

Department of Biostatistics
School of Graduate Studies
Medical College of Georgia



Annual Report

July 1, 2007 – June 30, 2008

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Introduction

This document summarizes the activities of the Department of Biostatistics in the School of Graduate Studies of the Medical College of Georgia (MCG) for the period of July 2007 – June 2008. As part of the strategic initiative and research mission of MCG, the Biostatistics Department was formed in 2003 as a full-fledged academic department from its previous status as the Office of Biostatistics, with strong emphasis in teaching, mentoring, and collaborative and methodological research. The Department is housed in the School of Graduate Studies. This unique setup is in recognition by MCG of the broad and vital role of biostatistics in multidisciplinary and translational research, crossing the boundaries of academic schools. We maintain strong collaborative relationships with departments and research centers in the Schools of Allied Health, Dentistry, Medicine and Nursing. As of June 30, the Department has seven primary and five joint faculty members, and three staff statisticians. Three new faculty members have already been hired, two of whom are expected to start July 1 and the other September 1, 2008. Funds have already been allocated and efforts are already underway to expand the department in the area of Epidemiology by hiring a leader of epidemiology followed by several faculty members. As a prelude to this expansion effort, the department will be renamed, Department of Biostatistics and Epidemiology, effective July 1, 2008.

Mission

The overarching mission of the Biostatistics Department at MCG is to advance knowledge in the field of biostatistics, and to provide leadership and scholarship in research, teaching and mentoring for the advancement of biomedical science and improvement of human health. The mission is achieved by:

- Implementing high caliber graduate programs in biostatistics;
- Conducting original research to develop and evaluate biostatistical methodologies;
- Collaborating with investigators on biomedical research that requires biostatistics support.

The long-term goal for the Department is to become a nationally and internationally recognized department with strengths and competency in graduate training, collaborative research and methodological research. Moving toward this goal, we are recruiting faculty members with strong records of methodological and collaborative research in biostatistics and epidemiology. The masters program in Biostatistics which started in the Fall of 2006 continues to grow, with the first class having graduated in May 2008. Qualified full-time students are admitted with graduate assistantships. A Masters and a Certificate program in Clinical and Translational Research have already started in May 2008 with 9 junior faculty members across from various clinical departments at MCG in the first batch. A doctoral program in Biostatistics is slated to start in the Fall of 2008. The Department also offers several courses, primarily catering to medical students, pre- and post-doctoral trainees and junior faculty investigators in Biomedical, Clinical, Nursing and Public Health research.

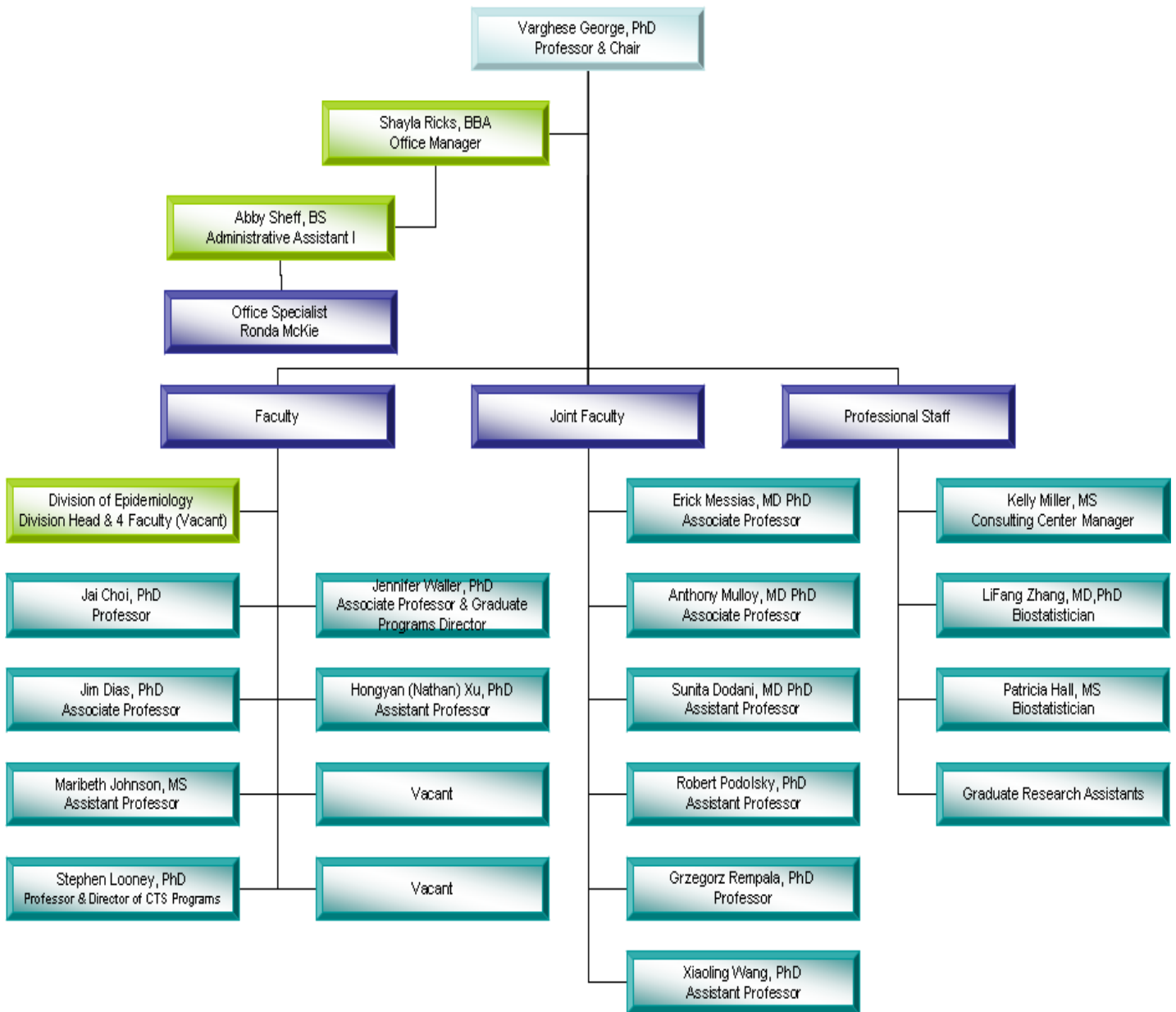
I should take this opportunity to express our utmost appreciation and gratitude for Drs. Gretchen Caughman (Dean, School of Graduate Studies), Barry Goldstein (the Provost) and Dan Rahn (the President) for their commitments, guidance and support for building a strong department. In the following pages we provide the details of our professional activities over the past year with the hope that it will provide a good idea of the breadth of our Department and our contributions.

Varghese George, Ph.D.



Professor & Chair

Organizational Chart as of June 30, 2008



Personnel Changes

- Dr. Jennifer Waller became Graduate Program Director in July 2007
- Dr. Anthony Mulloy became a Joint Faculty Member in October 2007
- LiFang Zhang joined the Department as a Biostatistician in November 2007
- Dr. Stephen Looney became the Co-Director of the CCTS/ MCTS Program in July 2007
- Dr. Anthony Mulloy became the Co-Director of the CCTS/ MCTS Program in October 2007
- Dr. Jai Choi joined the Department as a Professor in January 2008

- *Ronda Mckie joined the Department as an Office Specialist in March 2008*
- *Dr. Siuli Mukhopadhyay left the Department in December for a faculty position in the Indian Institute of Technology in Mumbai*
- *Ms. Mimi Lou left the department in February 2008 for another position in California*

Research Achievements and Benchmarks

Research

The Department is actively involved in methodological and collaborative research, and has a strong applied research thrust. The Biostatistics faculty members have extensive experience in providing statistical support for NIH, NSF and private foundation grants. Collaborative research is conducted by serving as co-investigators in grant proposals and funded projects. The collaboration has resulted in substantial extra-mural funding support for the Department and many peer-reviewed publications. Methodological research by the Department is in the area of statistical genetics and genetic epidemiology, statistical methods in bioinformatics, and clinical trials. These research projects have generated several peer-reviewed publications and the application of these methods will lead to further collaborative and methodological research. Drs. Balgobin Nandram and Greg Rempala are expected to join the department as of July 1, 2008 as full Professors, and Dr. Ling Lan is expected to join as Assistant Professor in September 2008. With the recruitment of these faculty members, we expect to expand the methodological and collaborative research, and to increase funding support substantially.

As of the end of FY08, the combined non-RI funding level for the department was 4.63 FTE for 9 full-time professional faculty/staff, corresponding to about 40% the total personnel budget of the department.

Biostatistics Consulting Center

The Department has an active consulting service, provided through the Biostatistics Consulting Center (BCC). Ms. Kelly Miller serves as the Manager of BCC. We offer comprehensive statistical consulting for investigators within the Medical College, and from other academic institutions, government agencies and private industries. Specific services offered include assistance in grant proposal preparation, design of clinical trials, experimental design, survey design, and determination of sample size requirements, randomization, data management, statistical modeling, data analysis and interpretation. The Medical College of Georgia investigators receive a 50% discount. The biostatistics faculty members have extensive experience in providing statistical support for NIH, NSF and private foundation grants.

