

Bloomberg School of Public Health

Department of Biostatistics
615 North Wolfe Street
Baltimore MD 21205-2179
410-955-3067 / Fax 410-955-0958
kbandeen@jhsph.edu

Karen Bandeen-Roche, Ph.D.
Hurley-Dorrier Professor and Chair

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To Friends of Hopkins Biostatistics

Dear Friends:

Greetings in this, the first annual update on Hopkins Biostatistics I am privileged to send to you. I hope this message finds each of you well and enjoying a productive and satisfying year. I am happy to report that the Department has had exactly this in the year that has passed since I assumed the leadership of the department—first, as Interim Chair, and since December, as the second Frank Hurley-Catharine Dorrier Chair.

In this light it is most appropriate to start this letter with heartfelt thanks to **Frank Hurley** and **Catharine Dorrier**. In 2005 they generously endowed the first professorship in the 90-year history of the Department. Two years later they augmented their investment to the endowment of the chair. **Scott Zeger** was the inaugural holder of that position; I was honored to be installed into it at a lovely ceremony held this past spring, attended, among others, by Frank and Kit and their family. As so many of you know, Frank and Kit are role models for us: Biostatisticians who have most successfully dedicated their lives to the betterment of society through the provision of healthcare products the world over. They're Johns Hopkins family members—Frank, a Department alumnus—who have invested themselves in the life and health of the institution through their time as well as their financial generosity. And they're true friends to Biostatistics, who come to our retreats and parties and write personal notes of support and have given of their energy and expertise to Scott before me, and now to me. To be associated with the Chair that bears their names is a particular joy and privilege for me, and a tribute to all of you who have made the department so very successful.

The Department has had a year full of tremendous accomplishments, which I am eager to report to you:

Honors and Awards:

Our faculty have gained outstanding recognition at our institution since **Scott Zeger** sent out his final annual report in January of 2008. **Scott** was named as our institution's Vice Provost for Research shortly before departing his position as Chair of Biostatistics, which he had held since 1996. He was named to serve as Interim Provost and Senior Vice President for Academic Affairs during the period between the nomination of former Provost Kristina Johnson to be *President*



Obama's Under Secretary of Energy and the recent naming of a new Provost—a credit to Scott's capability and his leadership in Biostatistics and science, and a source of pride to the Department. **Ron Brookmeyer** was the 2009 recipient of the School's Ernest Lyman Stebbins Medal. The award is given annually for outstanding educational contributions that cross multiple school departments. Ron joins **Scott**, **Marie Diener-West**, and **Jim Tonascia** as previous recipients among the current faculty. **Marie** was named as the Chair of the School-wide Master of Public Health Program in July 2008, replacing Ron. Three of our faculty won Golden Apple Awards for School-wide excellence in teaching in 2008-9: **Marie** (2009) as well as **John McGready** and **Brian Caffo** (2008). John's receipt was his third, and Marie's, her sixth. **John** as well as **Dan Scharfstein** were named as two of six "exceptional teachers" in the School of Public Health for the first term of the 2008-09 academic year. **Ciprian Crainiceanu** won an Advising, Mentoring, and Teaching Recognition Award, student **Brian Whitcomb** won a Teaching Assistant Recognition Award, and staff member **Patty Hubbard** won a Staff Recognition Award. **Francesca Dominici** was honored with a 2009 Diversity Recognition Award from the JHU Diversity Leadership Council, which recognizes exceptional contributions of faculty, staff and students in advancing and celebrating diversity and inclusiveness at Johns Hopkins.

