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Biostat Connections

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From the Editorial Staff:

It is a great pleasure to edit this century's last issue of *Biostat Connections*. Keep your copy in a safe place. It could become a collector's item someday! So many things happened in the past year. First, the department moved to a new, beautifully designed space. We are grateful to Nan and Ellen for their efforts to make the new place both aesthetic and pleasant. After leading the department for nine years, Nan decided to devote more of her time to teaching and research and Steve Lagakos took over as Chair on July 1. Most of you know Steve well and we are glad that he is going to lead us into the next century. In January of this year, Barry Bloom, an internationally known scientist and policymaker in public health, became the Dean of the School and we look forward to the ideas, leadership and commitment to public health he brings with him. Last summer, after more than twenty years of coaching biostatisticians, Marvin Zelen passed the helm of the Division of Biostatistical Science at the Dana-Farber Cancer Institute to David Harrington. We are glad that Marvin has more time to play ball with us in the field these days. Under the new leadership of the School, Department, and DFCI, we are confident that our group will continue to play a vital role in education, research and service to our profession. As always, we would very much like to hear from you. Have a great year!

A TRIBUTE TO NAN LAIRD

by James H. Ware

On July 1, after nine years, Nan Laird ended her tenure as chair of the Department of Biostatistics. The School is pleased that Steve Lagakos is succeeding her, and we are confident that he will provide outstanding guidance for a thriving department.

Nine years is a considerable period of time, one that invites comparisons, especially to number-loving biostatisticians. When Nan assumed the chairmanship in 1990, the department had a total of thirty-six faculty members; today it has fifty. Compared to six in 1989, the department graduated twelve doctoral students in 1999. The space currently occupied by the department—a measure of success at the perennially squeezed School of Public Health—is two and one third times what it was in 1990.

We all know that this growth is not mere serendipity but the product of an intelligent guiding hand. That hand has been working in many ways, none mysterious, all impressive. Around the time Nan's tenure began, Steve Lagakos, Richard Gelber, and Ken Stanley assumed statistical leadership of the AIDS Cooperative Treatment Group (ACTG). The resulting need for rapid expansion of faculty and staff created enormous

Tribute to Laird *(cont'd on p. 7)*

Nan M. Laird

SIR DAVID COX RECEIVES ZELEN LEADERSHIP AWARD

by Sudeshna Adak

The 1998 Marvin Zelen Leadership Award in Statistical Science was conferred upon Sir David Cox of Nuffield College, Oxford University. Professor Cox received the award on May 29, 1998 and delivered a lecture on "Graphical Models in Statistics: A Review".

This annual award recognizes an individual for excellence in leadership and for impacting both the theory and practice of statistics. In her introduction of Professor Cox, Dr. Agnes Herzberg of Queen's University, Kingston, Ontario described him as a "true leader of our profession….His influence has been felt through scientific publications including his own monographs and his editorial work, and most importantly through the nurturing of many members of the statistical community, enhancing the discipline of statistics enormously." This award was established in honor of Dr. Marvin Zelen and is supported by colleagues, friends and family.

Everyone in the biostatistics world is intimately acquainted with Sir David's pioneering work in 1972 on proportional hazards regression for censored survival data. However, this is only one of his many important contributions to our subject, too numerous to list here. Professor Cox was born in Birmingham, England in 1924. As a part of his war commission, he worked at the Royal Aircraft Establishment where aircraft components were being tested. There were other statistical problems such as where German rockets were landing and aircraft accident rates. Professor Cox went on to work at the Wool Industries Research Association in Leeds. During this time in Leeds, he wrote the book *An Outline of Statistical Methods for Use in the Textile Industry* which went on to a fifth edition. At the same time, Professor Cox earned his Ph.D. from the University of Leeds in 1949.