Articles published or submitted for publication by Biostatistics Primary Faculty

Adair SM, Schafer TE, **Waller JL**, Rockman RA. (2007) Age and gender differences in the use of behavior management techniques by pediatric dentists. *Pediatr Dent* 29(5):403-408.

Andrews JO, Felton G, Wewers ME, **Waller, JL**, Tingen M. (2007) The effect of multi-component smoking cessation intervention with African American women in public housing. *Research in Nursing and Health* 30:45-60.

Arrais CAG, Rueggeberg FA, **Waller JL**, de Goes MF, Giannini M. (2008) Effect of curing mode on the polymerization characteristics of dual-cured resin cement systems. *Journal of Dentistry*, doi:10.1016/j.jdent.2008.02.014

Balgobin Nandram and Jai Won Choi. A Bayesian Prediction for Undecided Voters, *Survey Methodology*. (2008) *Survey Methodology*, June 2008. Vol. 34, No. 1 pp 37-4

Barbeau P, **Johnson MH**, Howe CA, Allison J, Davis CL, Gutin B, Lemmon CR (2007): Ten months of exercise improves general and visceral adiposity, bone, and fitness in black girls. *Obesity(Silver Spring)* 15:2077-85.

Bergeron MF, Laird MD, Marinik EL, Brenner JS, Lou M, **Waller JL**. Physiological strain and perceptual responses to repeated-bout exercise in the heat in young athletes. *Journal of Applied Physiology* (under review).

Chisholm MA, Melroy J, **Johnson M**, Mulloy LL, Spivey CA (2007): Is age associated with the number or types of medications prescribed to renal transplant recipients? *Am Geriatr Soc*, 55:389-94

Condon JV, **Miller KM**, Le AH, Quasem M, **Looney SW**. Acute Myocardial Infarction and Race, Sex, and Insurance Types: Unequal Processes of Care. *The Health Care Manager*. Volume 27, Number 3, 1-10. (Submitted)

Davis CL, Tomporowski PD, Boyle CA, **Waller JL**, Miller PH, Naglieri HA, Gregoski M. (Dec 2007) Effects of aerobic exercise on overweight children's cognitive functioning: a randomized controlled trial. *Res Q Exerc Sport*.78 (5):510-519

Dodani S, Kaur R, Dong Y, Zhu H, Reed GL, **George V**: Novel apo A-I polymorphisms associated with low HDL in South Asian immigrants. *International Journal of Cardiology*, In press.

Dodani S, Kaur R, Marion L, Sharma G, Reed GL, **George V**: The association of carotid intima media thickness with dysfunctional HDL in South Asians. *Archives of Medical Science*, In press.

Dodani S, Kaur R, Reddy S, Reed GL, Navab M, **George V** (2008): Can dysfunctional HDL explain high coronary artery disease risk in South Asians? *International Journal of Cardiology* 129: 125-132.

Elgebaly MM, Portik-Dobos V, Sachidanandam K, Rychly D, Malcom D, **Johnson MH**, Ergul A (2007): Differential effects of ET(A) and ET(B) receptor antagonism on oxidative stress in type 2. *Vascul Pharmacol*, Jun 6.

- Ferris DG, **Waller JL**, Miller J, Patel P, Price GA, Jackson L, Wilson C (accepted June 2008). Correlates of HPV vaccine acceptance by men. *Journal of the Amer Board of Family Medicine*.
- Ferris DG, **Waller JL**, Owen A, Smith J. (July 2007) Midadult women's attitudes about receiving the prophylactic human papillomavirus vaccine. *Journal of Lower Genital Tract Disease*. 11(3):166-72.
- Ferris DG, **Waller JL**, Owen A, Smith J. (Jan-Feb 2008) HPV Vaccine Acceptance Among Mid-Adult Women. *J Am Board Fam Med* 21 (1):31-37
- Fick DM, Hodo DM, **Waller JL**, Martindale RG. Medication use following bariatric surgery in a managed care cohort. *Surgery for Obesity and Related Diseases* (accepted Jan 1008).
- Fick D, Kolanowski A, **Waller J**. (September 2007) High prevalence of central nervous system medications in community-dwelling older adults with dementia over a three-year period. *Aging & Mental Health*. 11(5):588-95.
- Fick DM, Mion LC, Beers MH, **Waller JL**. (Feb 2008) Health outcomes associated with potentially inappropriate medication use in older adults. *Res Nurs Health*. 31(1):42-51.
- Freeman A, Sattin R, **Dias J**, **Miller K**, Wilde J. HIV Screening in the Emergency Department Using Rapid Test Technology. *International Association of Physicians in AIDS Care (IAPAC)*. New Orleans, LA, November 2008. (Submitted)
- Gillespie K, Kodani I, Dickinson DP, Ogbureke KUE, Camba AM, Wu M, **Looney S**, Qin H, Bisch F, Schuster GS, Hsu SD: Effects of EGCG oral consumption in a murine model for human autoimmune diseases. *Journal of Pharmacology and Experimental Therapeutics* (submitted).
- Gutin B, **Johnson MH**, Humphries MC, Hatfield-Laube JL, Kapuku GK, Allison J, Gower BA, Daniels SR, Barbeau P (2007): Relations of visceral adiposity to cardiovascular disease risk factors in black and white teens. *Obesity (Silver Spring)*, 15:1029-35.
- Imai H, Fick DM, Waller JL, Maclean JR.* (Dec 2007) Physician characteristics associated with prescription of inappropriate medications using Beers criteria. *Geriatrics and Gerontology International* 7(4): 380-307.
- Keeney CE, Scharfenberger JA, O'Brien JG, **Looney S**, Pfeifer MP, Hermann C P (2008): Initiating and sustaining a standardized pain management program in long-term care facilities. *Journal of the American Medical Directors Association*. 9(5): 347-353.
- Kozak W, Kozak A, **Johnson MH**, Elewa HF, Fagan SC. 2008. Vascular protection with candesartan after experimental acute stroke in hypertensive rats: A dose-response study. *J Pharmacol Exp Therap*, DOI:10.1124/jpet.108.139618, June 17, 2008.
- Looney SW**, (2008): A Review of: *An Introduction to Categorical Data Analysis*, 2nd ed., by A. Agresti. *Journal of Biopharmaceutical Statistics*. 18(3): 585-7.
- Lyon M, McDougal P, Shiver S, Menckhoff C, **Mukhopadhyay S**, **Miller K**. The Effect of Compression on Ultrasound Archival Video. *Annals of Emergency Medicine*. September 2007. Vol 50, Issue 3, Page S109.
- Meeks S, Young CM, **Looney SW** (2007): Activity participation and affect among nursing home residents: Support for a behavioural model of depression. *Aging and Mental Health*. 11: 751-760.

Mukhopadhyay S, **Looney SW**: A graphical method to compare the efficiencies of cluster randomized designs. *Statistics in Medicine* (submitted).

Sachidanandam K, Portik-Dobos V, Harris AK, Hutchinson JR, Muller E, **Johnson MH**, Ergul A (2007): Evidence for Vasculoprotective Effects of ETB Receptors in Resistance Artery Remodeling in Diabetes. *Diabetes*, Aug 1.

Sattin RW, Freeman A, **Dias J**, **Miller K**, Wilde J, Sowjanya M, Forsyth M. Characteristics and Viral Loads of Patients Detected Through Rapid HIV Testing in the Emergency Department. *International Association of Physicians in AIDS Care (IAPAC)*. New Orleans, LA, November 2008. (Submitted)

Schoenlein P, Hou M, Samaddar JS, Gaddy VT, Thangaraju M, Lewis J, **Johnson M**, Ganapathy V, Kallab A, Barrett JT (2007): Downregulation of retinoblastoma protein is involved in the enhanced cytotoxicity of 4-hydroxytamoxifen plus mifepristone combination therapy versus antiestrogen monotherapy of human breast cancer. *Int J Oncol*, 31:643-55.

Shekhawat PS, Srinivas SR, Matern D, Bennett MJ, Boriack R, **George V**, **Xu H**, Prasad P, Roon P, Ganapathy V (2007): Spontaneous development of intestinal and colonic atrophy and inflammation in a carnitine- deficient *jvs* (*OCTN2^{-/-}*) mice. *Molecular Genetics and Metabolism* 92: 315-24.

Switzer JA, Hall C, Gross H, **Waller J**, Nichols FT, Wang S, Adams RJ, Hess DC. (Jan 2008) A Web-based Telestroke System Facilitates Rapid Treatment of Acute Ischemic Stroke Patients in Rural Emergency Departments. *J Emerg Med.*

Tan Y-D, Fonage M, **George V**, **Xu H** (2007): Parent-child pair design for detecting gene-environment interactions in complex diseases. *Human Genetics* 121:745-57.

Tan YD, Fornage M, **Xu H**. (2008): Ranking analysis of F-statistics for microarray data. *BMC Bioinformatics*. 9:142.

Presentations by Biostatistics Primary Faculty

Abreu-Serrano A, Loza MA, Elias-Boneta A, **Looney SW**, Rueggeberg FA. Effect of alloy surface treatment on adhesive cement strength. *37th Annual Meeting of the American Association for Dental Research*. Dallas, TX, April 2008.

