored Covariates," Pittsburg, KS
- 2004 The University of Kansas Department of Mathematics, "Predicting Hearing Threshold in Nonresponsive Subjects Using a Bayesian Linear Model in the Presence of Left-censored Covariates," Lawrence, KS
- 2004 The Joint Statistical Meetings: Section on Statistics in Epidemiology, "Predicting Hearing Threshold in Nonresponsive Subjects Using a Bayesian Linear Model in the Presence of Left-censored Covariates," Toronto, Ontario, Canada
- 2004 University of Kansas, Biostatistics Journal Club, "Predicting Hearing Threshold in Nonresponsive Subjects Using a Bayesian Linear Model in the Presence of Left-censored Covariates," Kansas City, KS
- 2003 Biostatistics External Advisory Board, University of Kansas Medical Center, "A Bayesian Log Normal Mixed model with Peakedness Parameter in the Presence of Censoring," Kansas City, KS
- 2003 The International Environmetrics Society Meeting and 50<sup>th</sup> South African Statistical Association Meeting, "Modeling Several Levels of Uncertainty in Hearing Threshold Data," Johannesburg, South Africa
- 2003 Faculty Research Day, University of Kansas Medical Center, "Consistency of Clustered Match-Paired Data in the Presence of Prior Information with an Application to the Evaluation of Nursing Homes," co-presenters Becker, Wrona, Dunton, and Thompson, Kansas City, KS
- 2003 The Joint Statistical Meetings: [Section on Bayesian Stat. Sciences](#), "Incorporating Pessimistic and Optimistic Priors into the Design of Bayesian Phase II Clinical Trials," co-presenter Matthew S. Mayo, San Francisco, CA
- 2003 University of Kansas, Biostatistics Journal Club, University of Kansas Medical Center, "Bayesian Data Analysis: It's in the Likelihood," Kansas City, KS
- 2003 International Biometrics Society, Eastern North American Region Spring Meeting, "Sample Size Calculations in Phase II Clinical Trials Using Informative Conjugate Priors," co-presenter Matthew S. Mayo, Tampa, FL
- 2003 Brigham Young University, Department of Statistics, "Modeling Several Levels of Uncertainty in Hearing Threshold Data," Provo, UT, *Invited*
- 2003 Transportation Research Board, National Academy of Sciences, "Estimating Link Travel Time Correlations: An Application of Bayesian Smoothing Splines", co-presenter Larry Rilett, Washington, DC, *Invited*
- 2002 Faculty Research Day, University of Kansas Medical Center, "A Log-Normal Distribution Model of the Effect of Bacteria and Ear Fenestration on Animal Hearing Loss: A Bayesian Approach," Kansas City, KS
- 2002 Kansas State University, Department of Statistics, "Effect of Surgery on Hearing Loss Using the Log Normal Distribution in the Presence of Interval Censoring," Manhattan, KS, *Invited*
- 2002 University of Missouri, Department of Statistics, "Effect of Surgery on Hearing Loss Using the Log Normal Distribution in the Presence of Interval Censoring," Columbia, MO, *Invited*
- 2002 The Joint Statistical Meetings: Section on Bayesian Statistical Science, "A Bayesian Model of the Effect of Pseudomonas Aeruginosa and Ear Fenestration on Hearing Loss," New York, NY
- 2002 University of Kansas, "A Statistical Model of the Effect of Pseudomonas Aeruginosa and Fenestration on Hearing Loss," Kansas City, KS 2002 Grand Valley State University, "Categorical Data Analysis: Introduction to Two-way Frequency Tables," Allendale, MI
- 2002 University of Wisconsin-La Crosse, "Integrating Teaching, Research, Continuing Study and Student Growth:

- A Case Study Using Medical Experiment Data,” La Crosse, WI
- 2002 University of Wisconsin-Platteville, “Integrating Teaching, Research, Continuing Study and Student Growth: A Case Study Using Medical Experiment Data,” Platteville, WI
- 2001 University of Minnesota at Duluth, “Integrating Teaching, Research, Continuing Study and Student Growth: A Case Study Using Medical Experiment Data,” Duluth, MN
- 2001 Winona State University, “Integrating Teaching, Research, Continuing Study and Student Growth: A Case Study Using Medical Experiment Data,” Winona, MN
- 2001 The International Environmetrics Society Conference, “Robust Receptor Modeling,” Portland, OR, *Invited*
- 2001 The Joint Statistical Meetings: Session on Receptor Modeling, “Applications and Goodness of Fit for Robust Multivariate Receptor Modeling,” Atlanta, GA, *Invited*
- 2001 St. Cloud State Statistics Colloquium, “A Hierarchical Model of the Effect of Pseudomonas Aeruginosa and Ear Fenestration on Hearing Loss,” St. Cloud MN
- 2001 Minnesota Council of Teachers of Mathematics, “Sampling and Experimentation,” Duluth, MN
- 2001 Transportation Research Board Annual Meeting, “Robust Estimation of Origin-Destination Matrices,” Washington D.C.
- 2000 Marquette University Mathematics Colloquium, “Robust Multivariate Estimation in Transportation and Environmental Engineering,” Milwaukee, WI, October 2000, *Invited*
- 2000 St. Cloud State Mathematics Colloquium, “Robust Multivariate Estimation in Transportation and Environmental Engineering,” St Cloud, MN
- 2000 The Joint Statistical Meetings: Session on Statistics and the Environment, “Robust Multivariate Receptor Modeling,” Indianapolis, IN
- 2000 Texas A&M University Statistics Colloquium, “Robust Multivariate Estimation and Variable Selection in Transportation and Environmental Engineering,” College Station, TX, *Invited*
- 2000 St. Cloud State Statistics Colloquium, “Statistical Science at the Texas Transportation Institute: Case Studies Involving Intelligent Transportation System (ITS) Data,” St. Cloud, MN, *Invited*
- 2000 University of Wisconsin at Oshkosh Mathematics Colloquium, “Statistical Science at the Texas Transportation Institute: Case Studies Involving Intelligent Transportation System (ITS) Data,” Oshkosh, WI, *Invited*
- 2000 Conference of Texas Statistician, “Statistical Science at the Texas Transportation Institute: Case Studies Involving Intelligent Transportation System (ITS) Data,” Sam Houston State University, Huntsville, TX
- 2000 Transportation Research Board Annual Meeting, “ITS Data Archiving: Statistical Techniques for Determining Optimal Aggregation Widths or Inductance Loop Detector Speed Data,” Washington D.C.
- 1999 Bureau of Transportation Statistics (BTS), “Statistical Science at the Texas Transportation Institute: Case Studies Involving Intelligent Transportation System (ITS) Data,” Washington D.C.

## CO-PRESENTATIONS

- 2007 Joint Statistical Meetings, with Stephen Simon, “Predicting Accrual in Clinical Trials: A Bayesian Based Approach,” Salt Lake City, UT
- 2005 Pressure Ulcer Consensus Conference, with Sandra Bergquist and Nancy Dunton, “Pressure Ulcers in Hospitalized Patients: Report from the National Database for Nursing Quality Indicators,” Tampa, FL, **Poster Winner**
- 2004 Annual Magnet Conference, with Nancy Dunton and Ali Ammouri, “Nurse Staffing and Patient Outcomes of Magnet & Non-Magnet Facilities,” Sacramento, CA
- 2004 Annual Magnet Conference, with Nancy Dunton and Ali Ammouri, “Nurse Staffing and Patient Outcomes of Magnet & Non-Magnet Facilities,” Sacramento, CA
- 2004 National Congress on the State of the Science in Nursing Research, with Nancy Dunton, Matthew Hall and Ali Ammouri, “Using Nursing Indicators To Monitor Quality of Care,” Washington DC
- 2004 American Academy of Audiology, with Nannette Nicholson, Judith Widen, Mark Chertoff, Jack Kantz, Robert Lee, “Effects of Filtering and Re-windowing on TEOAE’s”
- 2003 Faculty Research Day, University of Kansas Medical Center, with Nancy Dunton, “Nurse Staffing and Patient Falls in U. S. Acute Care Hospitals,” co-presenters Becker, Wrona, Dunton, and Thompson, Kansas City, KS
- 2003 The Joint Statistical Meetings: [Section on Statistical Education](#), with N. Thomas Rogness and Mary Richardson, “Four out of Five Students Surveyed Would Recommend This Activity (Part 2),” San Francisco, CA
- 2003 The Joint Statistical Meetings: [Section on Statistical Education](#), with Mary Richardson and N. Thomas Rogness, “Four out of Five Students Surveyed Would Recommend This Activity (Part 1),” San Francisco, CA

- 2002 Faculty Research Day, University of Kansas Medical Center, with Jan Moore and Nancy Dunton, "Health Limitations of Missouri Temporary Assistance to Needy Families (TANF) Leavers and Stayers," Kansas City, KS
- 2002 The Joint Statistical Meetings: Section on Statistics in Sports, with Todd Bishop, "Prediction of the NBA and the NFL Draft Picks for 2001 and 2002," New York, NY
- 2002 The Joint Statistical Meetings: Section on Statistical Education, with James Nelson, "A Project That Demonstrates the Estimation of Censored Distributions to Undergraduate Students of Statistics," New York, NY
- 2002 The Joint Statistical Meetings: Section on Statistical Education, with Stacia Merkel, "Appropriateness of the Paired T-Test from Poisson Data: A Case Study of the Effect of Surgery and Streptococcus Pneumoniae and Pseudomonas Aeruginosa on Hearing Loss," New York, NY
- 2001 American Academy of Otolaryngology—Head and Neck Surgery Annual Meeting, with Sedwick, J.D., Prevatt, A.R., and Antonelli, P.J., "Hearing Loss with Labyrinthine Fistulae in Pseudomonas Aeruginosa Induced Chronic Suppurative Otitis Media," Denver, CO.
- 2001 American Academy of Otolaryngology—Head and Neck Surgery Annual Meeting, with Yunus, T.M., Molina, R., Sedwick, J.D., Prevatt, A.R. and Antonelli, P.J., "Hearing Loss with Canal Fistula in Exotoxin A-Deficient Pseudomonas Otitis Media," Denver, CO.
- 2001 American Academy of Otolaryngology—Head and Neck Surgery Annual Meeting, with Molina, R., Yunus, T.M., Sedwick, J.D., Prevatt, A.R. and Antonelli, P.J., "Exotoxin A and Hearing Loss with Pseudomonas Otitis Media and Labyrinthine Fistula," Denver, CO.
- 2001 Transportation Research Board Annual Meeting, with Gold, D. L., Turner, S.M., and Spiegelman "Imputing Missing Values in ITS Data Archives for Intervals Under 5 Minutes," Washington, D.C.
- 2001 Transportation Research Board Annual Meeting, with Turner, S.M., "Using Archived ITS Data to Estimate Mobile Source Emissions Effects of Aggregation Level on VMT-Speed Distributions and Emissions Estimates," Washington, D.C.
- 2001 Transportation Research Board Annual Meeting, with Park, D.J., Rilett, L.R. and Spiegelman, C.H., "Optimal Aggregation Interval Size of Probe-Based Travel Time Information for AITS," Washington, D.C.
- 2000 Otolaryngology-Head and Neck Surgery Annual Meeting, with Sedwick, J.D., Prevatt, A.R., and Antonelli, P.J., "Magnetic Resonance Imaging in the Search for Retrocochlear Pathology," Washington, D.C.

## TEACHING EXPERIENCE

### The University of Kansas

#### Continuing Education: Biostatistics for Nonstatisticians

- Introduction to Survival Analysis (2003)
- Introduction to Biostatistics (2003)
- Introduction to SPSS (2004)
- Introduction to SPSS (2006)

#### School of Nursing Scholarship Program

- 2006 "Bayesian One-Way Analysis of Variance: A Framework for Teaching Bayesian Data Analysis to Non-Statisticians"
- 2005 "Normal Univariate Linear Mixed Models, Hierarchical Linear Models, Multilevel Models, and Nested Models with Random Effects A Basic Primer with Applications in SPSS"
- 2003 "A Note on 'A Comparison of Imputation Techniques for Handling Missing Data'"
- 2002 "Interdisciplinary Research with A Statistician: A Win-Win Situation"

#### New Course

- NRSG 801: Analysis of Variance (2003, 2004, 2005, 2006, 2007,2008)
- BMTR 801: Analysis of Variance (2003, 2004, 2005, 2006, 2007)
- NRSG 997: Independent Study (2004), "Bayesian Statistical Methods"
- NRSG 997: Independent Study (2006), "Meta-Analysis"
- NRSG 898: Research Experience (2006), "Statistical Research Practicum from beginning

to end: Database Development and Statistical Analysis”

**Guest Lecturer (The University of Kansas)**

2003 Physical Therapy Research II (for Wen Liu, PT)  
2003 Grant Writing Course (for Lauren Aaronson, NRSG)  
2003 Dietetics and Nutrition (for Mary Hise, DN)  
2004 Nursing Research (Twice for Phoebe Williams, NRSG)  
2005 Nursing Research (Phoebe Williams, NRSG)  
2006 Nursing Research (Phoebe Williams, NRSG)  
2007 Nursing Research (Twice for Phoebe Williams, NRSG)  
2007 Nursing Research (Geri Neuberger, NRSG)  
2008 Research clinical trial Coordinator: During Study Activities (Helen Schaag, NRSG)

**St. Cloud State University 2000-2002**

Stat 193, Statistical Thinking  
Stat 447, Elementary Theory of Probability  
Stat 448, Elementary Theory of Statistics  
Stat 480, Senior Project  
Honors 110, Statistical Thinking for Honors students