After receiving his Ph.D., Professor Cox was an assistant lecturer at the University of Cambridge for five years. During the next ten years he was Reader and then became Professor of Statistics at Birbeck College of the University of London. The largest portion of his career, about twenty years from 1966 to 1988, was spent as Professor of Statistics, Imperial College of Science and Technology, London. In 1988, he moved to Oxford and became the Warden of Nuffield College and retired from there in 1994. From 1966 through 1991, Professor Cox provided a most distinguished tenure as editor of *Biometrika*. His 250 papers and sixteen books are a testimony of Professor Cox's extraordinarily wide range of methodology and areas of applications of statistics as well as his enormously influential role in the profession.

Among his many honors, he has received more than 10 honorary doctorates (including the most recent one from Harvard!!), was elected Fellow of the Royal Society of London in 1973 and was knighted in 1985. In 1990, he received the Kettering Prize and Gold Medal for Cancer Research. Professor Cox was indeed a most fitting recipient of the Marvin Zelen Leadership Award for 1998.

John W. Tukey, Professor Emeritus, Princeton University, was the recipient of the 1999 Marvin Zelen Leadership Award and delivered a lecture at the Harvard School of Public Health this June 4th on "A Smorgasbord of Handy Techniques That Can Help in Analyzing Data".

Colleagues and friends are encouraged to submit nominations for next year's award. If you would like to support the Marvin Zelen Leadership Award Fund contributions may be sent to the Chair, Department of Biostatistics.

KATHRYN ROEDER DELIVERS SIXTH LEFKOPOULOU DISTINGUISHED LECTURE

by Robert J. Glynn

Dr. Kathryn Roeder, Professor of Statistics at Carnegie Mellon University, gave the sixth annual Lefkopoulou Distinguished Lecture at HSPH on September 24, 1998. Her talk, "Intelligence and Success, Is It All in the Genes?", provided a critical review of the statistical underpinnings of the controversial best-selling book *The Bell Curve (TBC)* by Richard J Herrnstein and Charles Murray. Roeder summarized the argument of TBC in the following syllogism: genes determine IQ; IQ determines life success; therefore genes determine life success. Her talk focused on the first part of this syllogism, the link between genetics and intelligence, and showed that TBC substantially overstated this relationship.

Roeder summarized her model for distinguishing the effects of nature on intelligence from the influence of nurture. The key statistical issue is a proper partitioning of the variance in intelligence explained by genetics from that explained by environment. Based on meta-analysis of a large number of previous studies, she showed that important maternal environmental effects were commonly ignored in previous analyses. Her model, which better explained the available data, found that less than half of the correlation between IQ in twins is due to genes. She concluded that IQ is far more malleable than suggested by TBC. Part of her presentation summarized the findings of her recent paper (Devlin B, Daniels M, Roeder K: "The Heritability of IQ" *Nature* 1997; 388:468-471).

The Myrto Lefkopoulou lectureship was established in perpetuity in memory of Dr. Lefkopoulou, a faculty member and graduate of the department who died of cancer at the age of

Lefkopoulou Lecture *(cont'd on p. 4)*

CHAIRPERSON'S CORNER

by Nan M. Laird

After nine exciting years as Chair I am stepping down as of June 30, 1999. Our department has had remarkable growth and recognition as the leading biostatistics department in the world and I feel very privileged to have been chair of this department during this dynamic period. Many things were accomplished during this period that I am very pleased with.

During my tenure, I placed great emphasis on increasing the diversity of the faculty in terms of expertise and interest and on providing research support for junior faculty. Not only have we made new faculty hires to work in clinical trials, cancer and AIDS, we have also added faculty in environmental statistics, psychiatric statistics and in statistical genetics, the last two areas being new to the school. We have initiated a policy that all new faculty must have at least 25% unrestricted research support to develop their own research agenda. This has been very helpful in recruiting and retaining high quality junior faculty.

A second area of interest for me has been the formation of partnerships between the department and Schering-Plough, Pfizer and Genetics Institute. Not only have these partnerships created a forum for discussion and debate over important issues in the pharmaceutical industry, they have solidified ties and forged new relationships between department faculty and research scientists in industry. Working with industry provides us with a challenging and exciting opportunity.

After more than 25 years in the Kresge building, the department moved into new space in September 1998, on the fourth floor of buildings one and two. We increased our total department space by about 15%, but best of all, we moved into beautifully renovated space complete with all new furnishings. Our conference room, library and computer room are all substantially increased in size, and we even have a lunchroom. Next time you come to Boston, please come to visit.