Barbeau P, Howe CA, **Johnson MH**, Lou M, Zhu H, Pollock JS, Dong Y. Interaction of cardiovascular fitness with endothelin receptor a gene on plasma endothelin-1 in black girls. *Med Sci Sports Exerc*. 39 (5 Suppl):S14, 2007

Choi JW, Nandram B. A Bayesian prediction for undecided voters. In “*Frontiers of Probability and Statistical Sciences*”, the *International Indian Statistical Association Conference*. Storrs, Connecticut, May 2008.

Davis CL, **Waller JL**, Allison J, Gower BA. Reduced Visceral Fat Accounts for Effect of Aerobic Training on Insulin Resistance in Overweight Children. *American Diabetes Association Annual Meeting* 2008.

Davis, CL, **Waller, JL**, Boyle C, Gutin B. Dose-response Effect of Regular Aerobic Exercise on Adiposity and Bone Density in Overweight Children. *Obesity Society’s Annual Meeting* 2007. Poster, October 22, 2007.

Davis, CL, **Waller JL**, Gower B. Dose-response Effect of Aerobic Exercise Training on Insulin Resistance in Overweight Children. Obesity Society's Annual Meeting 2007. Presentation, October 22, 2007.

Hagan JL, **Looney SW**. The job outlook for biostatistics graduates. *2007 Joint Statistical Meetings*, Salt Lake City, UT, August, 2007.

Howe CA, **Johnson MH**, Bundy V, Gutin B, Bassali R, Barbeau P. Interaction of cardiovascular fitness with endothelin receptor a gene on plasma endothelin-1 in black girls. *Med Sci Sports Exerc.* 39 (5 Suppl):S58., 2007.

Humphries MC, **Johnson MH**, Vernon MC, Gutin B, Grimstvedt M, Yin Z, Barbeau P. Micro- and Macro-Level Physiological, Psychosocial and Ecological Correlates of Adiposity in Children. *Med Sci Sports Exerc.* 39 (5 Suppl):S11, 2007

Johnson, MH. Analysis of Longitudinal Data: Comparison between PROC GLM and PROC MIXED, *SAS Educational Forum 2007 Proceedings, Austin, TX*, October, 2007.

Johnson, MH. Analysis of Longitudinal Data: Comparison between PROC GLM and PROC MIXED, *Jackson Area SAS Users Group meeting, Starkville, MS*, February, 2008.

Kozak W, Kozak A, **Johnson MH**, Elewa HF, Fagan SC. Mild hyperglycemia promotes resistance artery remodeling and increased matrix metalloproteinase activity in Type 2 diabetes. *European Stroke Conference. Nice, France*, May 2008.

Looney S, Meeks S, Teri L, Van Haitsma K. Increasing pleasant events in the nursing home: collaborative behavioral treatment for depression. *2007 Charleston meeting of the South Carolina Chapter of the American Statistical Association*, Charleston, SC, November 6, 2007.

Looney SW, Waller JL. Experiences in a masters-level course in biostatistical consulting. *2008 Spring Meeting of the Eastern North American Region of the Biometric Society*, Arlington, VA, March, 2008
Pancio AK, Frazier KB, Rueggeberg FA, Oxford C,

Looney SW. Penetration and adhesion comparison of conventional and self-etching sealants. *37th Annual Meeting of the American Association for Dental Research*, Dallas, TX, April 2008.

Waller JL. SAS Global Forum 2008. San Antonio, TX, March 19, 2008. Presented in the Statistics and Data Analysis Section. Many to One Using a SAS® DATA Step and PROC MEANS.

Waller JL. The Virginia SAS Users Group Fall Meeting. Richmond, VA, September 19, 2007. Many to One Using a SAS® DATA Step and PROC MEANS.

Waller JL. The South Carolina SAS Users Group Winter Meeting. Columbia, SC, January 18, 2008. Many to One Using a SAS® DATA Step and PROC MEANS.

Xu H, George V. A systematic assessment of population structure and its effects on genome-wide association studies. In "*Frontiers of Probability and Statistical Sciences*", the *International Indian Statistical Association Conference*. Storrs, Connecticut, May 2008.

Professional Meetings attended by Biostatistics Primary Faculty

Choi: International Indian Statistical Association Conference, Storrs, CT, May 2008

George: International Indian Statistical Association Conference, Storrs, CT, May 2008

Johnson: SouthEast SAS® Users Group, Hilton Head Island, SC, November 2007

SAS Global Forum, San Antonio, TX, March 2008

Looney: Joint Statistical Meetings, Salt Lake City, UT, July 29-August 2, 2007.

2007 Charleston meeting of the South Carolina Chapter of the American Statistical Association, Charleston, SC, November 6, 2007.

Spring 2008 meeting of Eastern North American Region of the International Biometric Society, Arlington, VA, March 11-14, 2008.

Waller: SouthEast SAS® Users Group, Hilton Head Island, SC, November 2007

SAS Global Forum, San Antonio, TX, March 2008

Xu: Annual meeting of American Society of Human Genetics, San Diego, CA, October 2007

International Biometric Society Eastern North American Region spring meeting, Arlington, VA March 2008

International Indian Statistical Association Conference, Storrs, CT, May 2008

Funded Grants with Biostatistics Primary Faculty as PI/Co-I

<i>Biostat Faculty</i>	<i>PI/ Department</i>	<i>Title</i>	<i>Agency</i>	<i>Total Direct Cost</i>	<i>Funding Period</i>
Dias	Pat Sodomka PFCC	Using an Electronic Personal Health Record to Empower Patients with Hypertension	AHRQ	\$1,181,369	2007-2009
Dias Miller	Richard Sattin Emergency Department	Rapid HIV Testing in the Emergency Department	CDC & State of Georgia Contract	\$630,000	2007-2010
George	Clinton Webb Physiology	Cytokines and Angiotensin II induced Hypertension	NHLBI	\$1,503,890 *Current year total	2004-2009
George Johnson Xu	V George Biostatistics	Biostatistics Core: Program Project on Stress-related Mechanisms of Hypertension Risk in Youth (PI: G Harshfield)	NHLBI	\$1,436,136 *Current year total	2002-2013
George Looney	F Treiber VP For Research	MCG's Clinical and Translational Research Transformation	NIH	\$236,275	2006-2007
George Lou Zhang	B Kirkpatrick Psychiatry	Diabetes in Neuropsychiatric Disorders	NIH	\$1,095,521	2005-2010
George Xu	Nathan Xu	Effects of Population Structure on Genetic Association Studies	MCG	\$375,000	2006-2009
George Xu	Nathan Xu	Association study of stroke risk in an admixed population of African Americans	NIH	\$200,000	2007-2009
Johnson	Adviye Ergul Physiology and Endocrinology	Vascular Protection and Endothelin B Receptors in Diabetes	NIH	\$900,000	2005-2009
Johnson	Vernon Barnes GPI/Pediatrics	Impact of LifeSkills Training on Blood Pressure in Youth	NIH	\$200,000	2007-2009
Johnson	Puttur Prasad OB GYN	Serotonin in Utero-Placental Unit & Genesis of Postpartum Depression	MCG/IRP	\$25,000	2007-2008
Johnson	Puttur Prasad OB GYN	Serotonin in Utero-Placental Unit & Genesis of Postpartum Depression	HRSA	\$506,303	2008-2011
Johnson	David Munn Pediatrics	Role ofIDO in Malignancy	NIH	\$1,125,000	2007-2012

<i>Biostat Faculty</i>	<i>PI/ Department</i>	<i>Title</i>	<i>Agency</i>	<i>Total Direct Cost</i>	<i>Funding Period</i>
Looney	Suzanne Meeks Univ of Louisville	A Behavioral Intervention for Depression in Nursing Homes	NIMH	\$375,000	2006-2011
Looney	C Drisko Dentistry	Nobel Biocare Center of Excellence	Nobel Biocare AB	\$6,208,115	2006-2011
Looney	D Young-Hyman GPI	Pilot Study for Treatment and Weight Concerns in Type I Diabetes (TaWC)	ADA	\$521,721	2008-2011
Waller	AV Terry Clinical Pharmacy (UGA)	Antipsychotics: Temporal Effects on Cognitive Function	NIH	\$1,111,980	2003 -2007
Waller	DH Pashley Dentistry	Determinants of the Durability of Resin-Dentin Bonds	NIH	\$1,429,200	2003- 2007
Waller	DH Pashley Dentistry	Reasons for Poor Durability of Resin-Dentin Bonds	NIH	\$1,850,549	2004-2009
Waller *	C Davis GPI	Exercise Dose and Insulin Sensitivity in Obese Children.	NIH	\$428,242	2003 – 2007
Waller *	C Davis GPI	Exercise and Overweight Children’s Cognition and Achievement	NIH	\$188,000	2005-2007
Waller	DM Fick Penn State Univ	Delirium in Persons with Dementia	NIH	\$100,000	2006-2008
Waller	J Switzer Neurology	Alterations in matrix metalloproteinases in acute stroke predict poor outcome in diabetics	MCG STP	\$125,000	2006-2007
Waller	M Mozaffari Oral Biology	Is chromium picolinate renoprotective in diabetes?	NIGH	\$275,000	2007 - 2009
Waller	D Hess Neurology	Minocycline to Improve Neurologic Outcome	NIH	\$1,175,280	2007 – 2010
Waller	M Tingen GPI	The Impact of a Tobacco Control Intervention in African-American Families	NIH	\$1,737,687	2007 – 2010
Waller	C Davis GPI	Exercise and Overweight Children’s Cognition	NIH	\$2,435,845	2008 -2011