**Texas A&M University 1996-2000**

Stat 307, Elementary Statistical Sampling  
Stat 303, Elementary Statistics

**Marquette University 1994-1995**

MATH 070, Calculus for Business Students

**UNDERGRADUATE SUPERVISORY EXPERIENCE**

**St. Cloud State University**

Todd Bishop (B.S., 2002)  
Stacia Merkel (B.S., 2002)  
James Nelson (B.S., 2002)  
Souleymane Kone (B.S., 2001)

**GRADUATE SUPERVISORY EXPERIENCE**

**M.S. COMMITTEE**

**St. Cloud State University**

Mariann Gabrawy (M.S., 2002)

**University of Kansas**

Gouthami Erra (Hearing and Speech., 2003)  
David Heller (Health, Sport and Exercise Science, 2008)  
Elizabeth Zayat (Occupational Therapy, 2007)  
Carola Dopp (Occupational Therapy)  
Jessica Clark (Occupational Therapy, 2008)  
Andy Wu (Occupational Therapy)

**MS. RESEARCH EXPERIENCE ADVISOR**

**University of Kansas**

Tracy Clark (Nursing)

## **MS. PROJECT ADVISOR**

**University of Kansas**

**Janet Cellitti (Nursing)**

## **PH.D. COMMITTEE**

**University of Kansas**

Catherine Siengsukon (Rehabilitative Sciences, 2008)  
Susan Megerson (Hearing and Speech)  
Linda Wendling (Nursing, Ph.D., 2005)  
Susan Klaus (Nursing, Ph.D., 2006)  
Kelli Kramer (Nursing, PhD, 2007)  
Ali Ammouri (Nursing, Ph.D., 2005)  
Emmanuel John (Rehabilitative Sciences, Ph.D., 2006)  
Nannette Nicholson (Hearing and Speech, Ph.D., 2003)  
Cynthia Ellisstoll (Nursing, Ph.D., 2003)  
Karen Komoroski (Nursing, Ph.D., 2003)  
Vicky Ross (Nursing, Ph.D., 2003)  
Lisa Mische Lawson (Occupational Therapy, PhD, 2006)  
Carol Elliot (Nursing, PhD, 2006)  
Jacque Carpenter (Nursing, PhD, 2006)  
Jeffery Lichtenhan (Hearing & Speech, PhD, 2007)  
Jennifer Duncan (Nursing, PhD, 2007)  
Murad Al-momani (Hearing & Speech, PhD, 2006)  
Diane Ebbert (Nursing, PhD, 2007)  
Jo Ellen Branstetter (Nursing, PhD, 2007)  
Hasan Al-Omani (Nursing, Ph.D., 2007)  
Marcie Swift (Rehabilitative Sciences, Ph.D., 2007)  
Gretchen Quenstedt-Moe (Nursing, Ph.D., 2007)  
Peggy Miller (Nursing, Ph.D., 2007)  
Carol Kemper (Nursing)  
Kendra Gagnon (Rehabilitative Sciences)

## **PH.D. QUALIFYING EXAM COMMITTEE**

**University of Kansas Dept of Rehabilitative Sciences**

Tarang Jain (2007)  
Kevin Farmer (2007)

## **PH.D. CUMULATIVE EXAM COMMITTEE**

**University of Kansas School of Nursing**

Stephanie Dallam (2008)

## **CONTINUING EDUCATION ATTENDED**

2008 "SAS Data Mining Course," by J Michael Hardin

2007 Eastern North American Regional Meeting, International Biometrics Society  
Short Course, "Advances in Latent Variable Mixture Modeling," by Bengt Muthen

2006 JSM Short Course, "Meta-analysis: Concepts and Applications," by

Michael Borenstein and Hannah R. Rothstein

2006 JSM Short Course, “Applied Bayesian Nonparametric Modeling,” by Alan E. Gelfand and Athanasios Kottas

2005 Western North American Regional Meeting, International Biometrics Society Short Course, “Bayesian Clinical Trials,” by Scott Berry

2004 Joint Statistical Meetings Short Course, “Generalized Linear Latent and Mixed Models ,” by Anders Skrondal, Sophia Rabe-Hesketh, and Andrew Pickels

2004 Joint Statistical Meetings Short Course, “Intermediate/Advanced Bayesian Hierarchical Modeling,” David Draper

2004 ASA Short Course, “Statistical Methods for the Measurement of Repeated Measurements,” by Charles Davis

## OTHER ACTIVITIES

**2004 University of Kansas’ Wheat State Whirlwind Tour:** six days touring Kansas with other University of Kansas faculty and staff. This is a competitive application through the Chancellor’s office. The goals of the tour are: To understand/appreciate origins of KU students, develop a deeper relationship with Kansas and its people so that we can gain a better understanding of their needs and hopes, experience a wide spectrum of Kansas people, heritage, and physical beauty and create a community within the University that crosses disciplinary boundaries.

**2004 Election Checker for Democratic Party**

**2004 Participant in the Analytic Strategies for Nursing Databases: A Collaborative Conference of the National Nursing Quality Database Consortium, Palo Alto, CA**

**2005 (11/12/05) Sports reporter Blair Kerkhoff, Kansas City Star, Reported Results of my paper “There’s No Place Like Home: Estimating Intra-Conference Home Field Advantage in College Football using a Bayesian Piecewise Linear Model,”**

**2007 NDNQI First National Conference Planning Committee Member.**

## OTHER SKILLS

### **Software Knowledge**

Matlab, WinBUGS, Minitab, MS Office, Splus, HTML, SAS, R, SPSS, Microsoft, Mplus

Date: Sep 16, 2008

**UNIVERSITY OF KANSAS SCHOOL OF MEDICINE**  
**FACULTY CURRICULUM VITAE**

**I. PERSONAL DATA**

Name: Jianghua (Wendy) He, PhD  
Current Academic Rank: Assistant Professor  
Department(s): Biostatistics

Office Address: University of Kansas Medical Center  
5028 Robinson, Mailstop 1026  
3901 Rainbow Blvd.  
Kansas City, Kansas 66160-7312

Phone: (913) 588-2985  
Fax: (913) 588-0252  
E-Mail: jhe@kumc.edu

PROFESSIONAL DEVELOPMENT

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
1997	BS (Information Management)	University of Science and Technology of China
2000	MS (Management Science)	University of Science and Technology of China
2001	MA (Statistics)	Bowling Green State University
2007	PhD (Statistics)	Florida State University

Postgraduate Education:

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
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Academic and Professional Appointments and Activities. (List in chronological order. Please explain any discontinuity in professional experience)

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
08/2000 – 12/2001	Teaching Assistant	Bowling Green State University
08/2003 – 05/2005	Teaching Assistant	Florida State University
06/2005 – 06/2007	Biostatistician	Florida State University, School of Medicine
06/2007 – Present	Assistant Professor	University of Kansas Medical Center
06/2007 – Present	Member	Center for Biostatistics and Advance Informatics, University of Kansas Medical Center
10/2005 – Present	Member	Kansas Masonic Cancer Research Institute, University of Kansas Medical Center

Professional Registration/Licensure:

<u>Year</u>	<u>Number</u>	<u>State</u>
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Professional Certification(s):

<u>Date</u>	<u>Board</u>
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Professional Societies and Affiliations:

<u>Year</u>	<u>Organization</u> (including offices held)
10/2004 --- present	American Statistical Association
12/2007 --- present	Eastern North American Region/International Biometric Society

Honors and Awards: (honorary societies, research awards, teaching and other awards.)

<u>Year</u>	<u>Award</u>
04/2006	Winner of the Yongyuan and Anna Li Student Presentation, Stat. Dept., FSU
02/2006	Student Paper Award, ASA Chapter Meeting of Florida
08/2004	Best First-year Student in theoretical statistics, FSU
08/2004	Book award, Statistics Department, FSU
08/2003	Teaching Fellowship, FSU

**II. TEACHING ACTIVITIES** (Evaluations and other evidence of quality of teaching must be attached; this represents the teacher's portfolio and should accurately summarize ALL of your teaching activities)

Brief statement of areas of teaching interest:

Linear Regression, Logistic Regression, Survival Analysis, Categorical  
Categorical Data Analysis, Nonparametric Statistics.

1. Instruction:

Didactic (e.g.: lectures and formal presentations)

<u>Academic</u> <u>Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2001	College Algebra		Lectures		5 hrs/week	undergraduate
2003-2004	STAR1013	Statistics Through Examples	Lectures		3hrs/week	undergraduate
2005	STAT2023	Business Statistics	Lectures		3hrs/week	undergraduate
2007	PRVM886	Applied Linear Regression	Lectures		3hrs/week	graduate
2008	PRVM882	Applied Nonparametric Statistics	Lectures		3hrs/week	graduate
2008	PRVM886	Applied Linear Regression	Lectures		3hrs/week	graduate

Nondidactic (e.g.: workshops, labs and discussion groups)

<u>Academic</u> <u>Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>

Clinical

<u>Year</u>	<u>Hours</u>	<u>Student</u>		<u>Length of Service</u>
		<u>No</u>	<u>Type</u>	

Master's Theses and PhD. Dissertations directed

<u>Year</u>	<u>Student Name</u>	<u>Thesis title</u>	<u>Degree (Completed /In process)</u>
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Supervision of Postdoctoral fellows

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
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Advising (Thesis or dissertation committees: student academic group/individual)

<u>Date</u>	<u>Student or group name</u>	<u>Type of Student/group</u>
05/30/08	Tarang Jain	PhD/Physical Therapy

Other teaching activities

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching function</u>
05/05/08	Multiple Tests	KU Biostatistics Journal Club	literature review /leading the discussion

## 2. Development of Educational Materials

(course materials e.g. syllabi, educational software packages, Web sites, films, educational tapes and evaluation tools)

<u>Year</u>	<u>Title Description</u>	<u>Intended Audience</u>
2008	Applied Nonparametric Statistics: syllabus, lectures	medical school graduate students
2008	Regression: syllabus	MS of biostatistics
2008	Nonparametric Statistics: syllabus	MS of biostatistics

## 3. Educational Leadership

(responsibility for courses and other leadership activities including mentoring of junior faculty. Please list faculty members mentored – letters from mentorees may be provided.)

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### III. SERVICE ACTIVITIES:

See guidelines and instructions to applicants for definitions and suggested documentation of professional and academic service.

#### **Professional Service:**

The diverse area of professional service includes patient care. Applicants should select measures that most clearly and concisely document their accomplishments and the value of these activities to the Medical School and University. Measures of both quantity and quality of activities are required and if necessary, applicants should provide brief descriptions to assist reviewers. **Measures of patient care activities include numbers of patients, time allocation in clinical activity, procedures completed, Relative Value Units (RVUs), and value to the School of the clinical service.** If the primary quality evaluation is the subjective assessment of peers, this should be available in letters from departmental colleagues, chair, or referees.

The significance of professional service in the forms of task forces, committees and similar groups should be explained and the specific role of the applicant clarified.

Professional consulting services must have academic credibility and clear service intent and not be performed primarily for personal profit.

2006-Present Non-Voting Member, General Clinical Research Center, University of Kansas Medical Center  
 2006-Present Biostatistical Reviewer, General Clinical Research Center, University of Kansas Medical Center

**Academic Service:**

In academic service the contribution of the candidate to the academic community should be clearly documented. Names and dates of committees, task forces, or working groups should be provided. A concise description of the significance of the group and explanation of the role of the applicant should be provided.

Activities related to Academic Societies should be documented in this section.

**IV. RESEARCH and SCHOLARLY ACTIVITIES:**

Brief statement of areas of research and scholarly interest, including current projects: Bayesian Survival Analysis, Meta Analysis, Obesity Research, Longitudinal Data Analysis

1. Grants and contracts

(Information must include whether the nominee is the principal investigator or a co-investigator, names of all investigators, title of grant, funding source, dollar amount in direct costs, and years during which grant applies. Co-investigators must specify role). Provide four copies of abstracts and award notice or renewal for all grants or contracts awarded in last five years.

Grants and contracts awarded:  
 (List in chronological order)

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Sullivan		Dairy Foods and Blood Pressure in Multi-Ethnic Children	National Institutes of Health	\$466,430	09/01/06 – 07/31/09	Active
Mayo		Biostatistics/Informatics Shared Resource	National Institutes of Health	\$195,300	04/01/02 - 03/31/08	Completed
Atkinson		General Clinical Research Center (GCRC)	NIH/NCRR	\$1,938,267	04/01/2007 – 03/31/2010	Active
Richter		Strengthening Organizational Capacity to Treat Co-Occurring Nicotine Dependence Among People with Mental Illness	Health Care Foundation of Greater Kansas City	\$79,213	08/01/2007 – 07/31/2008	Active
Richard Barohn		The methotrexate in myasthenia gravis (RO1)	FDA OPD program	\$1,600,000	12/01/08 - 11/30/12	Funded

Grants and contracts submitted:

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Benyi Li		PI3K p110beta activation in androgen receptor transactivation and prostate cancer progression	Department of Defense	\$120,315	04/01/2009 - 03/31/2012	Pending
Richard Barohn		Heartland Institute for Clinical and Translational Resear	National Institutes of Health	\$6,616,362	07/01/2008 - 06/30/2013	Not funded
Ann Davis		A Randomized Controlled Trial to Enhance Nutrition and Activity Among Rural Children	National Institutes of Health	\$50,000	12/01/2008 - 11/30/2010	Not funded

## 2. Scholarly Publications

Full length, peer-reviewed articles in scientific journals: (Provide names of all authors, year, title, journal, volume, and inclusive pages. List in chronological order.)