What will I do next? More of what I have always enjoyed the most: more teaching, more research.

Finally, I want to thank all the staff, faculty, students and the administration for their support, help and encouragement. Without their dedicated help we certainly would not have achieved all our successes. It has been a great nine years for me. I leave with a great sense of accomplishment and am secure in knowing that the department is in great hands with Steve Lagakos as the new chair.

MARVIN ZELEN RESIGNED POST AS CHAIR OF BIOSTATISTICAL SCIENCE AT THE DANA-FARBER CANCER INSTITUTE

by Editorial Staff

Last July, Marvin Zelen, Professor of Statistical Science and former chair of our Department, resigned his administrative post as chair of the Department of Biostatistical Science at the Dana-Farber Cancer Institute. He has been succeeded by David Harrington, Professor of Biostatistics.

In 1977, when Dr. Zelen arrived in Boston, he was accompanied by ten new biostatistics faculty to found the new Division of Biostatistics at the Sidney-Farber Cancer Institute (re-named Dana-Farber Cancer Institute). Some of the people who came at that time were: Richard Gelber (now Professor of Pediatrics and Biostatistics), David Schoenfeld (now Professor of Medicine and Biostatistics), Rebecca Gelman (at the time a graduate student, now Associate Professor of Radiation Therapy and Biostatistics), Ken Stanley (now Senior Lecturer,), Colin Begg (now Professor of Biostatistics, Memorial Sloan-Kettering Institute), and James Hanley (now Professor, McGill University). The following year, Steve Lagakos and Marcello Pagano joined the Dana-Farber Division of Biostatistics.

The Division quickly grew and became one of the leading centers of biostatistics in the world consulting and collaborating with biomedical investigators on problems of cancer research as well as carrying out methodological research in biostatistics.

The Statistical Center of the Eastern Cooperative Oncology Group (ECOG) was also located within the Division. The biostatistical staff pioneered many innovations in the theory and practice of clinical trials, which were introduced in ECOG and later adopted by those carrying out clinical trials throughout the world. Among the innovations which seem standard practice now are: use of database management systems, adoption of e-mail, data forms which are computer generated, centralized randomization, and innovative randomization algorithms. When these innovations were adopted, it was necessary to develop software programs for database systems, e-mail and form development as none existed at the time which was suitable for clinical trials.

The Department today has more than 15 faculty who are joint with the School of Public Health and has a world-class record of achievement in cancer and biostatistics research. We give Dave Harrington our best wishes for the continued success of the Department of Biostatistical Science at the Dana-Farber Cancer Institute.

GETTING TO KNOW OUR NEW DEAN, BARRY BLOOM

by Donna L. Spiegelman

Biologist Barry Bloom joined the Harvard School of Public Health faculty as Dean of the School and Professor of Immunology and Infectious Disease in January, 1999, replacing Harvey Fineberg, who became Provost of Harvard University, and interim Dean James Ware, Professor of Biostatistics, who continues in his position as Dean of Academic Affairs. Dean Bloom is an immunologist and microbiologist engaged in research on infectious diseases and vaccines. He holds a number of prestigious leadership positions in the public health arena, including the chair of the Vaccine Advisory Committee of UNAID, the co-chair of the Board on International Health of the National Research Council of the National Academy of Sciences, and membership in the Scientific Advisory Board of the National Center for Infectious Diseases at the Centers for Disease Control and Prevention. I interviewed Dean Bloom in his office on the 10th floor of the Kresge Building one afternoon in late May. How does he find time to maintain an active research program, lead the School of Public Health, and participate in a wide variety of national and international scientific and public health activities? Well, having moved to Boston in the early fall of 1998 from New York City, where he had previously been a Professor of Microbiology and Immunology at the Albert Einstein College of Medicine, Dean Bloom has hardly seen the city of Boston. He has not had much unpacking to do, living in a Harvard dormitory while his house is being renovated. His hours might explain some of his success in so many arenas simultaneously as well -- Dean Bloom's typical schedule begins with his arrival at HSPH at 7:30 AM each day and ends with his departure at 10 or 11 in the evening!