Our faculty also have gained outstanding international recognition for their excellence in 2008-9. **Scott Zeger** was the recipient of the 2008 Wilks Memorial Award from the American Statistical Association (ASA). This award recognizes contributions to the advancement of scientific or technical knowledge, ingenious application of existing knowledge, or successful fostering of cooperative scientific efforts that have been involved in matters of national defense or public interest. **Daniel Scharfstein** was named to the 2009 class of Fellows of the ASA for his major contributions to statistical methodology, particularly for group sequential studies, coarsened data, and causal inference as well as his excellence in advising, teaching, mentoring of graduate students and directing our graduate program. **Ciprian Crainiceanu** and **Mei-Cheng Wang** obtained new NIH awards, as principal investigators, that will fund the development of statistical methods for multilevel multivariate functional studies and HIV/AIDS research, respectively. **Rafael Irizarry** and joint faculty members **Fernando Pineda** and **Sarah Whealan** led in 3 of only 11 projects that were funded under the 2008 Johns Hopkins Discovery Initiative, which sought interdisciplinary proposals exhibiting outstanding innovation and high potential to further differentiate the university's selective excellence from its peers. Among his other accomplishments in an exceptionally notable year, **Rafael** was recently listed as the world's fourth most cited researcher in the general field of mathematics on the ISI Web of Knowledge and named as a most cited researcher in the August, 2009 *ScienceWatch* listing of Most Cited Institutions. His 2007 *Biostatistics* publication (with colleagues), "Exploration, normalization, and genotype calls of high-density oligonucleotide SNP array data" was named a "fast breaking paper" in Mathematics by Essential Science Indicators. He was named as a 2009 ASA Fellow for "signature leadership in methods development and implementation for the analysis of gene expression and other genomic data as well as his leadership in creating and administering Bioconductor and thereby promulgating the culture of reproducible research." He is the recipient of the 2009 Mortimer Spiegelman Award: an honor, given annually by the American Public

Health Association, that recognizes a statistician age 40 years or younger who has made outstanding contributions to public health statistics. Most recently, he was announced as the winner of the 2009 Committee of Presidents of Statistical Societies (COPSS) Presidents' Award, arguably our profession's most prestigious honor for early career contributions. The award citation recognized Rafael for his leadership and world-class contributions in science both biological and statistical, his teaching and mentoring, and his development and promulgation of practice-transforming software.

Our students and postdoctoral fellows continue to be well recognized for their work, both within the school and beyond. Beginning with external recognition, **Howard Chang** (advisors: **Roger Peng** and **Francesca Dominici**), **Jessie Myers** (advisor: **Francesca Dominici**), and **Yu-Jen Cheng** (advisor: **Ciprian Crainiceanu**) were recognized with Student Travel Awards for papers that were presented at the 2009 annual meeting of the International Biometrics Society / Eastern North American Region. **Jessie** as well as **Sandy Eckel** (advisor: **Tom Louis**) won ASA Health Policy and Statistics Section Student Paper Awards for work that was presented at the 2009 Joint Statistical Meetings. **Hong Zhu** (advisor: **Mei-Cheng Wang**) received a 2009 International Chinese Statistical Association Applied Statistics Symposium Jian-Ping Hsu Memorial Scholarship and Student Paper Award as well as a 2009 Boyd Harshbarger Southern Regional Council on Statistics Graduate Student and Junior Faculty Travel Award. Post-doctoral fellow **Rob Scharpf** was awarded a K99/R00 career development grant to develop new statistical methods for assessing copy number variation from SNP arrays—K99/R00, a new mechanism providing 1-2 years of mentored support and then three subsequent years of independent support. Post-doctoral fellow **Sonja Greven** (advisor: **Francesca Dominici**) was the winner of the 2009 David P. Byar Young Investigator Award presented annually by the Biometrics Section of the ASA. The award is given to an investigator who has held a doctorate in statistics, biostatistics or related field for three years or less for best emerging work to be presented at the Joint Statistical Meetings.