Articles published: **(Provide 4 copies of each peer-reviewed article published within the last five years. Other articles may be provided at the applicant's discretion.)**

Johnson SB, Pilkinton LL, Deeb LC, Jeffers S, **He J**, and Lamp C: "Prevalence of Overweight in North Florida Elementary and Middle School Children: Effects of Age, Sex, Ethnicity, and Socioeconomic Status". Journal of School Health. 2007,77,630-636

Singh S, Reddymasu S, Waheed S, Vail M, **He J**, Talapanneni J, Olyae M: "Endoscopic Ultrasonography findings in patients with nonspecific changes of the pancreas on computed tomography: A single-center experience". Digestive Diseases and Sciences. 2008, 53:2799-2804

Manuscripts in press: (Provide names of all authors, title, journal, and **4 photocopies of manuscript plus evidence of acceptance by journal**)

Johnson SB, Pilkinton LL, Lamp C, **He J**, and Deeb LC: "Parent Reactions to a School-Based Body Mass Index Screening Program". Journal of School Health.

Manuscripts submitted but not yet accepted: (Provide names of all authors, title, journal, and **4 photocopies plus evidence of receipt of manuscript by journal.**)

**He J**, McGee D, and Niu X: "Application of the Bayesian Dynamic Survival Model in Medicine". Statistics in Medicine. June, 2008

Ely AC, Befort CA, Banitt A, **He J**, Gibson C, Sullivan DK, Smith C, and Ellerbeck EF. "A Chronic Care Model Program Incorporating Group Office Visits for Obesity Treatment in Primary Care". Journal of Family Practice. Sep, 2008.

Invited or non-peer-reviewed articles or reviews: **(Provide names of all authors, year, title, journal, volume, and pages. If in press, provide documentation and 4 photocopies if published within the last five years.)**

Books and book chapters: **(Provide names of all authors, year, book title, chapter title, edition, publisher, and pages. If in press, provide documentation and 4 photocopies if published the last five years.)**

Published abstracts: (Provide names of all authors, year, title, where published, volume, and pages.)

Other scholarly publications

### 3. Presentations and posters

Oral paper presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review, and location and date of presentation.)

Scientific papers presented at national and international meetings:

**He J**, McGee D, and Niu X: "Application of Bayesian Dynamic Survival Model for Medical Research", ENAR (Eastern North American Region of International Biometric Society) 2008 Spring Meeting, Arlington, Virginia, Mar 19, 2008

**He J**, Mayo M: "Adjust the Analysis of Group Sequential Trials Using Bayesian Dynamic Survival Models Combined with Computation Techniques", Joint Statistical Meeting 2008, Denver, Colorado, Aug 5, 2008

Scientific papers presented at local and regional meetings:

**He J**, McGee D, and Niu X: Varying Relationship between BMI and All-cause Mortality, 2006 American Statistical Association Chapter Meeting of Florida Feb.17, 2006, Jacksonville, FL

**He J**, McGee D, and Niu X: "Application of Bayesian Dynamic Survival Model for Medical Research" Biostatistics Journal Club, University of Kansas Medical Center, Nov.5, 2007

**He J**: "The Effect of Length of Follow-up on Survival Analysis in Medical and Epidemiological Settings" Center for Biostatistics and Advanced Informatics Seminar Series, KUMC, December 11 2007

**He J**: "Using multiple imputation to adjust the estimates of the Cox model for group sequential designs." External Advisory Board Site Visit for the Center for Biostatistics and Advanced Informatics, University of Kansas Medical Center, Feb.22, 2008.

Poster presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review and location and date of presentation.)

Poster presentations at national and international meetings:

Ely AC, Befort C, Banitt A, He J, Smith CE, and Ellerbeck EE: "Managing Obesity as a Chronic Disease in Primary Care: The Kansas Primary Care Weighs In II Experience" *SGIM 31st Annual Meeting*, Pittsburgh, Pennsylvania, April 9-12, 2008

Sullivan DK, Spaeth K, Gibson CA, He J, and Donnelly JE: "High prevalence of overweight and obesity among multi-ethnic, urban, low-socioeconomic children" *2008 obesity society annual scientific meeting*, October 3-7, 2008

Banitt A, Ely A, Befort C, Goetz JR, He J, Gibson C, Sullivan DK: "Group Office Visits for Obesity in Primary Care: The Kansas Primary Care Weighs In II Experience" *2008 obesity society annual scientific meeting* October 3-7 2008

Poster presentations at local and regional meetings:

Invited seminars at other universities: (Provide title, sponsoring organization or institution, and date of presentation.)

4. Other evidence of scholarship

(includes clinical guidelines, policy documents, contributions to significant position statements by professional organizations, and development of national examinations)

March 1, 2008

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE  
FACULTY CURRICULUM VITAE

**PERSONAL DATA**

Name: **John Keighley**  
Current Academic Rank: Research Assistant Professor  
Department(s): Biostatistics

*Office Address, Phone, Fax and e-mail:*

University of Kansas Medical Center  
Department of Biostatistics  
3901 Rainbow Boulevard Mail-Stop 1026  
Kansas City, KS 66160  
Phone (913) 588-7391  
Fax (913) 588-0252  
e-mail: [jkeighle@kumc.edu](mailto:jkeighle@kumc.edu)

**PROFESSIONAL DEVELOPMENT**

*Undergraduate and Graduate Education:*

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
1979-1985	B.S. (Earth Science)	Emporia State University
1986-1989	M.S. in Mathematics	Emporia State University
1989-2005	Ph.D. in Statistics	Kansas State University

*Postgraduate Education:*

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
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*Academic and Other Professional Appointments and Activities:*

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
Aug 1986 - May 1989	GTA	Department of Mathematics Emporia State University, KS
Aug 1989 - May 1995	GTA	Department of Statistics Kansas State University, KS
Oct 1995 - June 1999	Research Associate	Department of Preventive Medicine University of Kansas Medical Center Kansas City, KS
June 1999 – Dec 2005	Research Instructor	Department of Preventive Medicine University of Kansas Medical Center
Jan 2006 – July 2007	Research Assistant Professor	Department of Preventive Medicine and Public Health University of Kansas Medical Center
July 2007 - Present	Research Assistant Professor	Department of Biostatistics University of Kansas Medical Center

*Professional Registration/Licensure:*

<u>Year</u>	<u>Number</u>	<u>State</u>
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*Professional Certification(s):*

<u>Date</u>	<u>Board</u>
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*Professional Societies and Affiliations:*

<u>Year</u>	<u>Organization</u> (including offices held)
1987 - 1989	Association of Computing Machinery
1990 - 1992	American Statistical Association
1996 - current	North American Association of Central Cancer Registries
2000 – current	American Statistical Association

*Honors and Awards: (honorary societies, research awards, teaching awards etc.)*

<u>Year</u>	<u>Award</u>
2007	Travel Award to ASA joint meetings in Salt Lake City

## TEACHING ACTIVITIES

*Brief statement of areas of teaching interest:*

*Didactic:* (e.g.: lectures and formal presentations)

Academic Year	Course	Title	Instruction		No	Student	
			Type	Hours		Type	
Fall 1986		Intermediate Algebra			70	Undergraduate	(2 sections)
Spring 1987		Intermediate Algebra			70	Undergraduate	(2 sections)
Fall 1987		Intermediate Algebra			35	Undergraduate	
Fall 1987		Math for Elementary Teachers			40	Undergraduate	
Spring 1988		Intermediate Algebra			35	Undergraduate	
Spring 1988		Elementary Mathematics			30	Undergraduate	
Fall 1988		Intermediate Algebra			70	Undergraduate	(2 Sections)
Spring 1989		Intermediate Algebra			70	Undergraduate	(2 Sections)
Fall 1989		Business Statistics I			40	Undergraduate	
Spring 1990		Business Statistics II			40	Undergraduate	
Fall 1990		Business Statistics I			80	Undergraduate	(2 Sections)
Spring 1991		Business Statistics I			40	Undergraduate	
Spring 1991		Social Statistics			40	Undergraduate	
Summer 1991		Social Statistics			30	Undergraduate	
Fall 1991		Business Statistics II			80	Undergraduate	
Spring 1992		Business Statistics II			80	Undergraduate	
Fall 1992		Business Statistics I			80	Undergraduate	
Spring 1993		Business Statistics II			80	Undergraduate	
Fall 1993		Business Statistics II			80	Undergraduate	
Spring 1994		Business Statistics II			80	Undergraduate	
Fall 1994		Business Statistics II			80	Undergraduate	(2 Sections)
Spring 1995		Business Statistics II			80	Undergraduate	(2 Sections)
Summer 1999	PRVM 871	Data Management & Descriptive Epidemiology			10	Graduate	
Summer 2001	PRVM 871	Data Management & Descriptive Epidemiology			10	Graduate	
Summer 2002	PRVM 871	Data Management & Descriptive Epidemiology			6	Graduate	
Summer 2003	PRVM 871	Data Management & Descriptive Epidemiology			6	Graduate	
Fall 2004	PRVM 879	Statistical Computing in Research			6	Graduate	

Summer 2005	PRVM 804	Principles of Statistics in Public Health	11	Graduate
Fall 2005	PRVM 879	Statistical Computing in Research	6	Graduate
Summer 2006	PRVM 804	Principles of Statistics in Public Health	10	Graduate
Fall 2006	PRVM 879	Statistical Computing in Research	9	Graduate
Fall 2007	PRVM 879	Statistical Computing in Research	5	Graduate
Fall 2007	PRVM 804	Principles of Statistics in Public Health	22	Graduate
Spring 2008	PRVM 804	Principles of Statistics in Public Health	25	Graduate

*Nondidactic:* (e.g.: workshops, labs and discussion groups)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Type</u>	<u>Instruction Hours</u>	<u>Student No</u>	<u>Type</u>
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*Clinical:*

<u>Year</u>	<u>Hours</u>	<u>Student No</u>	<u>Type</u>	<u>Length of Service</u>
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*Master's and Ph.D. theses directed:*

<u>Year</u>	<u>Student Name</u>	<u>Thesis title</u>	<u>Degree (Completed /In process)</u>
2006	Kelly Cramm	Patient-Provider Communication	MPH – completed
2006-2007	Laura Roling	Trans Fatty Acid Consumption and the Effect on Lipids in Young Adults: Jayhawk Observed Eating Study (JOE)	MS – Completion 7/07
2007-2008	Angela Myers	Not known yet	MPH – In Process
2007-2008	Josh Powell	Not Known yet	MS – In Process
2007-2008	Stacy Picek	Not Known yet	MPH-In Process
2007-2008	Joseph Soltys	The Role of the Central Nervous System in the Integration of Proprioceptive Information	PhD-In Process

*Supervision of Postdoctoral fellows:*

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
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*Advising:* (Thesis committee/student academic group/individual)

Date	Student or Group Name	Topic	Type of Student/Group
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*Educational materials:* (films, educational tapes, syllabi, educational Software packages, courses developed, Web courses)

<u>Year</u>	<u>Title Description</u>	<u>Intended Audience</u>
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*Other teaching activities:*

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching function</u>
Sept 6 2007	Critical Review of Randomized Clinical Trial Study Design”, CORE 800 – Foundations in Medicine Small Group Leader	Orr-Major 1012	Group Discussion Leader
Sept 17 2007	Talk on Kansas Cancer Registry, Role and purpose.	Orr-Major 1025	Speaker
Dec 4 <sup>th</sup> 2007	Lecture on Analysis of Mixed Models	SON 1005	Lecturer

**RESEARCH AND SCHOLARLY ACTIVITIES:**

*Brief statement of areas of research interest and current projects underway:*

Applied Statistics and Mixed Model Analysis methods.

*Current projects underway:*

1. Kansas Cancer Registry: To establish a statewide Kansas cancer registry to ascertain incidence on cancer in Kansas. The registry is used for cancer surveillance, prevention, control efforts, and for special studies on cancers.

Grant and contract support:

*Previous grants:*

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>
Pamela Duncan, PI Sue-Min Lai, Co-PI	Stephanie Studenski John Keighley, (Data Analyst)	Characterizing Measures of Stroke Outcomes	Glaxo-Wellcome Company	\$176,637	7/95 - 6/96
Pamela Duncan, PI Stephanie Studenski, Co-PI Sue-Min Lai, Co-PI	John Keighley, (Data Analyst)	Characterizing Measures of Stroke Rehabilitation Outcomes	Veteran’s Administration 4/99	\$269,900	7/97 -
Sue-Min Lai	John Keighley, (Data Analyst)	Kansas Cancer Registry	CDC & KDHE	\$3,657,241	10/94 - 6/00
Sue-Min Lai	John Keighley (Data Analyst)	Cancers in nursing home residents	CDC & KDHE	\$ 126,000	6/01 - 6/02

Sue-Min Lai	John Keighley, (Data Analyst)	Kansas Cancer Registry	CDC & KDHE	\$2,850,000	7/00 - 6/05
Sue-Min Lai	Brantley Thrasher John Keighley	Pesticides & risk for prostate cancer	CDC/ATPM KDHE	\$ 450,000	4/01 - 4/04
Sue-Min Lai	John Keighley, (Data Analyst)	Kansas Cancer Registry Using GIS technology	CDC & KDHE	\$3,712,945	7/02 - 6/07
Matthew Mayo	John Keighley (Statistician)	Biostatistics/ Informatics Shared Resource	NIH	\$196,530	4/01 - 3/07

*Current grants:*

Principal Investigator	Investigators	Title of Grant	Source	Costs	Years
Sue-Min Lai	John Keighley, (Data Analyst)	Kansas Cancer Registry	CDC & KDHE	\$3,800,000	7/07 - 6/12
Mahnken Jonathan	John Keighley (Data Analyst)	Oral/Pharyngeal Cancer Incidence from Medicare Claims	NIH	\$294,000 5/09	6/07
Elizabeth Topp	John Keighley (Consultant)	Controlled Release of Immunomodulating Peptides in T1D	Juvenile Diabetes Research Fd	\$98,182	06/07 - 05/08
Norge Jerome	John Keighley (Statistician)	Enhancing Behavioral Obesity Treatment for African American Women	NIH	\$404,250	12/07 -
Amit Rostogi	John Keighley	A Prospective, Randomized Controlled Trial form the Increased Detection of Colon Polyps and Predicting Histology		\$??	?