Dean Bloom completed a multivariate calculus course as an undergraduate in college and has never taken a course in statistics or biostatistics, attributing his knowledge of biostatistics to a detailed reading of Sokal and Rohlf's 859 page *Biometry: the principles and practice of statistics in biological research* many years ago. Statistical problems in the experimental biological work in which he is involved are simple, and his collaborations with statisticians here at HSPH and elsewhere have thus been limited. "I would feel badly bothering the faculty of the best biostatistics department in the world with an occasional routine t-test," said the Dean. On the other hand, the Dean is keenly interested in the mathematical interface between biology and statistics as it arises in the fields of statistical genetics, a program in which our outgoing Chair, Dr. Nan Laird, has played a leading role at HSPH, bioinformatics and computational biology, and the Dean hopes to further strengthen HSPH expertise in these burgeoning areas in the future.

The Dean laid out for me his view of the three key issues in public health today: the coming epidemic of chronic diseases, as the population structure of the developed world shifts increasingly to older ages and as the average lifespan in the developing world continues to lengthen; the global epidemics of AIDS, malaria, tuberculosis, and other emerging and re-emerging infectious diseases; and continued documentation of the multitude of inequities and disparities in health status and human rights violations within and across nations, as the first step towards ameliorating these. He regards HSPH as strong in these first two areas, and needing of some strengthening with respect to the third. Biostatistics, he asserts, plays an absolutely essential role in further growth and development of each of these. The Dean's immediate plans for the School's structure are to tinker as little as possible, citing the familiar adage, "If it ain't broke, don't fix it!". Over the long term, the Dean expects to use an incremental change approach to continue to recruit the best and most exciting people to HSPH, to foster mentoring of junior faculty, including finding mechanisms for creative and innovative research that might not otherwise be fundable via traditional channels, and to enhance the scholarship base for the School to insure that the most promising and most diverse student body can continue to enroll. We applaud the new Dean for his vision for the school, and welcome him wholeheartedly to the HSPH community.

Lefkopoulou Lecture *(cont'd from p. 2)*

34. Each year the Lefkopoulou lectureship is awarded to a promising statistician who has made contributions to either collaborative or methodological research in the applications of statistical methods to biology or medicine or has shown excellence in the teaching of biostatistics. Ordinarily, the lectureship is given to a statistician within 15 years of receiving an earned doctorate. The Lefkopoulou lecture is the first seminar of each academic year. Next year's Lefkopoulou lecturer will be Giovanni Parmigiani of Duke University who will speak on "Breast Cancer Genes: Modeling and Medical Care" on September 23, 1999 at 4:00 p.m. Nominations for the lecturer for 2000 are encouraged and can be addressed to the Lefkopoulou Lecture Search Committee.

DEPARTMENT WELCOMES NEW FACULTY AND POSTDOCS

by Kathryn Lunetta

Our department continues to be enriched by faculty and postdoctoral researchers with a variety of backgrounds and research interests. This year we were fortunate to welcome three new faculty members and eight new postdoctoral fellows.

Kimberlee Gauvreau joined us with a secondary appointment as Assistant Professor in January 1999. Her primary appointment is as Assistant Professor of Pediatrics at Harvard Medical School. Kimberlee is also a department alum: she received her doctorate in Biostatistics from HSPH in 1992, and then continued on as a postdoctoral fellow. In 1994 she joined the Department of Cardiology at Children's Hospital, Boston. Kimberlee's research interests focus on biostatistical issues arising in clinical research on pediatric patients. One particular interest has been exploring factors contributing to institutional variability in outcomes following surgery for congenital heart disease. Most of her free time is spent with her daughter Eliza, who will be two in September.