Turning to recognition of our students within our School: **Marco Carone** (advisor: **Dan Scharfstein**) was the 2008 recipient of the June B. Culley Award, which honors outstanding achievement by a Biostatistics student on the second-year paper. **Marco** as well as **Bruce Swihart** (advisor: **Brian Caffo**) won 2008 Louis I. and Thomas D. Dublin Awards for work bridging biostatistics and epidemiology; **Sandy Eckel** (advisor: **Tom Louis**) was the 2009 winner. **Wenyi Wang** (advisor: **Giovanni Parmigiani**) won the 2008 Jane and Steve Dykacz Award, which recognizes an outstanding paper by a Biostatistics student in medical statistics. **Sandy Eckel** (advisor: **Tom Louis**) won the 2008 Helen Abbey Award for Excellence in Teaching; **Nick Reich** (advisor: **Ron Brookmeyer**) was the 2009 winner. **Gary Chan** (advisor: **Mei-Cheng Wang**) and **Yue Yin** (advisor: **Tom Louis**) won the 2008 Margaret Merrell Award for Excellence in Research; **Chongzhi Di** (advisors: **Kung-Yee Liang** and **Ciprian Crainiceanu**) was the 2009 winner. **Gary** was a 2009 inductee into Delta Omega, the Public Health Honor Society of our School. **Hong Zhu** (advisor: **Mei-Cheng Wang**) won the Biostatistics award in the 2009 Delta Omega poster competition for her project *Understanding*

Progression of Ovarian Cancer in the US from SEER Data: A Semiparametric Joint Model for Bivariate Survival Distribution with Interval Sampling.

Faculty Appointments, Promotions, and Departures: We are excited to welcome two terrific new colleagues who came to us from our 2008-09 faculty search, **Jeffrey Leek** and **Michael Rosenblum**. **Jeff**, who joined us in May, holds a PhD in Biostatistics from the University of Washington. Most recently he had been pursuing a post-doctoral fellowship on the development of simple patient classifiers from high-throughput data under the mentorship of Professor **Giovanni Parmigiani** in our Department of Oncology here at Johns Hopkins. Jeff has also completed a post-doctoral fellowship at Mt. Sinai School of Medicine, where he invested himself in learning molecular biology techniques and practices. Jeff is interested finding simple, robust statistical solutions to high-dimensional problems in biological contexts such as gene expression microarrays, genetic epidemiology, brain imaging, spatial epidemiology, and computer science. In so doing he aims to simultaneously solve specific scientific problems and advance statistical theory and methodology for data in these contexts. He plans research to improve reproducibility in clinical gene expression and fMRI studies and to better physicians' classifications of cancer patients with microarrays.

Michael, who as we go to press has been with us two weeks, holds a PhD in Applied Mathematics from the Massachusetts Institute of Technology, where he worked with Michel Goemans and Vahid Tarokh (Harvard) on adversarial queueing theory. He comes to us from the University of California's Berkeley and San Francisco campuses, where he completed a three year post-doctoral fellowship in statistics and biostatistics under the mentorship of Professor Mark van der Laan. Michael's research is in the statistical areas of design and analysis of randomized trials, causal inference, and survey sampling; it is driven by concrete applications including the Methods for Improving Reproductive Health in Africa trial of a new HIV prevention method, the Research in Access to Care for the Homeless study of HIV positive individuals, and a recent re-analysis of data from a survey of mortality in Iraq. He plans research to address the FDA's Critical Path Initiatives to develop innovative trial designs, help determine which drug regimens give the best chance of survival to HIV positive individuals with adherence challenges, and improve reliability in cluster sampling surveys.

The department has been fortunate to celebrate two key promotions since our last writing: **Constantine Frangakis** was promoted to professor and **Ciprian Crainiceanu** was promoted to associate professor. **Constantine** has developed into an international leader in the field of "causal inference." His ideas were seminal in the discovery of the method of "principal stratification" for studying causal treatment effects in longitudinal studies, a concept that has had a profound effect on current research directions in complicated settings. For example Google Scholar shows more than 300 works citing the phrase since the method was first published, and at least 10 Ph.D. theses have been devoted to the method at statistics centers including Harvard, UCLA, and the Universities of Washington and Pennsylvania in addition to Johns Hopkins. Notable among his many other scholarly contributions, Constantine has also created novel

designs and analytic methods to combat biases due to incomplete data and imperfect compliance and advanced methods to make causal conclusions from observational studies more robust. He is applying his methodology to address important public health challenges ranging from more rigorously evaluating effects of treatments to investigating seasonal effects on suicide and injury to health policy monitoring and evaluation.