*Pending grant proposals: (i.e. those written and submitted)*

Principal Investigator	Investigators	Title of Grant	Funding Source	Direct Costs	Years
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**PUBLICATIONS:**

Full length, peer-reviewed articles in scientific journals:

*Articles already published:*

Lai SM, Duncan PW, Keighley J. Prediction of functional outcome after stroke: Comparison of the Orpington Prognostic Scale and the NIH Stroke Scale. *Stroke* 1998; 29:1838-1842.

Duncan PW, Lai SM, Keighley J. Defining post-stroke recovery: implications for design and interpretation of drug trials. *Neuropharmacology* 2000; 39(5): 835-841.

Lai SM, Duncan PW, Keighley J, Johnson D. Depressive symptoms and independence in BADL and IADL. *J Rehab Res and Development*, 2002;39(5): 589-596.

Lai SM, Gray J, Garimella S, Keighley J, Murphy P. Digital Document Management - There is Far More Than Meets the Eyes. *J Registry Management*, 2003;30(3);121-124.

Lai SM, Garimella S, Keighley J. Pathology and dermatology reports: Key in completeness of melanoma cancer reporting in population-based cancer registries. *J Registry Management* 2004;31:87-91.

Lai SM, Duncan PW, Dew P, Keighley J. Sex Differences in Stroke Recovery. *Prev Chronic Dis*, 2005;2(3):

*Manuscripts in press:*

(Provide names of all authors, title, journal, and photocopy of manuscript and letter of acceptance from journal editor.)

*Manuscripts submitted but not yet accepted:*

Mahnken JD, Keighley JD, Cumming CG, Girod DA, Mayo MS: "Evaluating the Completeness of the SEER-Medicare Linked Database for Oral and Pharyngeal Cancer". *Medical Care*

*Invited or non-peer-reviewed articles or reviews:*

*Books and book chapters:*

*Published abstracts:*

Lai SM, Duncan PW, Keighley J, Studenski S. Prognostic ability of Orpington Prognostic Scale and NIH Stroke Scale. *Stroke* 29(1):318,1998

Duncan PW, Lai SM, Keighley J, Rymer M. Time to medical attention after a mild or moderate acute stroke. *Stroke* 239(1):312, 1998

Oral paper presentations:

*Scientific papers presented at national and international meetings:*

*Scientific papers presented at local and regional meetings:*

Poster presentations:

*Poster presentations at national and international meetings:*

Duncan PW, Lai SM, Keighley J, Rymer M. Time to medical attention after a mild or moderate acute stroke. *American Heart Association, 23<sup>rd</sup> International Joint Conference on Stroke and Cerebral Circulation*, Orlando, FL, 1998.

Lai SM, Duncan PW, Keighley J, Studenski S. Prognostic ability of Orpington Prognostic Scale and NIH Stroke Scale. *American Heart Association, 23<sup>rd</sup> International Joint Conference on Stroke and Cerebral Circulation*, Orlando, FL, 1998.

Lai SM, Van Ness C, Dirisina M, Keighley J. Reassessment of access to cancer care in Kansas using GIS technology. *The 2002 North American Association of Central Cancer Registries*, Toronto, Canada, June 2002.

Lai SM, Garimella S, Keighley J. How valuable is it to use hospital disease index from small size hospitals for cancer case finding. *The 2002 North American Association of Central Cancer Registries*, Toronto, Canada, June 2002.

Lai SM, Gray J, Garimella S, Keighley J, Murphy P. Digital Document Management - There is far more to it than meets the eyes *The 2003 North American Association of Central Cancer Registries*, Honolulu, HI, June 2003.

Lai SM, Garimella S, Keighley J. Hospices – Another source of cancer reporting. *The 2003 North American Association of Central Cancer Registry Annual Conference*, Honolulu, HI, June 2003.

Lai SM, Garimella S, Keighely J. Pathology and Dermatology Reports: Key in Completeness of Melanoma Cancer Reporting in Population-based Cancer Registries. *The 2004 North American Association of Central Cancer Registry Annual Conference*, Salt Lake City, UT, June, 2004.

Lai SM, Garimella S, Keighely J. Pathology and Dermatology Reports: Key in Completeness of Melanoma Cancer Reporting in Population-based Cancer Registries. *The 2004 North American Association of Central Cancer Registry Annual Conference*, Salt Lake City, UT, June, 2004.

Lai SM, Keighley J, Krebill R. Is Age-adjusted Incidence to Mortality Ratio a Useful Tool? *The 2005 North American Association of Central Cancer Registry Annual Conference*, Boston, MA, June, 2005.

Lai SM, Keighley J, Garimella S. Significance of Non-Hospital Physician Reporting? *The 2006 North American Association of Central Cancer Registry Annual Conference*, Regina, Canada, June, 2006.

Mahnken JD, Keighley J, Mayo MS: “Evaluating SEER-Medicare Linked Database Completeness for Oral and Pharyngeal Cancer.” Joint Statistical Meetings, Salt Lake City, UT, July 29-August 2, 2007.

*Poster presentations at local and regional meetings:*

Mahnken J, Keighley J, Girod D, Cumming C, Mayo M. Oral and Pharyngeal Cancer Incidence From Medicare Claims. *The 2006 Annual Mason’s Day*, Kansas City, KS, Oct 2006.

*Invited seminars at other universities:*

*Other evidence of scholarly activities:*

Member of GU Cancer Working Working Group, University of Kansas Medical Center 2007 - current

## **ACADEMIC ACTIVITIES**

*Professional Service:*

*Academic Service:* \

Date: September 11, 2008

**UNIVERSITY OF KANSAS SCHOOL OF MEDICINE**  
**FACULTY CURRICULUM VITAE**

**PERSONAL DATA**

Name: Jonathan D. Mahnken, PhD  
 Current Academic Rank: Assistant Professor  
 Department(s): Biostatistics

Office Address: University of Kansas Medical Center  
 MSN 1026, 3901 Rainbow Blvd  
 Kansas City, Kansas 66160  
 Phone: (913) 588-2696  
 Fax : (913) 588-0252  
 Email: jmahnken@kumc.edu

**PROFESSIONAL DEVELOPMENT****Undergraduate and Graduate Education**

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
1992-1996	BA (Mathematics)	Concordia University, Nebraska
1997-1998	N/A (Biometry)	University of Nebraska
1998-2000	MS (Preventive Medicine)	University of Texas Medical Branch
2000-2003	PhD (Biometry)	University of Texas – Health Science Center

**Postgraduate Education**

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
N/A		

**Academic and Other Professional Appointments and Activities** (List in chronological order. Please explain any discontinuity in your professional experience.)

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
Nov. 1997-May 1998	Student Intern	Nebraska Agricultural State Statistician
Aug. 1998-Apr. 2000	Graduate Assistant	University of Texas Medical Branch
Apr. 2000-Jan. 2001	Research Assistant	University of Texas Medical Branch
Jan. 2001-Apr. 2004	Research Associate II	University of Texas Medical Branch
Apr. 2004-Jun. 2007	Assistant Professor	Dept. of Preventive Medicine and Public Health, University of Kansas Medical Center
<b>Jul. 2007-Present</b>	<b>Assistant Professor</b>	<b>Dept. of Biostatistics, University of Kansas Medical Center</b>
<b>Jan. 2005-Present</b>	<b>Member</b>	<b>Center for Biostatistics and Advance Informatics, University of Kansas Medical Center</b>
<b>Mar. 2005-Present</b>	<b>Associate</b>	<b>Landon Center on Aging, University of Kansas Medical Center</b>
<b>May 2005-Present</b>	<b>Member</b>	<b>Kansas Masonic Cancer Research Institute, University of Kansas Medical Center</b>
<b>Aug. 2008-Present</b>	<b>Scientific Director</b>	<b>Biostatistics/Informatics Shared Resource, University of Kansas Cancer Center</b>

**Professional Registration/Licensure**

<u>Years</u>	<u>Number</u>	<u>State</u>
N/A		

**Professional Certification(s)**

<u>Date</u>	<u>Board</u>
N/A	

### Professional Societies and Affiliations

<u>Year</u>	<u>Organization</u> (including offices held)
<b>1999-Present</b>	<b>Member, American Statistical Association</b>
2000-2001	Member, American Public Health Association
<b>2003-Present</b>	<b>Member, International Biometric Society Eastern North American Region</b>

### Honors and Awards (honorary societies, research awards, teaching awards, etc.)

<u>Year</u>	<u>Award</u>
2004	Delta Omega Honorary Society in Public Health
2005-2007	National Institutes of Health Clinical Research Loan Repayment Program
2007	Excellence in Public Health Teaching Award
<b>2008</b>	<b>Faculty Domestic Travel Award</b>
<b>2008-2010</b>	<b>National Institutes of Health Clinical Research Loan Repayment Program Renewal</b>

### TEACHING ACTIVITIES

#### Brief Statement of Areas of Teaching Interest

I have interest in teaching biostatistics courses at various levels. These include introductory biostatistics courses with a broad range of students, both with and without a concentration in biostatistics; also included are more theoretical statistics courses as well as advanced applications courses such as survival analysis. I developed the curriculum for the new course PRVM 884. This course was initiated as part of the new MS in Clinical Research degree program and was first offered in the Fall 2005 semester. PRVM 884 has broad applications to students in other fields both at the Medical Center and on the KU Lawrence campus whose research may involve categorical or censored data. In addition, I have revised the curriculum for the PRVM 814 course and adopted a new textbook to help differentiate this course from others offered at the Medical Center, and to better prepare students to take the more advanced statistics courses that currently being are offered and developed. I have developed and adopted a series of electronic lectures for PRVM 817, which were used in conjunction with weekly open discussions of the course material. Incorporating this technology allowed students to utilize the advantages afforded to online students, while maintaining weekly contact for questions arising from the course material and homework. This hybrid teaching setting is ideal for working professionals such as faculty at our institution who are interested in developing the skills to become independent clinical researchers. Finally, I have also developed electronic lectures for the PRVM 884 course, and began utilizing a hybrid teaching format similar to that described fro PRVM 817 during the Fall 2007 semester.

**lactic** (e.g., lectures and formal presentations)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2004	PRVM 814	Fundamentals of Biostatistics I	Lecture	48	16	Graduate
2005	PRVM 814	Fundamentals of Biostatistics I	Lecture	48	15	Graduate
2005	PRVM 884	Categorical Data and Survival Analysis	Lecture	48	2	Graduate
2006	PRVM 806	Advanced SAS Programming: Macro Processing and SQL	Independent Study		1	Graduate

2006	PRVM 814	Fundamentals of Biostatistics I	Lecture	48	20	Graduate
2006	PRVM 891	Public Health Practicum	Independent Study		1	Graduate
2007	PRVM 817	Fundamentals of Biostatistics II	Lecture	48	6	Graduate
2007	PRVM 893	Public Health Project	Independent Study		1	Graduate
2007	PRVM 884	Categorical Data and Survival Analysis	Lecture	48	3	Graduate
<b>2008</b>	<b>PRVM 817</b>	<b>Fundamentals of Biostatistics II</b>	<b>Lecture</b>	<b>48</b>	<b>5</b>	<b>Graduate</b>
<b>2008</b>	<b>PRVM 803</b>	<b>Introduction to Clinical Research</b>	<b>Lecture</b>	<b>1.5</b>	<b>???</b>	<b>Graduate</b>
<b>2008</b>	<b>PRVM 884</b>	<b>Categorical Data and Survival Analysis</b>	<b>Lecture</b>	<b>48</b>	<b>1</b>	<b>Graduate</b>

**Nondidactic** (e.g., workshops, labs and discussion groups)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2005	ICM 801	Health of the Public	Small Group	1	3	Medical

**Clinical:**

<u>Year</u>	<u>Hours</u>	<u>Student</u>		<u>Length of Service</u>
		<u>No</u>	<u>Type</u>	
N/A				

**Master's and PhD Theses Directed**

<u>Year</u>	<u>Student Name</u>	<u>Thesis Title</u>	<u>Degree (Completed/In Progress)</u>
<b>2008-Present</b>	<b>Catherine Womack</b>	<b>Comparing Oral and Pharyngeal Cancer Rates in Rural and Urban Areas</b>	<b>In Progress</b>

**Supervision of Postdoctoral Fellows**

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
N/A		

**Advising** (thesis committee/student academic group/individual)

<u>Date</u>	<u>Student or Group Name</u>	<u>Type of Student/Group</u>
2004-2006	Kelly Cramm, MD	MPH, University of Kansas Medical Center
2004-2006	Julie Anderson	MS in Clinical Research, University of Kansas Medical Center
<b>2004-Present</b>	<b>Timothy Welch</b>	<b>MPH, University of Kansas Medical Center</b>
<b>2004-Present</b>	<b>Vera Wekulo, MD (Capstone)</b>	<b>MPH, University of Kansas Medical Center</b>
2005-2007	Sarah Bond, PharmD	MPH, University of Kansas Medical Center
2005-2006	Raegen Bond (Capstone)	MPH, University of Kansas Medical Center

2005-2007	Samantha Machen	MPH, University of Kansas Medical Center
2005-2007	Laura Mussulman (Capstone)	MPH, University of Kansas Medical Center
2006	Julie Anderson (Capstone)	MS in Clinical Research, University of Kansas Medical Center
<b>2006-Present</b>	<b>Catherine Womack</b>	<b>MS in Clinical Research, University of Kansas Medical Center</b>
<b>2006-Present</b>	<b>Steven Jernigan</b>	<b>PhD, University of Kansas Medical Center</b>
<b>2007-Present</b>	<b>Brandon Carlson</b>	<b>MPH, University of Kansas Medical Center</b>
2007	Benjamin Cronk	MPH, University of Kansas Medical Center
<b>2007-Present</b>	<b>Greg Howell</b>	<b>MPH, University of Kansas Medical Center</b>
2007	Molly McVey (Thesis)	MS in Mechanical Engineering, University of Kansas
<b>2007-2008</b>	<b>George Thomas</b>	<b>MD-PhD in Molecular and Integrative Physiology Qualifying Examination Committee, University of Kansas Medical Center</b>
<b>2008</b>	<b>Jason Rucker</b>	<b>PhD in Rehabilitation Science Qualifying Examination Committee, University of Kansas Medical Center</b>
<b>2008-Present</b>	<b>Sundar Sankaran</b>	<b>MS in Clinical Research, University of Kansas Medical Center</b>