John Rogus joined us as an Assistant Professor, with a joint appointment in Environmental Health, in December 1998. John received his bachelor's degree in math and economics from Gettysburg College in Pennsylvania. His first job out of college was at Towers Perrin, a management consulting firm, doing actuarial work for retirement plans for large companies (including Harvard!). John became interested in pursuing statistics while studying for actuarial exams, and eventually pursued a doctorate in Biostatistics at HSPH, which he received in 1996. John then joined the Program in Population Genetics (PPG) at HSPH, and spent two years there as a postdoctoral fellow. In December 1998, he joined the faculty. His research interests include applying statistical methods to uncover the role of genes in human diseases such as hypertension, asthma, and diabetic nephropathy.

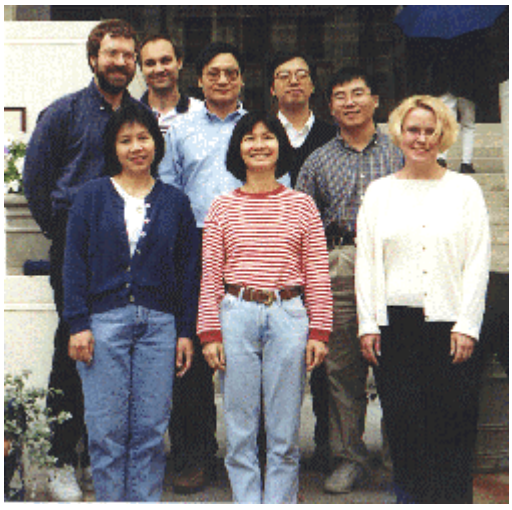
YouGan Wang joined us as an Assistant Professor in July of 1998 after spending eight years following his Ph.D. in Australia, as Principal Research Scientist in Commonwealth Scientific & Industrial Organization in Australia. YouGan received his Ph.D. from Oxford in 1991. His research interests include estimating functions and asymptotic inference, analysis of longitudinal data, resampling methods, dynamic programming and Gittins indices, sequential clinical trials, and screening trials. In his free time, he enjoys fishing and running.

Patricia Bernardo joined us as a postdoctoral fellow in September of 1998. She is originally from the Philippines, and came to the US in 1988 to earn a master's degree in Statistics and Operations Research from the Pennsylvania State University. From 1991-95, she worked as a biostatistician for Bristol-Myers Squibb in Princeton NJ and then came to HSPH to pursue her doctorate in Biostatistics. Patti's current research interests are in survival analysis and designs of clinical trials. She says she is a dancer at heart, but hasn't been doing any dancing for a while. Patti and her husband welcomed baby Mark into their family last October. Congratulations!

Nick Horton is another department graduate. He is continuing work as a postdoctoral fellow with Nan Laird and Garrett Fitzmaurice on use of multiple informants in psychiatric epidemiology. Nick spends his free time chasing after his children Alana (7) and Kinari (5), working as a volunteer with the American Friends Service Committee (a Quaker service organization), and serving as a non-resident tutor at one of the Harvard undergraduate houses. He likes living in Boston because it is a great place to walk, and dislikes living in Boston because it is a terrible place to drive.

Wenzheng Huang received his Ph.D. in biostatistics from Johns Hopkins University, and joined the department as a postdoctoral fellow in September 1998. His research interests include longitudinal data analysis and the foundations of statistical inference. He is working with Victor DeGruttola on modeling HIV RNA viral load data.

New faculty & postdocs *(cont'd on next page)*



New Faculty and Postdocs: Bottom row-Patti Bernardo, Beow Yeap, Jeanne Kowalski. Top row-Nick Horton, John Rogus, YouGan Wang, Lang Wu, Zhezhen Jin. (not in photo: Kim Gauvreau, Wenzheng Huang, and Helen Parise)

New faculty & postdocs *(cont'd from previous page)*

Zhezhen Jin joined the department as a postdoctoral fellow in August 1998. He received a B.S. (1989) and a M.S. (1992) in Probability and Statistics from Nankai University in China. He came to the US in 1992, and received a M.A. in applied mathematics in 1994 from the University of Southern California and a Ph.D. in statistics from Columbia University in 1998. Currently, he is involved in collaborative research in the Pediatric AIDS group for evaluating new treatments for HIV patients. He is also working on developing new statistical methods in nonlinear mixed effects models, survival analysis and clinical trials with L.J. Wei and Michael Hughes.