Ciprian has emerged as a leading statistician of his generation in the six years since we recruited him from Cornell University. Much of his research has been focused on developing theory, methods and applications for estimating unknown functions, often in space or time, using nonparametric methods. The resulting work was recognized with the American Statistical Association's 2006 Gottfried F. Noether Junior Scholar Award, has consistently appeared in the best journals in our field, and is made available by Ciprian to others through user-friendly software. Ciprian's other interests include measurement error models that take account of the imprecision of the predictor variables as well as the outcome in regression analysis, Bayesian analysis, and model selection. He is applying his methodology to address important public health problems ranging from mapping brain function in epileptics to mapping infectious diseases in Africa to measuring sleep health and its ramifications using persons' EEG traces during sleep.

Both Constantine and Ciprian are exceptional teachers and mentors and citizens of the department, in addition to their top flight research standing. Both received promotion reviews of rarified quality from those writing their letters of evaluation from outside the distribution. We are most proud of them.

We have had two faculty departures our last update letter. **Mike Griswold** and his wife, Gwen Windham, have relocated to be closer to Gwen's family at the University of Mississippi. **Francesca Dominici** has departed to create a research group on monitoring population health made informative by environmental biostatistics at Harvard University. **Mike** began his time with us as a Ph.D. student and, following his graduation, had directed our Biostatistics Consulting Center since 2005. He is initiating a similar group in his new department. Francesca will be a tenured professor in the Department of Biostatistics at Harvard's School of Public Health. Both were with us for many years: we will truly miss them. We will also miss joint appointee **Giovanni Parmigiani**, who has departed for Harvard together with Francesca, where he has been named to chair the Department of Biostatistics and Computational Biology in the Dana-Farber Cancer Institute. Finally, **Ron Brookmeyer** has decided to depart Johns Hopkins for the UCLA Department of Biostatistics later this academic year, culminating 28 years in the department with five spent as Chair and Director of the Master of Public Health program for our school. **Ron** and his wife, Robin Fox, are looking forward to the new challenges and life experiences their transition will afford them. **Ron, Francesca, Giovanni** and **Mike** have all contributed outstandingly to Hopkins Biostatistics during their time with us, for which we are forever grateful.

Research: The faculty and students have published over 150 scientific papers in the last year, continuing our tradition of discovery across the whole spectrum from statistics disciplinary science to the application of statistics in health science. The complete list of papers is available at <http://www.biostat.jhsph.edu/research/publication/index.shtml>; here are a few highlights. Among contributions to the statistical literature, student **Ming An**, her advisor, **Constantine Frangakis**, and colleagues elucidated the usage of “double-sampling” designs to correct potential biases in monitoring survival outcomes in programs such as the President's Emergency Plan for AIDS Relief (PEPFAR) (*Biometrics*, 2009). Motivated by questions of Alzheimer's disease heritability, **Karen Bandeen-Roche** and student **Jing Ning** published new methods to study familial associations in timing of disease onset (*Biometrika*, 2008). With colleagues, **Tom Louis** investigated a novel, random effects-based approach for meta-analyzing diagnostic test accuracy in the absence of a gold standard (*Journal of the American Statistical Association*, 2009). Student **Leena Choi**, **Brian Caffo** and **Chuck Rohde** elucidated the benefits of the likelihood paradigm for evaluating drug bioequivalence (*Statistics in Medicine*, 2008). Post-doctoral fellow **Rob Scharpf**, **Giovanni Parmigiani**, Jonathan Pevsner, and **Ingo Ruczinski** developed hidden Markov models for detecting chromosomal alterations (*Annals of Applied Statistics*, 2008). Student **Chongzhi Di**, his advisor, **Ciprian Crainiceanu**, **Brian Caffo**, and Naresh Punjabi introduced novel statistical methodology to analyze data occurring as inter-correlated curves, that is, to conduct “multilevel” functional principal component analysis (*Annals of Applied Statistics*, 2009). Motivated by research to evaluate effects of trauma center care on patient outcomes, student **Brian Egleston**, his advisor, **Dan Scharfstein**, and joint faculty member and Health Policy and Management Chair **Ellen MacKenzie** published new methods to estimate the effect of treatment on functional status among individuals who would survive regardless of treatment (*Biometrics*, 2009).