**Educational Materials** (films, educational tapes, syllabi, educational software packages, courses developed, web courses)

<u>Year</u>	<u>Title/Description</u>	<u>Intended Audience</u>
2003	Health Services Research: Biostatistics Modules This was a series of 12 lectures to be presented on a one-on-one basis for the purpose of faculty development in the area of biostatistics (part of an AHRQ grant)	Physicians interested in learning more about biostatistics
2007	PRVM 817 Electronic Lectures This was a series of lectures to allow students and faculty much of the flexibility of an online course for PRVM 817: Fundamentals of Biostatistics II	Graduate students in the MS in Clinical Research and MPH programs
2007	PRVM 884 Electronic Lectures This was a series of lectures to allow students and faculty much of the flexibility of an online course for PRVM 884: Categorical Data and Survival Analysis	Graduate students in the MS in Clinical Research and MPH programs

### **Other Teaching Activities**

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching Function</u>
Jun. 2003	Health Services Research: Biostatistics Modules	University of Texas Medical Branch	One-on-one instruction to resident
Oct. 2004	Introduction to Categorical Data and Survival Analysis	University of Kansas Medical Center	Biostatistics for the Nonstatistician Short Course (CME)
Feb. 2006	Introduction to Biostatistics	University of Kansas Medical Center	Biostatistics for the Nonstatistician Short Course (CME)
<b>Jun. 2008</b>	<b>Basic Clinical Biostatistics</b>	<b>University of Kansas Medical Center</b>	<b>USMLE Step 1 Prep Program biostatistics review lecture for 68 medical students (co-taught with Jo A. Edmonds, PhD)</b>

### **RESEARCH AND SCHOLARLY ACTIVITIES**

## Brief Statement of Areas of Research Interest and Current Projects Underway

I have statistical research interests focused in two areas: 1) power analysis and sample size justification for complex study designs; and 2) maximum likelihood estimation for multivariate censored data. Reviewing and designing studies requiring covariate adjustment motivated me to develop a new method for calculating power for data when the underlying distribution is not known. Not knowing the true underlying distribution is a common problem for calculating power and sample size, and often covariate adjustment may be required in the planned statistical protocol. This method, which allows for covariate adjustment, presents a generalizable tool for use in the justification or determination of a study sample size. A manuscript of this work is currently under review by *Biostatistics*. My other focus area, analyzing multivariate censored data, extends the traditional maximum likelihood techniques for univariate survival data. This work has applications to public health research involving screening data (e.g., screening mammography for breast cancer). On a more applied level, I have research interests and expertise in secondary data analysis. My pilot award from the Kansas Masonic Cancer Research Institute and my funded R03 (NIH/NIDCR) will allow me to evaluate the utility of using Medicare claims to identify incident oral and pharyngeal cancer cases. This work is the basis for future research avenues such as the improving baseline and trend data and investigating health trajectories among people with oral and pharyngeal cancer in the United States.

Beyond my own research interests, I am currently a co-investigator on a numerous projects ranging from pilot research to large externally funded grants and contracts. I am also the co-Director of the Oversight Core and the Director of the Biostatistics and Data Management Subcore of a large pre-clinical U54 project (Nudo). My contributions to the research at this institution include grant development, study design, data analysis, interpretation of the results, and dissemination of the study findings to the scientific community.

**Grant and Contract Support** (Information must include whether the nominee is the principal investigator or a co-investigator, names of all investigators, title of grant, funding source, dollar amount in direct costs, and years during which grant applies. Please describe in sufficient detail your contribution as co-investigator.)

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Shireman	Ellerbeck, Howard, Mahnken, Kresowik	Development of a Contemporary Bleeding Risk Model for Elderly Warfarin Recipients	American Heart Association (AHA0450071Z)	\$130,000	01/01/04-12/31/05	Completed
Thomas	Ahluwalia, Baucom, Beebe, Croghan, Lichtenstein, Mahnken, Mayo, Offord, Patten	Supportive Behaviors to Assist in Smoking Cessation	National Institute of Drug Abuse	\$50,000	03/20/05-02/28/06	Completed
Freeman	Greiner, Okuyemi, Ahluwalia, Ellerbeck, Ebersole, Born	Patients in Diverse Communities	Health Resources and Services Administration	\$241,610	09/01/03-08/31/06	Completed

(Continued )

Dunton	Boyle (Mahnken: Programmer)	National Database of Nursing Quality Indicators	American Nurses Association		01/01/00-12/31/06	Completed
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<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Engelman	Ellerbeck, Mahnken	Use of a Radiolucent Pad to Reduce Mammography Discomfort among African Americans	Susan G. Komen Breast Cancer Foundation (POP0503504)	\$199,496	05/01/05-04/30/07	Completed
Mahnken	Mayo, Girod	Oral/Pharyngeal Cancer Incidence from Medicare Claims	Kansas Masonic Cancer Research Institute	\$35,000	07/01/06-06/30/07	Completed
Shireman	Ellerbeck, Mahnken, Spertus, Wetmore	Cardiovascular Outcomes Measures in the USRDS: Preliminary Data Analyses	KUMC Lied Center Clinical Pilot	\$35,000	02/01/07 - 01/31/08	Completed
Engelman	Campbell, Ellerbeck, Greiner, James, Mahnken	Use of Novel Tailored Reminders in Rural Primary Care	National Institutes of Health (5R21CA121907-02)	\$298,580	04/01/06 - 03/31/08	Transferred to other statistician
Engelman	Ellerbeck, Gibson, Greiner, Mahnken	Implementation Intentions to Promote Colon Cancer Screening in Rural Primary Care	National Institutes of Health (1R01CA121016-01A1)	\$1,555,314	04/01/07 - 03/31/11	Transferred to other statistician
Greiner	Buckles, Campbell, Ellerbeck, Engelman, James	Tailored Touchscreen Colorectal Cancer Prevention in Urban Care Clinics	National Institutes of Health (1R01CA123245-01A1)	\$1,824,038	05/11/07 - 01/31/11	Transferred to other statistician
Narayan	Buch, Mahnken, Yankee	Morphine and Neuropathogenesis of SIV in Macaques	National Institutes of Health (1R01DA024442-01)	\$1,878,105	09/30/07 - 08/31/12	Transferred to other statistician
Richter	Ellerbeck, Mahnken	Building the Capacity of Mental Health Facilities to Treat Tobacco Dependence in Mental Health Treatment	Health Care Foundation of Greater Kansas City	\$79,213	08/01/07 - 07/31/08	Transferred to other statistician
Vivian	Mahnken	Phenotypic Screen in Mouse Embryonic Stem Cells for TGF-beta Signaling Mutations	National Institutes of Health	\$275,000	04/01/06 - 03/31/08	Transferred to other statistician
Atkinson		General Clinical Research Center (GCRC)	National Institutes of Health	\$5,422,783	04/01/07 - 03/31/10	Transferred to other statistician

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
(Continued) Dunton	Boyle (Mahnken: Programmer )	National Database of Nursing Quality Indicators	American Nurses Association	\$5,293,81 2	01/01/07 - 12/31/10	Active
Ellerbeck	Greiner, Mahnken, Sanderson- Cox	Disease Management for Smokers in Rural Primary Care	National Cancer Institute (1R01CA101963-01)	\$2,196,36 3	07/01/03 - 06/30/08	Active
Engelman	Ellerbeck, Mahnken, Richter	Development of a Comprehensive Mammography Services Quality Index	American Cancer Society (CPHPS- 111021)	\$776,493	01/01/06 - 12/31/09	Active
Mahnken	Mayo, Cumming, Girod	Oral/Pharyngeal Cancer Incidence from Medicare Claims	National Institute of Dental and Craniofacial Research (1R03DE016958- 01A2)	\$200,000	06/01/07 - 05/31/09	Active
Manzardo	Brown, Gabrielle, Knop, Nickel, Penick (Mahnken: Scientific Advisor)	Danish Study of Perinatal Neurodevelopmenta l Contributions to Adult Alcoholism	National Institutes of Health (1K01AA015935- 01A1)	\$358,598	04/01/07 - 03/31/10	Active
Nudo	Jones, Kleim, Mahnken, Plautz, Teskey	Cortical Stimulation to Enhance Recovery after Stroke	National Institutes of Neurological Disorders and Stroke (1U54NS048126- 01A1)	\$3,640,17 0	09/01/05 - 05/31/09	Active
Rigler	Ellerbeck, Mahnken, Shireman, Whittle	Current Antipsychotics and Fractures in Nursing Homes	National Institute of Aging (1R01AG079221- 01A2)	\$552,500	04/03/06 - 03/31/09	Active
Shireman	Brooks, Ellerbeck, Mahnken, Rigler, Spertus, Wetmore	Are Cardioprotective Medications Effective in ESRD?	National Institutes of Health	\$1,086,50 5	09/01/08 - 08/31/12	Pending

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Wetmore	Ellerbeck, Quarles, Rigler, Shireman, (Mahnken: Scientific Advisor)	Stroke & Bleed Outcomes with Warfarin in Dialysis Patients w/ Atrial Fibrillation	National Institutes of Health	\$731,500	12/01/08 - 11/30/13	Not Funded (Priority Score 225)
Choi		Center for Research and Education in Addictions and Health Disparities	National Institutes of Health	\$4,734,655	04/01/09 - 03/31/14	Pending
(Continued) Ellerbeck	Cox, Cupertino, Greiner, Mahnken, Richter, Shireman	Centralized Disease Management for Rural Hospitalized Smokers	National Institutes of Health	\$2,496,662	04/01/09 - 03/31/14	Pending
Rigler	Ellerbeck, Mahnken, Shireman	Weight Change & Incident Diabetes during Antipsychotic Use in Nursing Homes	National Institutes of Health	\$925,000	07/01/09 - 06/30/13	Pending

**Full Length, Peer-Reviewed Articles in Scientific Journals** (Provide names of all authors, year, title, journal, volume, and inclusive pages. List in chronological order.)

Articles already published:

1. Ahuja T, Freeman DH, **Mahnken JD**, Agraharkar M, Siddiqui M, Memon A: "Predictors of the Development of Hyperkalemia in Patients Using Angiotensin-Converting Enzyme Inhibitors." *American Journal of Nephrology*, 20:268-272, 2000.
2. Goodwin JS, Freeman JL, **Mahnken JD**, Freeman DH, Nattinger AB: "Geographic Variations in Breast Cancer Survival Among Older Women: Implications for Quality of Breast Cancer Care." *Journal of Gerontology: Medical Science*, 57A(6):M401-M406, 2002.
3. Randolph WM, Goodwin JS, **Mahnken JD**, Freeman JL: "Regular Use Is Associated with Elimination of Age-Related Disparities in Size and Stage of Breast Cancer at Diagnosis." *Annals of Internal Medicine*, 137(10):783-790, 2002.
4. Randolph WM, **Mahnken JD**, Goodwin JS, Freeman JL: "Using Medicare Data to Estimate the Prevalence of Breast Cancer Screening in Older Women: Comparison of Different Definitions to Identify Screening Mammograms." *Health Services Research*, 37(6):1643-1657, 2002.
5. Du XL, Key CR, Osborne C, **Mahnken JD**, Goodwin JS: "Discrepancy between Consensus Recommendations and Actual Community Use of Adjuvant Chemotherapy in Women with Breast Cancer." *Annals of Internal Medicine*, 138(2):90-98, 2003.
6. Lackan NA, Ostir GV, Freeman JL, **Mahnken JD**, Goodwin JS: "Decreasing Variation in the Use of Hospice among Older Adults with Breast, Lung, Colorectal and Prostate Cancer." *Medical Care* 42:116-122, 2004.
7. Eschbach KE, **Mahnken JD**, Goodwin JS: "Neighborhood Composition and Incidence of Cancer Among Hispanics in

the United States.” *Cancer* 103(5):1036-1044, 2005.