Grants under Review with Biostatistics Primary Faculty as PI/Co-I
 (* Funded starting in FY08)

<i>Biostat Faculty</i>	<i>PI/Department</i>	<i>Title</i>	<i>Total Direct Costs</i>	<i>Agency</i>
Dias	Sunita Dodani SON	Fit Body and Soul: A Lifestyle Intervention for Diabetes Prevention Conducted Through African-American Churches	\$750,000	NIDDK
Dias	Vincent Robinson Cardiology	The Diagnostic Utility of a New "Provoked" D-dimer Test in Patients with Suspected Pulmonary Embolism	\$3,040,608	NHLBI
Dias	Elena Khasanshina Center for Teleheath	Internet-Based Telepsychiatry for Students at a Rural Appalachian University: A Process Evaluation * to be resubmitted June 2008	\$700,000	NIMH
Dias	Elena Khasanshina Center for Teleheath	Academic Outcomes Measurement for Internet-Based Telepsychiatry Program in Rural University Student Population	\$750,000	NIMH
Choi	Elizabeth Nesmith School of Nursing	Inflammation and Sub-clinical Renal Damage in cocaine Dependent African American Submitted to NIDA	\$100,000	NIH
Choi	Tom Hu	Non-invasive Monitoring of Detailed Spatial and Temporal Calcium Homeostasis Modulations upon Myocardial Injury	\$1,250,000	NIH

<i>Biostat Faculty</i>	<i>PI/Department</i>	<i>Title</i>	<i>Total Direct Costs</i>	<i>Agency</i>
Choi	Gregory Liou Department of Ophthalmology	Effectiveness of CBD or KF24345 For the Treatment of Retinal Neurons in Diabetes	\$450,000	JDRF
George *	Kapil Bhalla	Shock protein 90 antagonist-based therapy of mantle cell lymphoma	\$250,000	NCI
George *	Sunita Dodani	Sub-Clinical Coronary Artery Disease in South Asian Immigrants	\$75,000	NIH
George	Jeff Switzer		\$50,000	MCG
George	Clinton Webb	Cytokines and Angiotensin II induced Hypertension	\$1,534,581	NIH
Johnson	Paule Barbeau GPI/Pediatrics	The Junior League Physical Activity Project for Youths	\$156,958	NIH
Johnson	Adviye Ergul Physiology and Endocrinology	Vascular Protection & Endothelin B Receptors in Diabetes (non-competing renewal)	\$115,755	NIH
Johnson	Adviye Ergul Physiology and Endocrinology	Cerebral Arteriole Structure/Function in Diabetic Ischemic Brain Injury	\$993,560	VA Merit
Johnson	Adviye Ergul Physiology and Endocrinology	Differential Effects of Acute Hyperglycemia vs. Diabetes on Ischemic Brain Injury	\$260,332	ADA
Johnson	James Gossage Pulmonology	A Phase II, Randomized, Double-Blinded, Placebo-Controlled Study of Intranasal Estriol Ointment and Tranexamic Acid Ointment in Epistaxis Due to Hereditary Hemorrhagic Telangiectasia (HHT)	\$564,058	FDA
Johnson	Vernon Barnes GPI/Pediatrics	Mindfulness Meditation: Regulating Eating and Obesity in Adolescents	\$981,440	NIH

<i>Biostat Faculty</i>	<i>PI/Department</i>	<i>Title</i>	<i>Total Direct Costs</i>	<i>Agency</i>
Looney	G Bennett Nursing	Telephone Counseling to Manage GnRH Agonist Symptom Clusters in Black Men w/ PCa	\$275,000	NIH
Looney	D Pashley Dentistry	Determination of the Durability of Resin-Dentin Bonds	\$2,650,138	NIH/NIDCR
Looney	M Mozaffari Dentistry	Mechanisms of Taurine Modulation of Acute Renal Failure	\$800,000	NIH
Looney	D Pollock	Translating Endothelin Control Of Renal Hemodynamic And Excretory Function (PPG)	\$7,753,000	NIH
Looney/ Zhang	B Kirkpatrick Psychiatry	Metabolism and Schizophrenia	\$2,007,829	NIH
Waller	C Davis GPI	Exercise and Overweight Children's Cognition	\$2,435,845	NIH
Waller	M Tingen and D Ownby GPI / Pediatrics	Puff City in GA	\$804,942	NIH
Waller	J Switzer Neurology	Impact of Telestroke on Enrollment in Acute Stroke Clinical Trials	\$125,000	NIH K-Award
Waller	K Liu	Role of Epigenetic Repression if IRF8 in Tumor Progression/Metastasis	\$1,125,000	NIH
Waller	Hess, D Neurology	MPC Multistem in Acute Ischemic Stroke	\$221,675	NIH
Waller	C Davis GPI	Childhood Overweight, Nonalcoholic Fatty Liver disease, and Exercise	\$25,000	MCG / PSRP
Waller	J Cannon Respiratory Therapy	Modifying Leptin Sensitivity Through Increased Physical Activity		SECTR
Waller	K Clark Respiratory Therapy			SECTR

Grants applied for but not funded with Biostatistics Primary Faculty as PI/Co-I

<i>Biostatistics Faculty</i>	<i>PI/Department</i>	<i>Title</i>	<i>Agency</i>
Dias	Max Stachura Center for Telehealth and Nikil Jayant GA Institute of Technology	Real-Time Wireless Visual Communications for Remote Pediatric Assessment	NIBIB
Dias	Elena Khasanshina Center for Telehealth	Psychiatric Support for Rural College Students and Counseling Services Providers Using Internet-Based Video- conferencing	NIMH
Dias	Elena Khasanshina Center for Telehealth	Internet-Based Telepsychiatry for Students at a Rural Appalachian University: A Process Evaluation * to be resubmitted June 2008	NIMH
George	Frank Treiber VP for Research	SECTR: Regional Clinical and Translational Science Award	NIH
George Johnson	V George Biostatistics	Biostatistics Core: PPG - Mechanisms of Age-dependent Progenitor Cell Dysfunction Mediating Bone Loss. <i>Overall PI: C Isles, Dept. of Medicine</i>	NIH
George Xu	A Kutlar Medicine	Comprehensive Sickle Cell Center: Mu Opioid Polymorphisms as Genetic Modifiers in SCD	
Johnson	Vernon Barnes GPI/Pediatrics	Impact of Yoga on Blood Pressure in Youth	SECTR
Johnson	Vernon Barnes GPI/Pediatrics	Dose-response effect of meditation on blood pressure	NIH
Johnson	Prem Shekhawat Pediatrics	Role of caritine and omega-3 PUFA in neonatal necrotizing enterocolitis	NIH
Johnson	Vadivel Ganapathy Biochem & Molecular Biology	Symbiotic supplementation and the incidence of necrotizing enterocolitis in premature infants	NIH
Johnson	Susan Fagan UGA Clinical Pharmacy	Neurovascular consequences of hypertension after stroke	NIH
Looney	S Hsu Dentistry	Identification of early-detection biomarkers associated with PTSD- modulated autoimmune diseases using proteomic technology	DOD

Looney	S Hsu Dentistry	Green tea polyphenols: a novel approach to modulating Sjogren's Syndrome-like disease	NIH
Looney	D Miller Medicine	TEACH: Tailoring to Enhance patient Activation and Control of Hypertension	RWJ
Looney	D Young-Hyman GPI	Creation of Eating/Activity Environments by New Mothers	NIH
Looney (Lou)	B Kirkpatrick Psychiatry	Paternal Age and Mortality	NIH
Waller	S Goggans General Internal Medicine	Use of a Stroke Risk Factor Index to Identify Stroke Patients in a Managed Care Data Base	MCG STP
Waller	D Ferris Family Medicine	Opinions, Beliefs, and Attitudes of Minority Populations Toward the HPV Vaccine	GA Department of Community Health
Waller	A Terry Pharmacology	Antipsychotics, Temporal Effects on Cognitive Function	NIH
Waller	M Mozafarri	Is Post conditioning Reno protective	MCG STP

Biostatistics Consulting Center Projects

<i>Biostatistics Faculty</i>	<i>PI/Department</i>	<i>Title</i>
Choi (Miller)	John Meyer, School of Allied Health/DHI/Dean's office	Review of survey tool for dissertation to ensure data collection will correspond correctly to analysis using ANOVA
Choi (Zhang, Huang)	Elizabeth Jones, Medicine / Hematology Oncology	Strategies to Maximize Revenue Streams and Effective Use of Benchmarks in an Academic Hematology/Oncology Practice
Choi (Zhang, Wimmer)	Jorge Cue, Department of Surgery	Impact of Intra-Abdominal Pressures on Intra-Cranial Pressures in Patients with Severe Traumatic Brain Injury
Choi (Miller, Greene)	Richard Hatch, Department of Obstetrics and Gynecology	Analysis of data from 1500 deliveries
Choi (Zhang)	Gregory Liou, Department of Ophthalmology	Controlling inflammation in diabetic retinopathy
Dias (Lou)	Khalifa, Nussbaum, Ophthalmology	Survey of Current Surgical Competency A Assessment Tools and a Possible Role for Virtual Reality Simulation
Dias	Raymond Chong, Occupational Therapy, SOAH	Tested patients on 6 motor activities. Each activity has several dependent variables. Would like to combine all the variables from the 6 activities and do a factor analysis to determine the common skill that the variables in each factor are testing.