Our scholars continue to make outstanding contributions to the health science literature as well. In clinical / translational research, **Mei-Cheng Wang** and student **Gary Chang** collaborated in investigating the utility of a new uterine and cervical cancer treatment (*Clinical Cancer Research*, 2008). **Jim Tonascia** and his colleagues reported findings from the Childhood Asthma Management Program randomized clinical trial, whose Clinical Coordinating Center he directs, indicating that clinically meaningful improvements in asthma control are not maintained after continuous corticosteroid treatment is discontinued (*Journal of Pediatrics*, 2009). **Marie Diener-West**, together with colleagues, found potential for clinical information technologies to improve clinical and financial outcomes in hospitals (*Archives of Internal Medicine*, 2009). In high-profile work on genetics and genomics, **Rafael Irizarry** authored two *Nature Genetics* papers: one, as lead author, that studied epigenetic alterations underlying colon cancer, and a second, as collaborator, that was co-lead-authored by his student, **Hao Wu**. **Kung-Yee Liang** led in research evidencing gene-gene interactions underlying obsessive-compulsive disorder (*American Journal of Medical Genetics B, Neuropsychiatric Genetics*, 2009). **Lucy Meoni** was the lead statistical author on a *Nature Genetics* article identifying genes substantially associated with risk of end-stage renal disease. **Hongkai Ji** led in a *Nature Biotechnology* paper presenting “CisGenome,” a new software system for analyzing genome-wide chromatin

immunoprecipitation (ChIP) data he and his colleagues have developed. In population research, **Ron Brookmeyer** mentored students **Justin Lessler** and **Nick Reich** in an analysis combining data from multiple published studies to more accurately determine the incubation period of nine respiratory viral infections (*Lancet Infectious Diseases*, 2009). **Roger Peng**, student **Howard Chang**, Michelle Bell, **Aidan McDermott**, **Scott Zeger**, former Department of Epidemiology Chair Jonathan Samet, and **Francesca Dominici** published a *JAMA* article linking exposure to fine particulate air pollution to hospital admission rates for cardiovascular and respiratory diseases among Medicare recipients. Most recently, Naresh Punjabi, **Brian Caffo** and their colleagues on the Sleep Heart Health Study had an internationally publicized *PLoS Medicine* article identifying sleep-disordered breathing as substantial risk factor for mortality.

In addition to original publications as principal and co-investigators, the Department faculty provide myriad short-term consultations to Hopkins and external colleagues, making it possible for them to publish influential research. For example, last year the Hopkins Biostatistics Center supported more than 200 clients, more than half free of charge. During this period Center associates were co-authors on 22 peer-reviewed publications. Special thanks go to recently departed Director **Mike Griswold**, Interim Director **Rick Thompson**, Center Administrator **Debra Moffitt**, Coordinator **Nicol Jenkins**, and research associates **Carol Thompson** and **Qilu Yu** for making all of this possible. Additional thanks go to **Andre Hackman** and **Jiangxia Wang**, who newly joined the Center as research associates over the past year.