8. Kreisler KR, Vance RA, Cruzzavala J, **Mahnken JD**: “Heparin-Bonded Cardiopulmonary Bypass Circuits Reduce the Rate of Red Blood Cell Transfusion When Compared to Patients Receiving Placebo During Elective Coronary Artery Bypass Surgery.” *Journal of Cardiothoracic and Vascular Anesthesia*, 19(5):608-611, 2005.
9. Neuberger JS, **Mahnken JD**, Mayo MS, Field RW: “Risk Factors for Lung Cancer in Iowa Women: Implications for Prevention.” *Cancer Detection and Prevention Control*, 30:158-167, 2006.
10. Shireman TI, **Mahnken JD**, Howard PA, Kresowik TF, Ellerbeck EF, Hou Q: “Development of a Contemporary Bleeding Risk Model for Elderly Warfarin Recipients.” *Chest*, 130(5):1390-1396, 2006.
11. Dancause N, Barbay S, Frost S, Zoubina E, Plautz E, **Mahnken JD**, Nudo R: “Effects of Small Ischemic Lesions in the Primary Motor Cortex on Neurophysiological Organization in Ventral Premotor Cortex.” *Journal of Neurophysiology*, 96:3506-3511, 2006.
12. Santos M, Zahner LH, McKiernan BJ, **Mahnken JD**, Quaney B: “Severe Chronic Hand Dysfunction Post-Stroke: Neuromuscular Electrical Stimulation Improves Motor Performance.” *Journal of Neurologic Physical Therapy*, 30(4):175-183, 2006.
13. **Mahnken JD**, Freeman DH, DiNuzzo AR, Freeman JL: “Mammography Use among Older Mexican-American Women: Correcting for Over-Reports of Breast Cancer Screening.” *Women & Health*, 45(3):53-64, 2007.
14. Cupertino AP, **Mahnken JD**, Richter K, Cox LS, Casey G, Resnicow K, Ellerbeck EF: “Long-Term Engagement in Smoking Cessation Counseling among Rural Smokers.” *Journal of Health Care for the Poor and Underserved*, 18(4):39-51, 2007.
15. Caban ME, **Mahnken JD**, Kuo Y, Freeman JL, Nosek MA: “Mammography Use Mediates Disparities in Tumor Size at Diagnosis in Women with Social Security Disabilities.” *Women & Health*, 46(4):1-17, 2007.
16. Dancause N, Barbay S, Frost SB, **Mahnken JD**, Nudo RJ: “Interhemispheric Connections of the Ventral premotor Cortex in a New World Primate.” *Journal of Comparative Neurology*, 505(6):701-715, 2007.
17. Berg CJ, Cox LS, **Mahnken JD**, Greiner KA, Ellerbeck EF: “Correlates of Smoking Abstinence Self-Efficacy among a Sample of Rural Smokers.” *Journal of Health Psychology*, 13(3):416-421, 2008.
18. Cox LS, Cupertino AP, Mussulman LM, Nazir N, Greiner KA, **Mahnken JD**, Ahluwalia JS, Ellerbeck EF: “Design and Baseline Characteristics from the KAN-QUIT Disease Management Intervention for Rural Smokers in Primary Care.” *Preventive Medicine*, 47:200-205, 2008.

Manuscripts in press: (Provide names of all authors, title, journal, and **photocopy of manuscript and letter of acceptance from journal editor.**)

1. **Mahnken JD**, Chan W, Freeman DH, Freeman JL: “Reducing the Effects of Lead-Time Bias, Length Bias, and Over-Detection in Evaluating Screening Mammography: A Censored Bivariate Data Approach.” *Statistical Methods in Medical Research*. In press.
2. **Mahnken JD**, Mayo MS, Nudo RJ: “A Decision Algorithm for Translating Preclinical Trial Results to Enhance Recovery after Stroke.” *Journal of Biopharmaceutical Statistics*. In press.
3. Wetmore JB, Lovett DH, Hung AM, Cook-Wiens G, **Mahnken JD**, Sen S, Johansen KL: “Associations of Interleukin-6, C-reactive Protein, and Serum Amyloid A with Mortality in Hemodialysis Patients.” *Nephrology*. In press.

Manuscripts Submitted but Not Yet Accepted (Provide names of all authors, title, journal, and **photocopy and letter acknowledging receipt of manuscript by journal.**)

1. Mahnken JD: "Power and Sample Size Calculations for Models from Unknown Distributions Using Quasi-likelihood Methods." *Statistics in Biopharmaceutical Research*.
2. Thomas JL, Patten CA, Mahnken JD, Offord KP, Hou Q, Lynam IM, Wirt BA, Croghan IT: "Validation of the Support Provided Measure among Spouses of Smokers Receiving a Clinical Smoking Cessation Intervention." *Nicotine & Tobacco Research*.
3. Nollen NL, Befort C, Davis AM, Snow T, Mahnken JD, Hou Q, Story M, Ahluwalia JS: "Competitive Foods in Schools: Availability and Purchasing in Small and Large High Schools and Their Relationship to Student BMI." *Journal of the American Dietetic Association*.
4. Ellerbeck EF, Cupertino AP, Sanderson Cox L, Greiner KA, Mussulman LM, Nazir N, Shireman T, Mahnken JD, Resnicow K, Ahluwalia JS: "Disease Management Versus Pharmacotherapy Management Alone for Smoking Cessation." *Annals of Internal Medicine*.
5. Hou Q, Mahnken JD, Gajewski B, Dunton N: "The Box-Cox Power Transformation on Nursing Sensitive Indicators: Does It Matter if Structural Effects Are Omitted During the Estimation of the Transformation Parameter?" *Journal of Nursing Measurement*.
6. Mahnken JD, Keigley JD, Cumming CG, Girod DA, Mayo MS: "Evaluating the Completeness of the SEER-Medicare Linked Database for Oral and Pharyngeal Cancer." *Journal of Registry Management*.
7. Gajewski BJ, Mahnken JD, Dunton N: "Is the Sky Really Falling? Model-based Report Cards for Nursing Outcomes." *BMC Medical Research Methodology*.
8. Mayo MS, Mahnken JD, Soong S: "Randomized Two-Arm, Phase II Clinical Trial Design Using Multiple Constraints." *Statistics in Biopharmaceutical Research*.
9. Cannon C, Braxton C, Kling-Smith M, Mahnken JD, Carlton E, Moncure M: "Utility of the Shock Index in Predicting Mortality in Traumatically Injured Patients." *Journal of Trauma*.

Manuscripts in preparation:

1. King GW, Luchies CW, Kluding PM, Mahnken JD, Stylianou AP, McVey MA, Hughes Zahner L: "Effects of Age and Localized Muscle Fatigue on Balance Recovery from a Forward Fall."
2. McVey MA, Stylianou AP, Luchies CW, Lyons KE, Pahwa R, Jernigan S, Mahnken JD: "The Effect of Parkinson's Disease on the Step Response to a Backwards Pull."

**Invited or Non-Peer-Reviewed Articles or Reviews** (Provide names of all authors, year, title, journal, volume, and pages. If in press, provide documentation.)

1. Mahnken JD, "Many-to-Many Merging Using the SAS® Macro Facility." *Proceedings of the Twenty-Seventh Annual SAS Users Group International Conference*, Paper 89-27, 2002 (Presented as Oral Presentation, Twenty-Seventh Annual SAS Users Group International Conference, Orlando, FL, April 14-17, 2002).
2. Mahnken JD, Chan W, Freeman DH, Freeman JL. (2004), "Left, Right, and Interval Bivariate Censored Data: Evaluating Screening Mammography in the Presence of Lead-Time Bias, Length Bias, and Over-Detection," *2004 Proceedings of the American Statistical Association*, [CD-ROM], Alexandria, VA: American Statistical Association, (Presented as Oral Presentation, Joint Statistical Meetings, Toronto, Canada, August 8-12, 2004).

**Books and Book Chapters** (Provide names of all authors, year, book title, chapter title, edition, publisher, and pages. If in press, provide documentation.)

N/A

**Published Abstracts** (Provide names of all authors, year, title, where published, volume, and pages.)

1. Li C, Kaur H, Nazir N, **Mahnken J**, So J, Ahluwalia JS: "Natural History and Early Life Predictors of Obesity Onset from Childhood to Adolescence." *Obesity Research*, 12:A873, 2004 (Presented as Poster, North American Association for the Study of Obesity Annual Meeting, Las Vegas, NV, November 14-18, 2004).
2. Shireman TI, **Mahnken JD**, Howard PA, Kresowik TF, Ellerbeck EF, Hou Q: "Development of a Bleeding Risk Model for Elderly Warfarin Recipients with Atrial Fibrillation." *Circulation* 112(Suppl II):823, 2005 (Presented as Paper, American Heart Association Scientific Sessions, Dallas, TX, November 13-16, 2005).
3. Cannon CM, Kling M, **Mahnken JD**, Carlton RN, Moncure M: "Utility of the Shock Index in the Field on Emergency Department Arrival in Predicting Mortality in Traumatically Injured Patients." *Academic Emergency Medicine* 13(5, Suppl 1):S72-S73, 2006 (Presented as Poster, Society for Academic Emergency Medicine Annual Meeting, San Francisco, CA, May 18-21, 2006).

**Technical Reports**

1. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 4, 2004 Report*, Kansas City, KS: University of Kansas School of Nursing, 2005.
2. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 1, 2005 Report*, Kansas City, KS: University of Kansas School of Nursing, 2005.
3. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 2, 2005 Report*, Kansas City, KS: University of Kansas School of Nursing, 2005.
4. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 3, 2005 Report*, Kansas City, KS: University of Kansas School of Nursing, 2005.
5. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 4, 2005 Report*, Kansas City, KS: University of Kansas School of Nursing, 2006.
6. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 1, 2006 Report*, Kansas City, KS: University of Kansas School of Nursing, 2006.
7. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 2, 2006 Report*, Kansas City, KS: University of Kansas School of Nursing, 2006.
8. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 3, 2006 Report*, Kansas City, KS: University of Kansas School of Nursing, 2006.
9. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 4, 2006 Report*, Kansas City, KS: University of Kansas School of Nursing, 2007.
10. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 1, 2007 Report*, Kansas City, KS: University of Kansas School of Nursing, 2007.
11. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 2, 2006 Report*, Kansas City, KS: University of Kansas School of Nursing, 2007.
12. Dunton N et al. (co-author: **Mahnken JD**): National Database of Nursing Quality Indicators: *Quarter 3, 2007 Report*, Kansas City, KS: University of Kansas School of Nursing, 2007.
13. **Dunton N et al. (co-author: Mahnken JD): National Database of Nursing Quality Indicators: Quarter 4, 2007 Report, Kansas City, KS: University of Kansas School of Nursing, 2008.**

14. **Dunton N et al. (co-author: Mahnken JD): National Database of Nursing Quality Indicators: *Quarter 1, 2008 Report*, Kansas City, KS: University of Kansas School of Nursing, 2008.**

**Oral Paper Presentations** (Provide names of all authors, title, sponsoring organization, and location and date of presentation.)

Scientific papers presented at national and international meetings:

1. **Mahnken JD**, Dinuzzo AR, Freeman JL, Freeman DH: “Healthy People 2000 Mammography Goals: Can We Declare Victory for Older Mexican-American Women?” Joint Conference of the National Mammography Marketing and Education Association and the National Association of Mobile Health Providers, Houston, TX, September 27 – October 1, 2001, *invited*.
2. **Mahnken JD**, Chan W, Freeman JL: “Maximum Likelihood Estimates for Incomplete Bivariate Survival Data and Their Application in Evaluating Mammography Efficacy.” Joint Statistical Meetings, San Francisco, CA, August 3-7, 2003.

3. **Mahnken JD**, Chan W, Freeman DH, Freeman JL: "Left, Right and Interval Bivariate Censored Data: Evaluating Screening Mammography in the Presence of Lead-Time Bias, Length Bias and Over-Detection." International Biometric Society Eastern North American Region Spring Meeting, Pittsburgh, PA, March 28-31, 2004.
4. Stylianou AP, Luchies CW, Maletsky RA, Lyons KE, Pahwa R, **Mahnken JD**: "Postural Sway Analysis in Parkinson's Disease: Visual Feedback." Summer Bioengineering Conference, Amelia Island, FL, June 21-25, 2006.
5. **McVey M**, Stylianou A, Luchies C, Lyons K, Pahwa R, **Jernigan S**, **Mahnken J**: "The Effect of Parkinson's Disease on the Step Response to a Backwards Pull." Summer Bioengineering Conference, Marco Island, FL, June 25-29, 2008.
6. **Mahnken JD**: "Quasi-likelihood Power and Sample Size Calculations for Models from Unknown Distributions." Association of General Clinical Research Center Statisticians, Denver, CO, August 2-3, 2008, *Invited Paper*.
7. **Mahnken JD**: "Statistical Consulting for a Newly Formed Department of Biostatistics in a Highly Collaborative Environment at the University of Kansas Medical Center." Joint Statistical Meetings, Denver, CO, August 3-7, 2008, *Invited Paper*.
8. **Gajewski BJ**, **Mahnken JD**, **Dunton N**: "Is the Sky Really Falling? Model-Based Report Cards for Nursing Outcomes." National Association for Healthcare Quality Annual Conference, Phoenix, AZ, September 15, 2008.

Scientific papers presented at local and regional meetings:

1. **Mahnken JD**, Chan W, Freeman DH, Freeman JL: "Evaluating the Benefit of Screening Mammography in the Elderly." External Advisory Board Site Visit for the Center for Biostatistics and Advanced Informatics, University of Kansas Medical Center, October 29, 2004.
2. **Mahnken JD**, Mayo MS, Nudo RJ: "Cortical Stimulation to Enhance Recovery after Stroke: A Milestone Decision Algorithm for Translating Preclinical Trial Results." External Advisory Board Site Visit for the Center for Biostatistics and Advanced Informatics, University of Kansas Medical Center, October 21, 2005.
3. **Mahnken JD**: "Quasi-likelihood Power and Sample Size Calculations for Models from Unknown Distributions." Cerner Colloquium, University of Kansas Medical Center, December 14, 2007.

**Poster Presentations** (Provide names of all authors, title, sponsoring organization, and location and date of presentation.)

Poster presentations at national and international meetings:

1. **Mahnken JD**, DiNuzzo AR, Freeman JL, Freeman DH: "Healthy People 2000 Mammography Goals: Can We Declare Victory for Older Mexican-American Women?" American Public Health Association Annual Meeting, Boston, MA, November 12-16, 2000.