<i>Biostatistics Faculty</i>	<i>PI/Department</i>	<i>Title</i>
Dias	Sodomka, Cibirka, Center for Patient and Family Centered Care	Factor Analysis for the PFCC Survey of MCG personnel
Dias	Vincent Robinson, Department of Cardiology	Reperfusion Pattern on the Stress-Minus-Delay Bull's-eye Map Improves Sensitivity of Myocardial Perfusion Scans
Dias (Miller)	Chernecky, School of Nursing	Identifying knowledge barriers in educating nurses about valve connectors of venous access devices
Dias	Bolanle Asiyanbola, Hospital of St Raphael	Retrospective power analysis
Dias (Lou, P. Hall)	Jinks, Peterson, School of Nursing	Survey of music in operating room
Dias	Elena Khasanshina, Center for Telehealth	Mental health concerns for today's college students in rural communities
Dias	Jennifer Pace, Augusta VA Medical Center	Study design for doctoral dissertation at Nova Southeastern University
Dias	NeSmith, Catravas, School of Nursing	Exhaled breathe condensate as a non-invasive screening tool to identify differences in pulmonary inflammatory biomarkers in person who experience chronic stress
Dias (Zhang, Huang)	Richter, Atherton, Department of Cellular Biology and Anatomy	Herpes virus in Ganglia of the Human Head and Neck
Dias	Norris, Pearson-Shaver, Department of Pediatrics - Critical Care Division	Recognition of Shock in Pediatrics
Dias	Arthur A Taft, Department of Respiratory Therapy	Effects of Sampling Site and Mask Type Under Varying Flow Conditions on ETCO2 Readings During NPPV
Dias (Miller)	Herz, Occupational Therapy	The Efficacy of Occupational Therapy with Parkinson's Clients
Dias	Stachura, Center for Telehealth	Continuous Subcutaneous Insulin Infusion/Insulin Pumps: An Impact Study
Dias (Zhang)	Bell, P. McDonough, Department of Obstetrics and Gynecology	How does morbid obesity effect the surgical management of pregnant women undergoing cesarean deliveries.
Dias	McCracken, Vender, Department of Neurosurgery	Trigeminal Nerve - Gamma Knife Surgery Pain Study
Dias	Thornton, Gentry, Reed, Department of Cardiology	Case Control Study of Peripartum Cardiomyopathy Patients - Risk Factors
Dias (Miller)	Herz, Occupational Therapy	The Efficacy of Occupational Therapy with Parkinson's Clients - Correlating the UPDRS and PDQ 39 for the pilot aspect
George	Teresa Coleman MCG Cancer Center	A phase I study of the use of LBH 589 in the treatment of refractory superficial TCC of the bladder.
George (Lou, Zhang)	Kuhne, Dynan, IMMAG	Medaka as a whole-organism model for understanding the risks of secondary neutron exposure to air and space travelers
Johnson	Shekhawat, Pediatrics	Grant: Role of caritine and omega 3 PUFA in neonatal necrotizing enterocolitis

<i>Biostatistics Faculty</i>	<i>PI/Department</i>	<i>Title</i>
Johnson	Bhatia, Cresci, Pediatrics	Grant: Symbiotic supplementation and the incidence of necrotizing enterocolitis in premature infants
Johnson	Barnes / GPI	Pilot data analysis for future grant application (BM-EAT) Submitted Jan 2008, not funded
Johnson	Fagan/ UGA Clinical Pharmacy	Grant: Neurovascular consequences of hypertension after stroke (resubmitted Jan 2008, not funded)
Johnson	David DeRemer, Pharmacy	Analysis of febrile neutropenia in multiple myeloma patients post-autologous hematopoietic stem cell transplantation (HSCT)
Johnson (Miller, Le)	Peebles, Buckley, Department of Psychiatry and Health Behavior	Georgia's Imperative in Mental Health Service Department: Immersing Practitioners in the Recovery Model
Johnson (Miller, Le)	Collins, Dental Hygiene (SOAH)	To determine the reliability of 2 probability models in predicting success in dental hygiene education at the Medical College of Georgia
Johnson (Zhang, Sarkar)	Podbielska, Hogan, IMMAG	IgG antibodies from MS CSF bind certain microbial and myelin lipids
Johnson (Zhang)	El Geneidy, Coleman, Department of Hematology/ Oncology	Test for racial differences in response to anti-androgen withdrawal
Johnson	Gossage, Department of Pulmonology	Compare three ointments for nosebleeds
Johnson	Wenger, Yu, Departments of Orthopaedic surgery and Plastic surgery	Vibration of aging mice to prevent osteoporosis
Johnson (Zhang)	Cuellar, Department of Internal Medicine	Correlation between cardiac measurements and body mass index
Johnson (Miller)	Wilde, Department of Pediatric Emergency Medicine	Impact of rapid influenza tests on physician management of children evaluated for influenza-like illness in the emergency department
Johnson (Miller, M. Hall, Price)	Khalifa, Bogorad, Department of Ophthalmology	Effect of Ciliary Muscle Tone on Corneal Anatomy with Pentacam Measurements
Johnson (Zhang, Walker)	Ghamande, Maddox, P. McDonough, Department of Obstetrics and Gynecology	Recurrent Ovarian Cancer Study
Johnson	Ergul, Department of Physiology	Mechanisms of increased hemorrhage after acute ischemic brain injury in diabetes
Johnson (Miller)	Edwards, Department of Surgery	The utility of near-infrared spectrometry derived tissue hemoglobin oxygen saturation monitoring (StO2) in guiding resuscitation for patients in shock: Comparison to establish standards in guiding therapy and predicting outcome

<i>Biostatistics Faculty</i>	<i>PI/Department</i>	<i>Title</i>
Johnson (M. Hall)	Pittman, Department of Obstetrics and Gynecology	To describe the prevalence of positive depression scores prenatally and after delivery, the changes in depression scores with case management only and with case management and mental health counseling, the recurrence of positive scores in subsequent pregnancies of women receiving case management services by the Enterprise Community Healthy Start Program (ECHS) registered nurses (RNs), and the impact of depression and changes in depression status on pregnancy outcomes and on the development of the children resulting from the pregnancy, based on Ages and Stages Questionnaires (ASQ).
Johnson (Miller, Greene)	Davis, Park, Department of Neurology	Predictors of good surgical outcomes in Occipital Lobe Epilepsy
Looney (Zhang, Walker)	Ding, Dynan, IMMAG	Study design for experiment comparing antisense morpholino oligonucleotides with or without irradiation
Looney (Miller, Huang)	Bennett, Health Environments and Systems, School of Nursing	Telephone Counseling to Manage GnRH Agonist Symptom Cluster in Black Men with Pca
Looney (Zhang)	Pinchevsky-Font, Department of Occupational Therapy	Cultural Competency Evaluation of Occupational Therapy Graduate Students, practitioners and faculty
Waller (Miller)	Bollag, Freant, Chang, Department of Pathology and Cardiothoracic Surgery	Retrospective analysis for occult micrometastasis in stage I and II non-small cell lung carcinoma
Waller (Miller & Price)	Piazza, Schwartz, Department of Emergency Medicine	Comparison of filled expedient dressings in the Vira agent of open pneumothorax.
Waller	Ferris, Department of Family Medicine	Survey on men age 18-45 regarding their attitude toward receiving the HPV vaccine
Waller (Miller)	Kheda, Szerlip, Department of Nephrology	Study contrast induced pancreatitis.
Waller	Buckler, Bhatia, Department of Neonatal-Perinatal Medicine	Workup of Term Neonates born to GBS unknown women
Waller	Burkhead, Department of Otolaryngology	Correlating tumor size with secretion severity score and penetration-aspiration score.
Waller	Nilson, Johnson, Department of Ophthalmology	Effects of Xal-Ease on Patient Compliance with Xalatan
Waller (Miller)	Liu, Department of Biochemistry and Molecular Biology	IRF8 Expression and function in metastatic tumors
Waller (Zhang, Price)	Hathaway, Lewis, Department of Surgery (Urology)	Parsing the role of statins in erectile dysfunction
Waller	Cortez-Cooper, Department of Physical Therapy	The effect of muscle stretching on arterial stiffness and blood pressure in adults with hypertension
Waller	Joseph, Department of Occupational Therapy	The effect of neutral posture on the occurrence of musculoskeletal symptoms in administrative office assistants