Graduates: Our recent PhD graduates continue to take up outstanding positions. From our 2007-08 graduating class (our largest ever), **Aristide Achy-Brou** (advisor: **Constantine Frangakis**; co-advisors: **Rafael Irizarry** and **Dan Scharfstein**) is now with JP Morgan Chase. **Ming An** (advisor: **Constantine Frangakis**) is an assistant professor in the Department of Mathematics at Vassar College. **Elizabeth (Johnson) Colantuoni** (advisor: **Scott Zeger**) is an assistant professor in the Department of Anesthesiology at the Johns Hopkins School of Medicine, with a joint appointment in our Department. **Xianbin Li** (advisor: **Brian Caffo**; co-advisor: **Ciprian Crainiceanu**) is with the FDA. **Yun Lu** (advisor: **Scott Zeger**) is doing a postdoctoral fellowship in the Department of Biostatistics and Epidemiology at the University of Pennsylvania. **Sheng Luo** (advisor: **Ciprian Crainiceanu**; co-advisor: **Tom Louis**) is an assistant professor in the Division of Biostatistics, School of Public Health, at the University of Texas Health Science Center in Houston. **Ani Manichaikul** (advisor: **Karl Broman**) is a postdoctoral fellow in the Department of Biomedical Engineering at the University of Virginia. **John McGready** (advisor: **Ron Brookmeyer**) is an assistant scientist here in our Department. **Jing Ning** (advisor: **Mei-Cheng Wang**) is a postdoctoral fellow in the Department of Biostatistics at M.D. Anderson Cancer Center. **Shu-Chih Su** (advisor: **Brian Caffo**) is with Merck, as is **Yijie Zhou** (advisor: **Francesca Dominici**; co-advisor: **Tom Louis**). **Weiwei Wang** (advisor: **Dan Scharfstein**) is doing a postdoctoral fellowship at Princeton's Department of Operations Research and Financial Engineering. **Wenyi Wang** (advisor: **Giovanni Parmigiani**) is a postdoctoral fellow at Stanford's Genome Technology Center. **Yue Yin**

(advisor: **Tom Louis**) is with Genentech's Oncology Division. **Xiaojun You** (advisor: **Ron Brookmeyer**) has taken a position with Biogen Idec.

From our 2008-09 graduating class, **Benilton Carvalho** (advisor: **Rafael Irizarry**) has obtained a postdoctoral fellowship position at the University of Cambridge. **Gary Chan** (advisor: **Mei-Cheng Wang**) is an assistant professor in the Department of Biostatistics at the University of Washington. **Yu-Jen Cheng** (advisor: **Mei-Cheng Wang**; advisor: **Ciprian Crainiceanu**) has obtained a faculty position at National Tsing Hua University. **Yen-Yi Ho** (advisor: **Giovanni Parmigiani**) is a postdoctoral fellow at the Johns Hopkins School of Medicine in the lab of Aravinda Chakravarti. **Kenny Shum** (advisor: **Scott Zeger**) has taken a position with Archimedes, Inc. in San Francisco.

As we go to press, our 2009-10 graduating class is already taking shape with students who have recently defended their theses. **Qing Li** (advisor: **Ingo Ruczinski**) has taken as position as Research Fellow in the National Human Genome Research Institute, National Institutes of Health. **Chongzhi Di** (advisor: **Kung-Yee Liang**; co-advisor: **Ciprian Crainiceanu**) will be joining Fred Hutchinson Cancer Research Center. **Sandy Eckel** (advisor: **Tom Louis**) is going to the University of Southern California as a postdoctoral fellow. **Chi Wang** (advisor: **Tom Louis**) will take up a position at University of California-Riverside. **Howard Chang** (advisor: **Francesca Dominici**) will be starting a postdoctoral fellowship at SAMSI.

New Students and Postdocs: The 2008-2009 admissions cycle brought us over 170 applications for biostatistics from 28 countries. In September 2008, we welcomed 9 new students into the department—4 PhD and 5 ScM.

Our student recruiting efforts for the 2009-10 admissions cycle have been outstandingly successful. We began the cycle with an energetic recruiting drive encompassing letter-writing to chairs of key departments, visits to undergraduate programs from which we have successfully recruited in the past, student fair participation, and a fall open house here in the department for prospective applicants from schools in the Baltimore-Washington area that drew approximately 24 juniors and seniors. We went on to receive over 184 applications from 19 countries. We held our fifth annual visitors' weekend Friday, February 20 through Saturday, February 21, with 20 of our top applicants attending. In a most exciting month, we welcomed what promises to be our largest incoming class ever, with 10 outstanding new PhD students, 10 new ScM students, and 2 new bioinformatics MHS students.