2. Khan S, Freeman DH, Randolph WM, **Mahnken JD**, Goodwin JS, Freeman JL: "The Association Between Marital Status and Stage at Diagnosis of Breast Cancer: What Role Does Screening Play?" American Public Health Association Annual Meeting, Philadelphia, PA, November 9-13, 2002.
3. Mercado AC, Randolph WM, Khan S, **Mahnken JD**, Freeman DH, Goodwin JS, Freeman JL: "Racial Disparities in Size of Tumor at Breast Cancer Diagnosis: What Role Does Screening Play in Older Women?" Gerontological Society of America Annual Meeting, San Diego, CA, November 21-25, 2003.
4. Caban MA, Freeman JL, **Mahnken JD**, Nosek M: "Impact of screening mammography in the size and staging of breast cancer at diagnosis among women with Social Security Disability Insurance." American Academy of Physical Medicine and Rehabilitation Annual Assembly, Phoenix, AZ, October 7-10, 2004.
5. **Mahnken JD**, Li C, Nazir N, So J, Kaur H, Ahluwalia JS: "Analyzing the National Longitudinal Survey of Youth: A Comparison of Statistical Methods." Joint Statistical Meetings, Minneapolis, MN, August 7-11, 2005.
6. Berg CJ, Cox LS, **Mahnken JD**, Greiner KA, Ellerbeck EF: "Correlates of Self-Efficacy among Rural Smokers." Society for Research on Nicotine and Tobacco, Orlando, FL, February 15-18, 2006.
7. **Mahnken JD**: "Calculating Power for Generalized Linear Models Using the Wald Test." Joint Statistical Meetings, Seattle, WA, August 6-10, 2006.
8. Cupertino AP, **Mahnken JD**, Richter K, Casey G, Ellerbeck EF: "Adherence to Long Term, Disease Management Focused Tobacco Counseling." Society for Research on Nicotine and Tobacco, Austin, TX, February 20-23, 2007.
9. Engelman KK, **Mahnken JD**, Jianas L, Ellerbeck EF: "A Description of Mammography Discomfort among African American Women." Society for Behavioral Medicine, Washington, DC, March 21-24, 2007.
10. **Mahnken JD**, Keighley J, Mayo MS: "Evaluating SEER-Medicare Linked Database Completeness for Oral and Pharyngeal Cancer." Joint Statistical Meetings, Salt Lake City, UT, July 29-August 2, 2007.
11. Nollen NL, Befort C, Davis A, **Mahnken JD**, Story M, Ahluwalia JS: "Competitive Food Availability and Purchasing in Small and large High Schools and Their Relationship to Student BMI." Annual Meeting of the Obesity Society, New Orleans, LA, October 20-24, 2007.
12. Hou Q, **Mahnken JD**, Pierson B, Klaus S, Gajewski B, Dunton N: "NDNQI® Quarterly Report Informatics: Understanding the Processing Blackbox." Annual National Database of Nursing Quality Indicators Data Use Conference, Orlando, FL, January 30-February 1, 2008.
13. Engelman KK, **Mahnken JD**, Jianas LL, Ellerbeck EF: "Use of a Radiolucent Mammography Cushion among African American Women." Society of Behavioral Medicine, San Diego, CA, March 26-28, 2008.
14. Cupertino AP, Richter K, Mussulman L, **Mahnken JD**, Ellerbeck EF: "Long-Term Disease Management Focused on Pharmacotherapy Utilization among Rural Smokers." Society for Research on Nicotine and Tobacco, Portland, OR, February 27-March 1, 2008.

Poster presentations at local and regional meetings:

1. **Mahnken JD**, DiNuzzo AR, Freeman JL, Freeman DH: "A Validation Study for Self-Reported Data of Recent Mammography Use Among Older Mexican-American Women in Southeast Texas." University of Texas Medical Branch Forum on Aging, Galveston, TX, September 29, 1999.
2. **Mahnken JD**, Goodwin JS, Eschbach K: "Investigating the Hispanic Paradox with Cancer Outcomes." University of Texas Medical Branch Forum on Aging, Galveston, TX, September 25, 2002.
3. **Mahnken JD**, El-zeky FF, Khan S, Freeman DH, Freeman JL: "Faculty Development: Tutorials in Data Management and Statistics." University of Texas Medical Branch Forum on Aging, Galveston, TX, September 25, 2003.

4. Mercado AC, Freeman JL, Freeman DH, Goodwin JS, Khan S, **Mahnken JD**, Randolph WM: "Racial Disparities in Size of Tumor at Breast Cancer Diagnosis: What Role Does Screening Play in Older Women?" University of Texas Medical Branch Forum on Aging, Galveston, TX, September 25, 2003.
5. **Mahnken JD**, Chan W, Freeman JL: "Maximum Likelihood Estimates for Incomplete Bivariate Survival Data and Their Application in Evaluating Mammography Efficacy." University of Texas Medical Branch Forum on Aging, Galveston, TX, September 25, 2003.
6. **Mahnken JD**, Chan W, Freeman JL: "Left, Right and Interval Bivariate Censored Data: Evaluating Screening Mammography in the Presence of Lead-Time Bias, Length Bias and Over-Detection." University of Texas – Health Science Center Graduate and Postgraduate Research Forum, Houston, TX, November 14, 2003.
7. Stylianou AP, Luchies CW, Lyons K, Pahwa R, Maletsky R, **Mahnken JD**: "Effects of Low Severity Parkinson's Disease on the Control of Postural Sway." University of Kansas Medical Center Faculty Research Day, Kansas City, KS, November 2, 2005.
8. **Mahnken JD**, Keighley JD, Mayo MS: "Evaluating the Completeness of the SEER-Medicare Linked Database for Oral and Pharyngeal Cancer." University of Kansas Medical Center Faculty Research Day, Kansas City, KS, November 8, 2007.

**Invited Seminars at Other Universities** (Provide title, sponsoring organization or institution, and date of presentation.)

1. "Evaluating the Benefit of Screening Mammography in the Elderly." Center for Health Promotion and Prevention Research, University of Texas – Health Science Center, March 17, 2004.
2. "Evaluating the Benefit of Screening Mammography in the Elderly." Department of Mathematics Colloquium, Pittsburg State University, April 19, 2005.
3. **"Quasi-likelihood Power and Sample Size Calculations for Models from Unknown Distributions."** **University of Minnesota School of Public Health, January 31, 2008.**

#### **Other Evidence of Scholarly Activities**

1. **Mahnken JD**, Chan W, Freeman DH, Freeman JL: "Screening Mammography in the Elderly: The Case for Biennial Over Annual Use." Biostatistics Journal Club, University of Kansas Medical Center, June 7, 2004.
2. **Mahnken JD**: "Understanding and Interpreting Statistical Interactions." Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, July 25, 2006.
3. **Mahnken JD**: "Statistical Considerations for Grants and Protocols: What Information Should be Conveyed?" Clinical and Translational Research Seminar, University of Kansas Medical Center, May 17, 2007.
4. Grady JJ, Pollock BH, **Mahnken JD**: "The Future of AGS." Invited Panel, Association of General Clinical Research Center Statisticians Annual Meeting, Salt Lake City, UT, July 28-29, 2007.
5. **Mahnken JD**: "What Is Sensitivity Analysis?" **Center for Biostatistics and Advanced Informatics Seminar Series, University of Kansas Medical Center, March 4, 2008.**

**ACADEMIC ACTIVITIES** (See attached guidelines for definitions of professional and academic activities.)

### **Brief Statement of Service Activities**

My faculty position has provided me with numerous opportunities for service, both to KUMC and to the greater scientific community. In addition to the institutional service activities on important committees, such as the Protocol Review and Monitoring Committee (KMCRI), the General Clinical Research Center Advisory Counsel, and the MPH and MS in Clinical Research degree admissions committees, I have provided significant in kind support through activities such as grant development and grant writing. This service has touched many of the departments across the different schools at KUMC. On the national level, I have been provided the opportunity to review grants for the NIH, both for the Cardiovascular and Integrative Sciences Study Section and for the National Institute of Dental and Craniofacial Research. I continue to be asked for future service on these committees. Serving the greater scientific community through these committees has also helped to improve my abilities in support of the myriad of ongoing collaborative research here at KUMC.

### **Professional Service**

2004	Ad Hoc Reviewer, <i>Journal of General Internal Medicine</i>
2005	Ad Hoc Reviewer, <i>Archives of Internal Medicine</i>
2005	Ad Hoc Reviewer, <i>Journal of the Royal Statistical Society: Series C – Applied Statistics</i>
2005	Ad Hoc Reviewer, <i>Ear and Hearing</i>
<b>2005-Present</b>	<b>Non-Voting Member/Biostatistical Reviewer, General Clinical Research Center, University of Kansas Medical Center</b>
2006	Ad Hoc Reviewer, <i>Journal of the Royal Statistical Society: Series C – Applied Statistics</i>
<b>2006-2008</b>	<b>Member, Protocol Review and Monitoring Committee, Kansas Masonic Cancer Research Institute, University of Kansas Medical Center</b>
2006	Clinical and Integrative Cardiovascular Science Study Section, National Institutes of Health (March and July)
2006	Session Chair, Joint Statistical Meetings
2006	Ad Hoc Reviewer, <i>Ear and Hearing</i>
2006	Ad Hoc Statistical Reviewer, <i>Circulation</i>
2006	Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health (November)
2006	Ad Hoc Reviewer, <i>Biometrical Journal</i>
2007	Clinical and Integrative Cardiovascular Science Study Section, National Institutes of Health (February, October)
2007	Ad Hoc Reviewer, <i>Journal of General Internal Medicine</i>
2007	Ad Hoc Statistical Reviewer, <i>Circulation</i>
2007	Data Analysis and Statistical Methodology (R03) Review Committee, National Institute of Dental and Craniofacial Research, National Institutes of Health (May)
2007	Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health (August, October)
<b>2007-2008</b>	<b>Co-Organizer, Regional Symposium: “Innovations in Design, Analysis, and Dissemination: Frontiers in Biostatistical Methods” held May 8-9, 2008 in Kansas City, Missouri</b>
<b>2008</b>	<b>Ad Hoc Statistical Reviewer, <i>Circulation</i></b>
<b>2008</b>	<b>Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health (February)</b>
<b>2008</b>	<b>Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health, Centers for Disparities in Oral Health (March)</b>
<b>2008</b>	<b>Special Emphasis Panel, National Institute of Dental and Craniofacial Research, National Institutes of Health (March, March [separate panels])</b>
<b>2008-2009</b>	<b>Vice-President, Kansas-Western Missouri Chapter of the American Statistical Association</b>
<b>2008</b>	<b>Co-Chair, Regional Symposium: “Innovations in Design, Analysis, and</b>

**Dissemination: Frontiers in Biostatistical Methods” held May 8-9, 2008 in Kansas City, Missouri**

**2008 Member, Data Safety and Monitoring Board, University of Kansas Cancer Center**

**Academic Service**

- 2004-2007 Member, Masters of Public Health program Admissions Committee, University of Kansas Medical Center
- 2004-Present **Chair, Masters of Science in Clinical Research program Admissions Committee, University of Kansas Medical Center**
- 2004-Present **Assistant Director, Masters of Science in Clinical Research program Executive Committee, University of Kansas Medical Center**
- 2005-2006 Member, Search Committee for Preventive Medicine and Public Health faculty position in biostatistics, University of Kansas Medical Center
- 2007-Present **Non-Voting Member, Graduate Council, University of Kansas Medical Center**
- 2007 Chair, Search Committee for Biostatistics faculty position, University of Kansas Medical Center
- 2007-2008 **Co-Chair, Biostatistics Graduate Degree Program Development Committee, University of Kansas Medical Center**
- 2008 **Member, Biostatistics Graduate Degree Program Development Committee, University of Kansas Medical Center**
- 2008 **Mentor to ???, Departmental Faculty Development Program**
- 2008 **Mentor to ???, Departmental Faculty Development Program**
- 2008 **Member, Search Committee for Program Director of the Comprehensive Research Information System (CRIS)**

**UNIVERSITY OF KANSAS SCHOOL OF MEDICINE  
FACULTY CURRICULUM VITAE**

**I. PERSONAL DATA**

Name: Hung-Wen (Henry) Yeh, PhD  
Current Academic Rank: Assistant Professor  
Department(s): Biostatistics

Office Address: University of Kansas Medical Center  
5028K Robinson, Mailstop 1026  
3901 Rainbow Blvd.  
Kansas City, Kansas 66160-7312

Phone: (913) 588-0531  
Fax: (913) 588-0252  
E-Mail: hyeh@kumc.edu

**PROFESSIONAL DEVELOPMENT**

Undergraduate and Graduate Education

<u>Years (Inclusive)</u>	<u>Degree</u>	<u>Institution</u>
1991-1995	BS (Chemical Engineering)	National Taiwan University, Taiwan
1996-2002	MS (Chemical Engineering)	Texas A&M University
2003-2007	PhD (Biostatistics)	University of Texas Health Science Center at Houston

Postgraduate Education:

<u>Years (Inclusive)</u>	<u>Area of Study</u>	<u>Institution</u>
N/A		

Academic and Professional Appointments and Activities. (List in chronological order. Please explain any discontinuity in professional experience)

<u>Month and Year</u>	<u>Position</u>	<u>Institution</u>
Feb. 2007 – Present	Assistant Professor	University of Kansas Medical Center

Professional Registration/Licensure:

<u>Year</u>	<u>Number</u>	<u>State</u>
N/A		

Professional Certification(s):

<u>Date</u>	<u>Board</u>
N/A	

Professional Societies and Affiliations:

<u>Year</u>	<u>Organization (including offices held)</u>
2005 – Present	Member, American Statistical Association

Honors and Awards: (honorary societies, research awards, teaching and other awards.)

<u>Year</u>	<u>Award</u>
2004	James Emerson Award for Outstanding Teaching Assistant
2004	Richard D. Remington Scholarship
2006	Nominee of Outstanding Teaching Assistant
2006	M. Stewart West Scholarship
2007	Elected member, Delta Omega Honorary Society in Public Health

**III. TEACHING ACTIVITIES** (Evaluations and other evidence of quality of teaching must be attached; this represents the teacher's portfolio and should accurately summarize ALL of your teaching activities)

Brief statement of areas of teaching interest

I have interests in teaching biostatistics courses at various levels, ranging from introductory to intermediate biostatistics and to advanced applied statistical courses such as Multivariate methods.