<i>Biostatistics Faculty</i>	<i>PI/Department</i>	<i>Title</i>
Waller (Miller)	Stevens, Mabe, Department of Psychiatry and Health Behavior	An examination of mental health factors related to risk-taking behaviors in children and adolescents
Waller (Miller, Huang)	Wilkins, Department of Family Medicine	The effectiveness of presenting colorectal cancer risk information as a bar graph versus usual care in the intention and uptake of colorectal cancer screening in above-average risk individuals
Waller (Miller)	Moretz, Park, Department of Pediatric Neurology	Comparing clinical presentation and neuropsychological testing in two groups of children - those with ADHD and those with narcolepsy
Waller (Miller)	Paulson, Department of Medicine (Nephrology)	A Study of hemodialysis graft blood flow as a predictor of graft thrombosis
Waller (Miller)	Gillies, Department of Family Medicine	Common indications and findings of nasolaryngoscopy performed in a university-based family medicine clinic
Waller (Miller)	Mckuster, Kathryn, Pediatrics	At what point does screen time become a large factor in obesity?
Waller (Miller)	Hatch, Richard OB/GYN	Analysis data from 1500 deliveries
Waller (Miller)	Braun, Kelli, OB/GYN	The Effects of Hysterectomy on Urinary Symptoms
Waller (Miller, Sarkar)	J. McDonough, Helfgott, Department of Obstetrics and Gynecology (Section of Maternal-Fetal Medicine)	A Descriptive Comparative Study of Maternal Risk, Maternal-Fetal Medicine Services, Delivery and Birth Outcomes for High Risk Pregnant Rural Women: A Pilot Study.
Waller	Nilson, Johnson, Department of Ophthalmology	Effects of Xal-Ease on Patient Compliance with Xalatan
Waller	Cortez-Cooper, Department of Physical Therapy	The effect of muscle stretching on arterial stiffness and blood pressure in adults with hypertension
Xu (Miller)	Bell, Carson, Department of Pediatric Hematology/Oncology	6-Mercaptor urine metabolites as predictors of impact on toxicity and survival in patients with acute lymphoblastic leukemia
Xu (Miller)	Chamberlain, Department of Medicine (Gastroenterology)	Single blinded study comparing the efficacy of Lubiprostone and 4L PEG prep to 4L PEG prep alone on preparation quality in patients with known diabetes undergoing colonoscopy
Xu (Miller)	Meiler, Department of Anesthesiology and Perioperative Medicine	A genome-wide screen of the nematode C elegans for target proteins of volatile anesthetics
Xu (Lou, Baker, Sarkar)	S Weinrich, School of Nursing	Addressing reviewer comments, adding confidence intervals and odds ratios to report
Xu	Peiper, Department of Pathology	Inhibition of metastasis with kisspeptins and down-sized analogs
Xu (Zhang, Le)	Sharma, Department of Pathology / Anatomic Pathology	A immunohistochemical study of MOM1/IRF4 and BD4 for primary CNS lymphomas
Xu (Zhang)	Hill, Department of Cell Biology and Anatomy	Microarray analysis of human brain pericytes
Xu	Wang, Department of Pathology	Data analysis of DNA copy Number Assessment of Cancer Genome with Affymetrix SNP Array
Xu (Lou, Baker, Sarkar)	S Weinrich, School of Nursing	Addressing reviewer comments, adding confidence intervals and odds ratios to report

Educational Activities

Graduate Programs in Biostatistics

The field of biostatistics is in an exciting phase. The demand for biostatisticians in biomedical research far outstrips the supply. Fewer training programs and fewer qualified applicants are available for statistics and biostatistics programs than 10 years ago. In order to meet the growing demand for professional biostatisticians, a Masters program in Biostatistics was started at MCG in the Fall of 2006. Four of the initial 7 full time students graduated in May 2008, two will graduate May 2009, and one decided to pursue other opportunities in December of 2007. Of the four students who graduated two will continue on in the Doctor of Philosophy program, which was approved by the Board of Regents in Fall of 2007. The other two students found employment as Master's level biostatisticians at the Medical University of South Carolina and at the Medical College of Georgia. All four students beginning our program in Fall 2007 are on schedule to graduate in May 2009. We expect three of these four students who began their program of study in Fall 2007 to continue on in the doctoral program. For the upcoming academic year, we have recruited 4 students to begin the Master of Science program with the intent to move them to the doctoral program within their first year of study. Qualified full-time students are supported by graduate assistantships. The initial cohort of students includes 6 Georgia residents, one African American, four Asians, and two females. The 4 students who began in the Fall of 2007 include two Georgia residents, one Asian and two females. The four students beginning Fall 2008 include 3 Georgia residents, one African American, and one female.

A new Masters and a Certificate Program in Clinical and Translational Science (MCTS and CCTS) were approved by the University System of Georgia Board of Regents in April 2007 and began in Summer 2008 with 9 students in the Masters program.

Graduate Programs in Clinical and Translational Science

Expansion and transformation of clinical and translational research (CTR) was identified as a top priority for MCG's 5-year strategic research mission in 2005. It was recognized at that time that training programs in Clinical and Translational Science (CTS) would be a key component of the development of CTR at MCG. In early 2006, the Department of Biostatistics was given the task of developing proposals for new training programs in CTS that were to be submitted for approval to the University System of Georgia (USG) Board of Regents. Once approved, the target for implementing these degree programs at MCG was to be no later than the 2008-2009 academic year.

Proposals for a two-year Masters (MCTS) and a one-year Certificate (CCTS) in CTS were submitted to the USG Board of Regents in February 2007. The Board approved the MCTS program in April 2007 and the CCTS program in November 2007. Recruitment efforts for both programs began in November 2007 and the first cohort of nine CTS trainees was admitted in Summer 2008.

The objectives of CTS training programs at MCG are to (1) Provide an educational environment in which trainees learn how to apply principles and methods of CTR under the supervision of a research mentor, and (2) Increase CTR productivity at MCG.

For their mentored research project, trainees are expected to produce a competitive NIH-level grant proposal and/or one or more scientific papers suitable for publication in a leading clinical research journal. Graduates completing either the CCTS or MCTS programs should be able to perform each of the following tasks: (1) Effectively utilize human subjects in clinical trials, (2) Carry out basic analyses of clinical research data, (3) Apply basic epidemiologic principles and tools in clinical research, (4) Consider relevant ethical and legal issues when designing and conducting clinical research, (5) Prepare research manuscripts for publication in research journals and (6) Prepare competitive grant proposals for extra-mural research funding.

The 36-credit hour MCTS training program at MCG is similar to the existing Masters programs in CTR at the Medical University of South Carolina and Emory University. Currently, MCG is the only state institution in Georgia offering such a training program. The CCTS program, consisting of 20 credit hours, is equivalent to 1st year of the MCTS program, and there is currently no comparable program in Georgia or South Carolina.

Trainees who cannot commit to the full-time CTS program can choose part-time options (2 years for the CCTS and 3-4 years for the MCTS).

The target audience for the CTS training programs at MCG includes current MCG faculty in the clinical professions in the School of Allied Health Sciences, the School of Dentistry, the School of Medicine, and the School of Nursing. Medical residents and fellows, Ph.D. students and post-doctoral fellows in the basic sciences, and advanced undergraduates in clinical training programs at MCG are also encouraged to apply.

Prior to entering either of the CTS academic programs, a successful applicant must identify an MCG faculty member who will serve as primary (research) mentor. This primary mentor should have a track record of Principal Investigator funding from NIH or equivalent extra-mural research support. In addition to the primary mentor, each CTS trainee's Advisory Committee also includes a biostatistics mentor who is a faculty member from the MCG Department of Biostatistics.

The first cohort of nine CTS trainees at MCG are as follows:

- Vishal Arora, MD, Cardiology
Mentor: R. Clinton Webb

- Mohammed Elsalanty, MD, PhD, Oral Biology
Mentor: Carlos Isales

- Michael Edwards, MD, Surgery
Mentor: Carlos Isales

- Mulugeta Fissha, MD, Cardiology Fellow
Mentor: Guy Reed

- Stephen Goggans, MD, Internal Medicine
Mentor: Richard Sattin
- Anup Manoharan, MBBS, Nephrology
Mentor: Richard Sattin
- Kavita Natarajan, MBBS, Hematology/Oncology
Mentor: Abdullah Kutlar
- Michelle Reid-Nicholson, MBBS, Pathology
Mentor: Stephen Peiper
- Jeffrey Switzer, DO, Neurology
Mentor: David Hess

Further details and application information for the CTS programs at MCG can be found on the departmental website: <http://www.mcg.edu/biostat/CTS.html>

Other Graduate and Undergraduate Teaching

The Department is actively involved in campus-wide graduate and undergraduate education at MCG. We offer a two-semester sequence in Biostatistics (Biostatistics I & II, 3 credits each) for students in various MS and PhD programs in Schools of Allied Health, Nursing and other disciplines. Every summer semester, we offer a 3 credit hour course, Biomedical Statistics, primarily directed to the Biomedical Science doctoral students and the MCTS and CCTS students. We offer an introductory epidemiology course every fall, primarily for the MPH and Nursing students and MS, PhD, MCTS and CCTS students. Each fall, we also offer an undergraduate course, Statistics and Research Methodology (3 credit hours), for students in Health Informatics. In addition, we also offer an introductory course titled, "Introduction to Epidemiology and Biostatistics" for the Clinical Nurse Leader (CNL) program, and a one credit hour on-line course in introductory biostatistics for the dental residents.