We are particularly pleased to report that **Hilary Parker**, one of our incoming PhD students in 2008, as well as **Rachel Chase** and **Sarah Khasawinah**, incoming in 2009, were named to the prestigious Sommer Scholars program in the School of Public Health. They join five other Biostatistics students (**Simina Boca**, **Marco Carone**, **Yong Chen**, **Jennifer Feder**, and **Jeff Goldsmith**) as Sommer Scholars. To read more about our Sommer Scholars, please go to <http://www.jhsph.edu/sommerscholars/>.

We have also recruited a cohort of talented postdoctoral fellows over the last year and a half. **Chris Barr** and **Hector Corrada Bravo** (mentor: **Rafael Irizarry**) joined us at the outset of the 2008-9 academic year. **Holger Schwender** (mentor: **Ingo Ruczinski**) and **Vadim Zipunnikov** (mentor: **Ciprian Crainiceanu**) are starting off with us as we initiate the current academic year. **Margaret Taub** and **Kasper Hansen** will join us in the middle fall (mentor: **Rafael Irizarry**).

Family joys: Since our last letter to you, the Department welcomed nine (!) new babies: **Jonathan**, son of academic administrator **Mary Joy Argo**; **Penelope (PJ)**, daughter of **Brian Caffo**; **Etta**, daughter of **Elizabeth (Johnson) Colantuoni** and **Carlo Colantuoni**; **Bianca** and **Julia**, twin daughters of **Ciprian Crainiceanu**; **Kelly**, daughter of **Hongkai Ji**; **Cat**, daughter of Luu Pham; **Clara**, daughter of joint faculty member **Elizabeth Stuart**; and **Joyce**, daughter of recently-graduated student **Qing Li**.

Wedding congratulations go out to two of our faculty members and their spouses: **Lucy Meoni** and Dean Michael Klag, and **Constantine Frangakis** and Kyrana Tsapkini. We have also celebrated the nuptials of three of our students and their spouses: **Simina Boca** and Dan Widrevitz, **Jeff Goldsmith** and Celia Aldape, and **Bruce Swihart** and Megan Salter.

We rejoice over these additions to our collective family!

A closing word: As I reflect on all I've had the pleasure of reporting to you, and on my living it day to day, I must say that I could not be more excited over the future of the Department. Our faculty and students are making surpassing contributions to statistics and science, and they're being internationally recognized for it. We've had the joy and privilege of being joined by outstanding new colleagues and our most successful student recruitment in years. There remains no better portfolio of science—statistical or otherwise—than is being led here at Hopkins, and so no richer opportunity to translate our scholarship into the betterment of our public's health and society. Thanks to Scott's energetic leadership, all our hard work, and your generosity, the Department has a strong foundation of resources with which to sustain and multiply our excellence and accomplishments. There are challenges, no doubt, with some of our number making transitions, the demand for biostatistical education and collaboration at our institution ever growing, and the astonishing rate at which the sources of the data we are charged with interpreting evolve and amplify their yield. I'm positive we're up to the test. Our faculty are intellectually gifted, expert, determined to lead, devoted to training our field's future leaders, and committed to advancing the human condition. We'll be recruiting more outstanding new colleagues to join us for the 2010-11 academic year. We're launching exciting new initiatives—a master degree internship program to train the collaborating statisticians our society's workforce so greatly needs, a symposium to bring the world's leading expertise in the analysis of very large datasets together here in Baltimore, ways to better support the faculty in their work and the institution in its data analytic needs, and, of course, research and education building on that you've learned about in this reading. I can't wait to tell you about our progress next year.

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Thank you so very much for being a part of Hopkins Biostatistics. It remains an incredibly special place. Please stay in touch by visiting our website at <http://www.biostat.jhsph.edu> and by stopping by or calling if you can. Your support and connections to the Department are tremendously valued, and more important than ever.

Sincerely,

A handwritten signature in black ink, appearing to read "Karen".

Karen Bandeen-Roche, PhD
Frank Hurley-Catharine Dorrier Chair and Professor
The Johns Hopkins Bloomberg School
Department of Biostatistics

KBR/rjz

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