5. Instruction:

Didactic (e.g.: lectures and formal presentations)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
2007	PRVM 814	Fundamentals of Biostatistics I	Lecture	48	15	Graduate
2008	PRVM 814	Fundamentals of Biostatistics I	Lecture	48		Graduate

Nondidactic (e.g.: workshops, labs and discussion groups)

<u>Academic Year</u>	<u>Course</u>	<u>Title</u>	<u>Instruction</u>		<u>Student</u>	
			<u>Type</u>	<u>Hours</u>	<u>No</u>	<u>Type</u>
N/A						

Clinical

<u>Year</u>	<u>Hours</u>	<u>Student</u>		<u>Length of Service</u>
		<u>No</u>	<u>Type</u>	
N/A				

Master's Theses and PhD. Dissertations directed

<u>Year</u>	<u>Student Name</u>	<u>Thesis title</u>	<u>Degree (Completed /In process)</u>
2008	Robin L. Aupperle	An fMRI study examining the effects of acute D-cycloserine administration on brain activations and cognitive functioning in spider phobia	Completed
2008	Benjamin B. Cronk	Body Weight and Cognitive Decline in MCI	Completed

Supervision of Postdoctoral fellows

<u>Year</u>	<u>Fellow Name</u>	<u>Area of Study</u>
N/A		

Advising (Thesis or dissertation committees: student academic group/individual)

<u>Date</u>	<u>Student or group name</u>	<u>Type of Student/group</u>
N/A		

Other teaching activities

<u>Date</u>	<u>Title</u>	<u>Place</u>	<u>Teaching function</u>
N/A			

6. Development of Educational Materials

(course materials e.g. syllabi, educational software packages, Web sites, films, educational tapes and evaluation tools)

<u>Year</u>	<u>Title Description</u>	<u>Intended Audience</u>
2007	Course development for PRVM 887 Applied Multivariate Methods	

7. Educational Leadership

(responsibility for courses and other leadership activities including mentoring of junior faculty. Please list faculty members mentored – letters from mentorees may be provided.)

N/A

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### III. RESEARCH and SCHOLARLY ACTIVITIES:

Brief statement of areas of research and scholarly interest, including current projects:

My research interests focus on handling missing data and/or surrogate variables in longitudinal studies using the EM algorithm in Markov chain models. The methods have applications to modeling progression and/or reoccurrence of chronic diseases, especially when the diagnoses involve biomarkers or surrogate variables.

1. Grants and contracts

(Information must include whether the nominee is the principal investigator or a co-investigator, names of all investigators, title of grant, funding source, dollar amount in direct costs, and years during which grant applies. Co-investigators must specify role). Provide four copies of abstracts and award notice or renewal for all grants or contracts awarded in last five years.

Grants and contracts awarded:  
(List in chronological order)

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
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<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Fabian	Petroff, Kimler, Yeh	QM-MSP, Ki-67, and Cytomorphology of RPFNA Specimens from High Risk Women	NIH/NCI via subcontract from University of Alabama Birmingham	\$330,100	09/26/2005 - 08/13/2007	Completed
Engleman	Ellerbeck, Greiner, James, Daley, Yeh	Use of Novel tailored Reminders in Rural Primary Care	NIH	\$149,750	05/04/2006-03/31/2008	Completed
Fabian	Kimler, Yeh, Anderson	Flaxseed Lignan for Breast Cancer Chemoprevention	NIH	\$104,974	05/12/2005 - 04/30/2009	Ongoing
Choi	Daley, Richter, Yeh	Targeted Smoking Cessation Program for Native Americans	American Cancer Society	\$280,900	07/01/2006 - 06/30/2009	Ongoing
Burns		Longitudinal Study of Cardiorespiratory Fitness in Alzheimer's Disease	NIH	\$110,250	07/15/2007 - 04/30/2009	Ongoing
Fabian		Breast Cancer Risk Biomarkers and Improved Energy Balance	NIH	\$100,000	04/01/2007 - 03/31/2009	Ongoing
Fabian		Breast Cancer Prevention by Letrozole in High Risk Women	NIH	\$335,918	09/20/2007 - 07/31/2011	Ongoing
Greiner	Buckles, Ellerbeck, Engleman, James, Yeh	Tailored Touchscreen Colorectal Cancer Prevention in Urban Core Clinics	NIH	\$354,951	05/11/2007 - 01/31/2011	Ongoing
Engleman	Ellerbeck, Gibson, Greiner, Yeh	Implementation Intentions to Promote Colon Cancer Screening in Rural Primary Care	NIH	\$301,215	09/01/2007 - 07/31/2011	Ongoing
Buch		Morphine and the Neuropathogenesis of SIV in Macaques	NIH	\$361,509	09/30/2007 - 08/31/2012	Ongoing
Choi		Quantitative in Vivo Biomarkers of Oxidative Stress in Diabetes	NIH	\$150,000	04/01/2008 - 03/31/2010	Ongoing
Savage	Befort, Brooks, Mayo, Sullivan, Yeh	Brain function predictors and outcome of weight loss maintenance	NIH	\$1,167,936	2008-2011	Ongoing

Grants and contracts submitted:

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Mayo		Data Coordinating Center for the Effect of Exercise on Weight Loss Maintenance and CVD Risk Factors Trial	NIH	\$399,930	12/01/2007 - 11/30/2012	Not funded

<u>Principal Investigator</u>	<u>Investigators</u>	<u>Title of Grant</u>	<u>Funding Source</u>	<u>Direct Costs</u>	<u>Years</u>	<u>Status</u>
Burns	Gallagher, Yeh	Insulin and Insulin-Like Growth Factors in Alzheimer Disease	NIH	\$125,000	04/01/2008 - 03/31/2010	Pending
Parmely		Pathogenesis of Tissue Injury in Tularemia	NIH	\$250,000	07/01/2008 - 06/30/2013	Pending
Barohn		Heartland Institute for Clinical and Translational Research	NIH	\$6,616,362	07/01/2008 - 06/30/2013	Pending
Choi		Culturally-tailored Smoking Cessation for American Indians: A Multi-site Trial	NIH	\$570,130	12/01/2008 - 11/30/2013	Not funded
Mayo		Data Coordinating Center for the Effect of Exercise on Weight Loss Maintenance	NIH	\$387,204	12/01/2008 - 11/30/2013	Pending
Richter		The Impact of a Campus-Wide Hospital Smoking Ban on Patient Discharge Against Medical Advice	Robert Wood Johnson Foundation	\$90,061	09/01/2008 - 08/31/2009	Pending
Hellings		Genes Impacting Serotonin, Hyperphagia and fMRI Activity in Prader-Willi Syndrome	NIH	\$186,000	12/01/2008 - 11/30/2010	Not funded
Savage		Brain Mechanisms Underlying Impulsivity in Binge Eating Disorder	Klarman Family Foundation	\$178,435	06/01/2008 - 05/31/2010	Not funded
Berman		Inflammation and traumatic brain injury in the elderly	NIH	\$250,000	12/01/2008 - 11/30/2013	Pending
Choi		Neuroimaging biomarker of cerebral oxidative stress	NIH	\$150,000	04/01/2009 - 03/31/2011	Pending
Parmely		Novel Inhibitors of Programmed Cell Death for Treating Tularemia	NIH	\$484,636	06/01/2009 - 05/31/2013	Pending
Gustafson		The effects of docosahexaenoic acid (DHA) on fetal cardiac outcomes	NIH	\$150,000	04/01/2009 - 03/31/2011	Pending

## 2. Scholarly Publications

Full length, peer-reviewed articles in scientific journals: (Provide names of all authors, year, title, journal, volume, and inclusive pages. List in chronological order.)

Articles published: **(Provide 4 copies of each peer-reviewed article published within the last five years. Other articles may be provided at the applicant's discretion.)**

N/A

1. Hong KJ, Wickstrum JR, Yeh H, Parmely MJ. TLR2 Controls the Interferon- $\gamma$  Response to Francisella

tularensis by Mouse Liver Lymphocytes. *Infection and Immunity*. 75 (11), 2007.

2. Bokhari, S.M., K.-J. Kim, D.M. Pinson, J. Slusser, **H. Yeh**, and M.J. Parmely. NK cells and gamma interferon coordinate the formation and function of hepatic granulomas in mice infected with *Francisella tularensis* LVS. *Infect. and Immun.* 76 (4), 2008

Manuscripts in press: (Provide names of all authors, title, journal, and **4 photocopies of manuscript plus evidence of acceptance by journal**)

1. Davis C, Kancherla V, Reddy A, **Yeh H**, Noroski LM, Rosenblatt H, Shearer WT, Chinen J. Development of Specific T cell responses to Candida and Tetanus Antigens in Partial DiGeorge Syndrome. *The Journal of Allergy and Clinical*. Accepted, 2008.
2. Yeh C, Chan W, **Yeh H**. "Some equivalent forms of the arithmetic-geometric mean inequality in probability: A survey". *Journal of Inequalities and Applications*. Accepted, 2008.

Manuscripts submitted but not yet accepted: (Provide names of all authors, title, journal, and **4 photocopies plus evidence of receipt of manuscript by journal.**)

Invited or non-peer-reviewed articles or reviews: **(Provide names of all authors, year, title, journal, volume, and pages. If in press, provide documentation and 4 photocopies if published within the last five years.)**

N/A

Books and book chapters: **(Provide names of all authors, year, book title, chapter title, edition, publisher, and pages. If in press, provide documentation and 4 photocopies if published the last five years.)**

N/A

Published abstracts: (Provide names of all authors, year, title, where published, volume, and pages.)

N/A

Other scholarly publications

N/A

### 3. Presentations and posters

Oral paper presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review, and location and date of presentation.)

Scientific papers presented at national and international meetings:

Faseru B, **Yeh H**, Ellerbeck E, Befort C, Richter K. "Referral and Treatment for Tobacco Dependence among Hospitalized Smokers". 2008 AMERSA National Conference, Washington DC, November 6-8, 2008. Yearly Best Abstract Award reviewed by the 2008 AMERSA Executive Board, Abstract Review and Program Committees. (Presented by ). (accepted)

Wambach K, Aaronson L, Breedlove G, Williams Domian E, Rojjanasrirat W, and **Yeh H**: "A Test of a Theory Based Intervention to Improve Breastfeeding Outcomes in Adolescent Mothers". 2008 National State of the Science Congress in Nursing Research, Washington D.C., October 2-4, 2008. Reviewed by The Council for the Advancement of Nursing Science Abstract Review Committee. (Podium presentation given by Wambach K.) (accepted)

Rojjanasrirat W, Wambach K, and **Yeh H**: "Effects of a Peer Counselor and Lactation Consultant Team on

Breastfeeding Initiation and Duration.” International Lactation Consultant Association (ILCA), Las Vegas, Nevada, 23-27 July, 2008. In a blind review process, the committee chose 6 oral presentations from all the abstracts submitted. Presented by Wambach K.

Rojjanasrirat W, Wambach K, and **Yeh H**: “Impact of Lactation Consultant and Peer Counselor Team Interventions on Exclusive Breastfeeding Rates among Adolescent Mothers.” Sigma Theta Tau International Honor Society of Nursing (STTI). The 19th International Nursing Research Congress Focusing on Evidence-Based Practice, Singapore, 7-11 July 2008. (Presented by Rojjanasrirat W)

Rojjanasrirat W, Wambach K, and **Yeh H**: “Impact of Lactation Consultant and Peer Counselor Team Interventions on Exclusive Breastfeeding Rates among Adolescent Mothers.” The 2008 International Conference: Healthy People for the Healthy World at Bangkok, Thailand, June 25-27, 2008. (Presented by Rojjanasrirat W)

Engelman K, Greiner A, James A, Daley C, **Yeh H**, Long T, and Ellerbeck E: “Electronic Colorectal Cancer Screening Patient Prompts in Rural Primary Care”. the Society of Behavioral Medicine's 29th Annual Meeting and Scientific Sessions, San Diego, California, March 26-29, 2008. (Presented by Engelman K.)

Chan W, **Yeh H**, Symanski E: “Recovering the Estimated Slope of an Unobservable Predictor in a Simple Regression” Joint Statistical Meetings, Salt Lake City, UT, July 29 - August 2, 2007. (Presented by **Yeh H**)

Chan W, **Yeh H**, Symanski E: “Estimation of transition probabilities in a discrete-time Markov chain with missing observations” Joint Statistical Meetings, Seattle, WA, August 6-10, 2006. (Presented by **Yeh H**)

Scientific papers presented at local and regional meetings:

Wambach K, Rojjanasrirat W, Aaronson L, Williams Domian E, Breedlove G, and **Yeh H**: “Randomized Clinical Trial to Promote and Support Breastfeeding in Adolescent Mothers”. Midwest Nursing Research Society (MNRS) 2008 Annual Conference, Indianapolis, Indiana, March 28-31, 2008. (Presented by Wambach K.)

Poster presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review and location and date of presentation.)

Poster presentations at national and international meetings:

N/A

Poster presentations at local and regional meetings:

N/A

Invited seminars at other universities: (Provide title, sponsoring organization or institution, and date of presentation.)

“Navigating Nondetectable Data: Meet Halfway?” University of Texas Health Science Center at Houston, October 15, 2007

#### 8. Other evidence of scholarship

(includes clinical guidelines, policy documents, contributions to significant position statements by professional organizations, and development of national examinations)

Visiting Fellowship in Functional MRI at MGH at the Athinoula A. Martinos Center for Biomedical Imaging, March 10-14, 2008 (attendee)

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**IV. SERVICE ACTIVITIES:**

See guidelines and instructions to applicants for definitions and suggested documentation of professional and academic service.

Professional Service:

N/A

Academic Service:

Institutional Animal Care and Use Committee (IACUC) at KUMC (August 2007 to present)

Faculty Council (Fall 2007 to present)

Faculty Search Committee for Department of Biostatistics (September 2007 to present)