Campus-wide Courses taught by Biostatistics Primary Faculty in 2006-07

<i>Course #</i>	<i>Course Title</i>	<i>Instructor</i>	<i>Term</i>	<i>Students</i>
STAT 7010	Biostatistics I	Dias	Summer 07	26 DNP
STAT 7040	Biomedical Statistics	Dias	Summer 07	25 PhD
STAT 8311	Demography & the Analysis of Rates & Proportions	Looney	Summer 07	48 DNP
STAT 8340	Readings & Research	Looney	Summer 07	32 PhD
STAT 8600	Biostatistical Consulting in Research	Looney/Waller	Summer 07	8 MS Biostatistics
STAT 4020	Stat & Research Methodology	Miller	Fall 07	5 Students
STAT 6300	Introduction to Epidemiology & Biostatistics	Dias	Fall 07	41 Students
STAT 7010	Biostatistics I	Dias	Fall 07	18 Students
STAT 7060	Research Design and Statistics	Dias	Fall 07	15 Dental Residents
STAT 8110	Introduction to Biostatistics	Dias	Fall 07	4 MS Biostatistics
STAT 8130	Introduction to Epidemiology	Weinrich	Fall 07	27 Students
STAT 8240	Introduction to Clinical Trials	Waller	Fall 07	8 MS Biostatistics
STAT 8510	Programming for Data Analysis	Waller	Fall 07	5 MS Biostatistics
STAT 8520	Statistical Theory I	Looney	Fall 07	6 MS Biostatistics
STAT 8710	Applied Linear Models II	Mukhopadhyay	Fall 07	7 MS Biostatistics
STAT 7020	Biostatistics II	Dias	Spring 08	3 PhD & MPH
STAT 8130	Introduction to Epidemiology	Messias & Dodani	Spring 08	20 Students
STAT 8610	Applied Linear Models I	Johnson	Spring 08	5 MS Biostatistics
STAT 8620	Statistical Theory II	Choi	Spring 08	6 MS Biostatistics
STAT 8720	Survival Analysis	Dias	Spring 08	6 MS Biostatistics
STAT 8910	Biostatistical Consulting Project	Waller	Spring 08	5 MS Biostatistics
STAT 7040	Biomedical Statistics	Dias	Summer 08	32 CTS Biostatistics
STAT 8130	Introduction to Epidemiology	Messias	Summer 08	14 MS Biostatistics & CTS
STAT 8270	Categorical Data Analysis	Looney	Summer 08	4 MS Biostatistics
STAT 8870	Biostatistical Consulting in Research	Waller	Summer 08	5 MS Biostatistics
STAT 8890	Readings & Research	Waller	Summer 08	2 PhD Biostatistics

College-wide Student Mentoring

Our faculty members are actively involved in the college-wide training programs for fellows, residents, graduate students and professional students. We serve in the Masters and Doctoral committees upon request by the students, mentor fellows, residents, graduate students and professional students by providing biostatistical and computing support on their research projects. We also participate in the journal clubs of various departments on campus, as circumstances necessitate. Though these activities typically do not result in publications or other rewards, we strongly believe that it is our responsibility to facilitate the advanced medical, nursing, allied health and basic science training programs offered by the Medical College.

<i>Thesis and Dissertation Committees Served</i>				
<i>Level</i>	<i>Biostatistics Faculty</i>	<i>Candidate</i>	<i>Department/School</i>	<i>Date</i>
Masters	Dias	Josean Martinez, DMD	School of Dentistry School	Ongoing
	Dias	Patricia Hall	Biostatistics/School of Graduate Studies	May, 2008
	Dias	Byazid Sarkar	Biostatistics/School of Graduate Studies	May, 2008
	Dias	George Price	Biostatistics/School of Graduate Studies	Ongoing
	Johnson	Anh Le	Biostatistics/School of Graduate Studies	April, 2008
	Johnson	Patricia Hall	Biostatistics/School of Graduate Studies	April, 2008
	Looney	Amos Chi	School of Dentistry	August, 2008
	Looney	Yousef Marafie	School of Dentistry	Ongoing
	Looney	Anh Le	Biostatistics/School of Graduate Studies	May, 2008
	Looney	Bayazid Sarkar	Biostatistics/School of Graduate Studies	May, 2008
	Waller	Patricia Hall	Chair	Fall 07, Spring 08
	Waller	George Price	Chair	Fall 07, Spring 08
	Waller	Anh Le	Committee Member	Fall 07, Spring 08
	Xu	Bayazid Sarkar	Biostatistics/School of Graduate Studies	
Ph.D.	Looney	Catherine Binkley	Univ. of Louisville School of Public Health	December, 2007
	Xu	Eleanor Fennell	School of Graduate Studies	

Special Lectures

Dias: Statistical Tools Needed in Reviewing the Medical Literature; Section on Cardiology and the Cardiology Fellows Lecture Series, MCG, October 2007.

Selecting Statistical Procedures & about the Department of Biostatistics; Department of International and Postdoctoral Services, MCG, January 2008.

MCG Biostatistics Journal Club, March 2008.

George: MCG Biostatistics Journal Club, September 2007

Johnson: Rank Transformations as a Bridge Between Parametric and Nonparametric Statistics. Medical College of Georgia Department of Biostatistics Journal Club, November 2007.

The Effect of Missing Data on Repeated Measures Models. Armstrong Atlantic State University, October 2007.

Looney: MCG Biostatistics Journal Club. May 2008

Fostering and Enabling New Dental Research (FENDER): Part I: Effective Use of Surveys and Questionnaires in Dental Research: 6 hours of lectures to MCG School of Dentistry Faculty. July-August 2007.

Fostering and Enabling New Dental Research (FENDER): Part II: Introduction to Clinical Trials: 4 hours of lectures to MCG School of Dentistry and Dental Hygiene Faculty. May-June 2008.

Critical Evaluation of the Dental Literature, Advanced Education in General Dentistry Residents, Spring 2008

Residency Research Project Development Sessions, Orthodontics Residents, Spring and Summer 2008

Waller: MCG Biostatistics Journal Club, February 2008.

Lecture to Dean's Summer Research Fellows in June 2008.

Service Activities

Service at the National/International Level

Choi

- Chair of the American Statistical Association's Statistical Partnership among Academe, Industry, and Government Committee
- Three teleconferences to discuss the non-academic salary survey of ASA members, invited talk at ASA meeting, student data base and other issues of the committee.
- Taskforce member of ASA Senior Member Committee

George

- Organizer and Chair of the Special Invited Session, “Recent Advances in Statistical Genomics”, at the IISA Joint Statistical Meetings and International Conference, Storrs, CT. May 2008.

Johnson

- President and Executive Council member of the SouthEast SAS Users Group (SESUG)
- Co-chair for the Statistics and Data Analysis section at the fifteenth annual SESUG conference – SESUG '07 in Hilton Head Island, SC
- Co-chair for the Coders' Corner section at SAS Global Forum 2008 in San Antonio, TX

Looney

- Member, Special Emphasis Panel/Scientific Review Group, RFA DE08-008, Centers for Research to Reduce Disparities in Oral Health, National Institutes of Health, National Institute of Dental and Craniofacial Research, Washington, D.C., March 5-6, 2008.

Waller

- Registrar and Volunteer Coordinator for the SouthEast SAS Users Group meeting in Hilton Head, SC October 2007.
- Statistics and Data Analysis Section Session Coordinator, and Statistics Tutorials
- Session Coordinator for the SAS Global Forum Meeting, San Antonio, TX, March 2008.
- Executive Council Member and Secretary of the SouthEast SAS Users Group

College-wide Service

Dias

- Member MCG Graduate Faculty
- Member of the Curriculum Advisory Committee, SGS, MCG
- SGS representative to the MCG Faculty Grievance Subcommittee
- Member of the Biostatistics Graduate Program Committee
- Member of the Planning Committee for the Masters and Certificate Programs in Clinical and Translational Science
- University System of Georgia Academic Advisory Committee, Mathematical Subjects Representative
- Chair, Department of Biostatistics Campus-wide Teaching Committee
- Invited Participant of Monthly Cardiology Journal Club

Choi

- Member of the Biostatistics Library Committee

George

- Member of the Biostatistics Graduate Program Committee
- Chair of the search committee for the Division of Epidemiology Director
- Co-Chair, Search Committee for the Director of Outcome Research Center, MCG
- MCG Sickle Cell Center faculty

- Member of MCG Integrated Clinical Translation Curriculum (ICTC) Taskforce
- Member, Data and Safety Monitoring Board Diabetes in Neuropsychiatric Disorders, Brian Kirkpatrick, PI
- MCG Cancer Center Biostatistics Core
- Research Training, Education and Career Development Core Leader, SECTR Consortium
- Design, Biostatistics & Research Ethics Core Member, SECTR Consortium

Johnson

- Poster judge for MCG Graduate Research Day
- Monthly Pulmonary Fellows Research Methods Journal Club – provide assistance interpreting statistical concerns of medical literature
- Statutes Review Committee of MCG Academic Council

Looney

- Co-Director of Clinical and Translational Science Program
- Co-Chair, Clinical and Translational Science Program Committee
- Member, Research Training, Education & Career Development Core, SECTR Consortium
- MCG Leader, Design, Biostatistics & Clinical Research Ethics Working Group, SECTR Consortium
- Member of MCG Integrated Clinical Translation Curriculum (ICTC) Taskforce
- Member, Data and Safety Monitoring Board Diabetes in Neuropsychiatric Disorders, Brian Kirkpatrick, PI
- Collaborative statistician and research mentor for the School of Dentistry
- MCG Cancer Center Biostatistics Core
- Member of Graduate Program Committee, Department of Biostatistics
- Member, Department of Biostatistics Faculty Search Committee

Waller

- Department of Biostatistics representative to the Graduate Council, voting member
- Department of Biostatistics Director of Graduate Programs beginning July 1, 2007
- Participation in faculty recruitment efforts.
- Member of the search committee for the Division of Epidemiology Director, June 2008.

Xu

- Chair, Department of Biostatistics Seminar & Journal Club
- MCG Sickle Cell Center faculty

Manuscript Reviews

Dias: Psychiatric Services

George: BMC Genetics
BMC Genomics
Human Heredity
International Journal of Obesity

Johnson: Journal of Prosthetic Dentistry

Looney: Communications in Statistics
Pediatric Dentistry
Journal of Nutrition
Journal of Periodontology
Journal of Intellectual and Developmental Disabilities

Waller: Reviewed 26 manuscripts for the Journal of Prosthetic Dentistry

Strategic Planning and Major Goals

Educational Environment

The long-term educational goal of the department is to build a strong MS/PhD program that will be highly competitive, methodologically sound, and which will meet the modern skills and demands of a practicing biostatistician. The formal proposal for the doctoral program in biostatistics was approved by the Board of Regents in October 2007, and the first cohort of the doctoral program is expected to start in the Fall of 2008.

During the fall semester of every year, our faculty members visit relevant undergraduate departments at colleges and universities in Georgia and South Carolina, as part of our recruitment efforts.

As part of the five-year strategic research mission, MCG is taking a major initiative for the expansion and transformation of its Clinical and Translational Research (CTR). . In early 2006, the Department of Biostatistics was given the task of developing proposals for new training programs in CTS that were to be submitted for approval to the University System of Georgia (USG) Board of Regents. Proposals for a two-year Masters (MCTS) and a one-year Certificate (CCTS) in CTS were submitted to the USG Board of Regents in February 2007. The Board approved the MCTS program in April 2007 and the CCTS program in November 2007. Recruitment efforts for both programs began in November 2007 and the first cohort of nine CTS trainees was admitted in Summer 2008.

Research Enterprise

The long-term goal of the Department is to build a critical mass of faculty members with strong commitment in methodological and collaborative research. Active methodological research by faculty is not only important for the continued professional growth of the faculty, but is also an integral part of a good doctoral program.

As a biostatistician within a biomedical research institution, the most important role is to be a successful collaborative researcher. The Biostatistics department should serve as the backbone of scientific research on campus, providing the leadership and support for all statistical needs. Biostatistics faculty should play a key role and serve as co-investigator in every grant application from MCG, submitted to NIH, NSF and other national funding agencies. The Biostatistics faculty members continue to work hard in developing strong partnerships with other departments and individual researchers on campus by meeting with them individually and in groups, attending and giving talks to journal clubs of various research groups, and helping them in their grant proposals. We expect to increase the extramural support within the Department to the level of a minimum of 50% funding for each faculty within the next 2 years, and use those funds to further expand the department. Dr. Varghese George will continue to serve as the collaborative statistician for the Department of Neurology, with additional funding support for Ms. Patricia Hall. Starting from the beginning of FY07, Dr. Stephen Looney serves as the collaborative statistician for the School of Dentistry. School of Nursing has been supporting Ms. Kelly Miller and Dr. Lifang Zhang for Biostatistics educational assistance. Ms. Miller is currently supported by the Emergency Medicine department for database management.

The department also provides biostatistics core support of the MCG Cancer Research Center and the Georgia Prevention Institute. We hope to expand such collaborations with other departments and schools on campus.

Starting next fiscal year, the role of biostatistics within the Cancer Center will be expanding significantly with the newly recruited Dr. Greg Rempala leading the Core. Several faculty members and postdoctoral fellows will be supported by and working together with clinical investigators in the Cancer Center. Dr. Kapil Bhalla, the Director of Cancer Center, has made a commitment to provide one FTE support of Biostatistics faculty for collaborative research with the Cancer Center scientists, immediately. As the Cancer Center grows, we expect to be an integral part of it, serving as its Biostatistics Core.

One of the areas where MCG lacks expertise at present is Epidemiology. All of the Deans, the Cancer Center Director, the Vice President for Research, the Provost, and the President clearly recognize this deficiency and have made firm commitment to provide funding for establishing an Epidemiology Division within the Biostatistics Department. Reasonably sufficient funds have been allocated for this purpose, and recruitment efforts are already underway for a senior faculty in Epidemiology who will spearhead the epidemiology expansion. We fully expect to have several epidemiology faculty within the next year. To reflect the anticipated presence and academic activities of epidemiology, it was approved to have the department renamed to the Department of Biostatistics and Epidemiology.

We will continue the Visiting Faculty Program by bringing in scholars with national and international reputation, to facilitate methodological and collaborative research of our faculty and students.

Faculty Recruitment

With our educational and research goals in mind, the Department has already recruited Drs. Greg Rempala and Balgobin Nandram, two highly renowned senior faculty members in Statistics with the highest level accomplishments. Both are expected to start July 1, 2008. We will continue our efforts to recruit more faculty members in biostatistics and epidemiology to complement the existing strengths of the department. The newly recruited faculty members will have a strong commitment for methodological and collaborative research.

Diversity

The Department is committed to promote diversity of ethnic background, gender and other characteristics. Of the eleven full-time personnel in the Department at present, we have 7 women, one African-American, four Asians and one of Hispanic origin. We will make every effort to continue fair representation from all groups, including under-represented minorities, in our recruitment efforts for faculty, staff and students.

Institutional Communications

The Department will continue to support all existing and new academic programs across MCG, and will continue to mentor students, residents and fellows by assisting them in their projects for statistical and computational needs, serving in their thesis/dissertation committees, and offering short courses and seminars to meet their needs. We will make every effort to build research

partnerships and promote strong interdisciplinary research programs by providing collaborative support to investigators across campus. We will continue to work closely with the IT Department of MCG to optimize our computing and IT needs.

Office Space

As the department has grown substantially over the last year, we are faced with the major problem of lack of office space for our personnel. At present we have exhausted all available space allocated to the Department. As a result, the first floor of Pavilion I, our current building, is being renovated to make sufficient room to meet the short-term and long-term growth of the Department. We expect to move into the renovated first floor by October 1, 2008.

Major Goals of FY09 and Beyond

Our long term goal is to build a full-fledged department of national repute, with strengths in graduate teaching, and collaborative and methodological research. Working towards this goal, we plan to accomplish the following:

- Recruit at least three highly qualified Epidemiology faculty members who are committed to strong methodological and collaborative research, graduate teaching and mentoring.
- Continue recruit 4-6 graduate students every year with strong quantitative background and exposure to biomedical research.
- Recruit 3-5 junior faculty and several postdoctoral fellows in Biostatistics
- Continue working with the scientists and researchers at MCG in our collective efforts.
- Continue our regular seminar and journal club series. Each faculty will be required to present at least one seminar on his/her research and at least one journal club presentation of a relevant and timely article during each year.
- Maintain the extramural funding support at a minimum of 50% support for each faculty through methodological grants with Biostatistics faculty as PIs and through collaborative grants with Biostatistics faculty as co-investigators.
- Increase the visibility of the Biostatistics Consulting Center across campus and increase the consulting activities. As before, we will distribute the consulting brochure among all departments, faculty members, residents and fellows on campus, and among industries and government agencies across the State and the Nation.
- Continue the support service for medical students, undergraduate and graduate students, residents and fellows, and other teaching programs by mentoring, presenting seminars, participating in journal clubs and offering formal courses.
- Continue the professional growth of faculty by participating in national conferences and continuing education activities, presenting the research in meetings and seminars, and publishing methodological and collaborative research results in peer reviewed journals.

Conclusion

The Department is still at its infancy, and it will take considerable efforts from the administration, faculty and staff to build it into a full-fledged department with national and international stature. With the new leadership, the strong support from the administration and the firm commitments from our faculty and staff, we are very confident to achieve our goals in the not-too-far future. We already have several nationally renowned faculty members in the department, and we intend to further expand. The various research and educational initiatives such as the Cancer Research Center and the Georgia Prevention Institute open up the door for Biostatistics and Epidemiology to expand and grow into a strong resource for research methodology and a major component of collaborative, interdisciplinary and translational research on Campus. With the MS and PhD programs in Biostatistics, and the new Masters and Certificate programs in CTS, and continued teaching and mentoring of students in other programs, Biostatistics will serve as an integral part of the academic programs at MCG. The state of the Department continues to be quite healthy and the future looks very bright and promising.