Jeanne Kowalski received her Ph.D. in Statistics from the University of Pittsburgh in August 1998, and joined as a postdoctoral fellow soon after. As a student, she was a graduate researcher on a methodological AIDS grant. Jeanne's current research interests are in the analysis of viral genomes, such as HIV. She is working with Marcello Pagano and Victor DeGruttola on ways to characterize mutations associated with phenotypic resistance patterns for subsequent use in genotypic-based treatment. Jeanne finds Boston an exciting city. In her free time, she enjoys walking along the river at JFK park in Cambridge.

Helen Parise is another HSPH biostatistics graduate. She has joined the departments of Biostatistics and Environmental Health as a postdoctoral fellow. Her research interests include methods for analyzing environmental data, and nonparametric smoothing techniques for survival and clustered/longitudinal data.

Lang Wu joined the department as a postdoctoral fellow in August 1998. He is from China, and received his Ph.D. in Statistics from the University of Washington at Seattle. Lang's current research interests are missing data problems in nonlinear mixed-effect models and contingency tables and AIDS viral dynamics. During his free time he sometimes plays ping-pong. He loves Boston for its academic environment and the sun.

Beow Yeap received her Sc.D. in Biostatistics from HSPH in August, 1998, and has been a postdoctoral fellow since September. Beow has been a part of the HSPH and Dana-Farber Biostatistics family for many years. Her first contact with the department was when she took a class from Dave Harrington in the Statistics Department at Harvard. She entered the HSPH doctoral program at the same time her older son Spenser started kindergarten, in 1993. Beow is based at the Dana-Farber where she is involved in cancer clinical trials. She is particularly interested in longitudinal modeling of tumor markers and their relationship to clinical outcomes. Beow grew up on a tropical island called Penang (also a Boston restaurant) in West Malaysia. Her spouse, Steven Skates, is also a statistician and is originally from Australia. Her sons Spenser and Simon attend a bilingual school where they study in Spanish half the time. Quite an international household!

VISITORS ENRICH THE DEPARTMENT

by Kathryn Lunetta

Each year our department and faculty benefit from collaboration with scholars visiting from other universities. This year we have been exceptionally lucky to welcome five visitors with a broad range of research interests from universities all over the world.

Robert Gentleman is visiting from the Department of Statistics, University of Auckland, New Zealand. In Auckland he has a half- time association with the Clinical Trials Research Unit, within the Department of Medicine. Robert's research interests are in statistical computing, particularly language design, multi-threading and exception handling. He is currently working on the analysis of interval censored data with Alain Vandal, exploring the application of combinatorial algorithms to various problems that arise when analyzing interval censored data. Robert is spending most of his time at the Dana Farber Cancer Institute, where he is working on the patient randomization system. He says, "It has enough interesting and complicated problems to remove all the spare time from anybody's schedule." About Boston, Robert says the thing he enjoys most is cycling along the Charles to work.

Francis Hsuan is an Associate Professor from the Department of Statistics in Temple University, Philadelphia. While on sabbatical leave he is working with Nan Laird and Garrett Fitzmaurice on likelihood-based methods for analyzing correlated discrete data with non-ignorable nonresponses. Francis says that he found Boston extremely charming. Many little things differentiate this city from others Francis knows: the street performers, Boston Pops, Victorian buildings, the cityscape, the civility of the general public (e.g., people say 'thank you' or 'good-night' to bus drivers), the innovative spirit (e.g., the magnificent scale of the big dig project), the abundance of European products, the unique stores on Charles Street in Beacon Hill, and, of course, the sophistication of Harvard and MIT." While he was here, Francis joined the Community Boating and started taking sailing lessons.

Sungim Lee visited our department for part of this past year as a 5th-year Ph.D. student from Seoul National University from Seoul, Korea. Sungim's area of interest is survival

Visitors *(cont'd on next page)*

Tribute to Laird *(cont'd from p. 1)*

challenges for the department, skillfully orchestrated by Nan. Since its creation, the ACTG Statistical Center has made major contributions to AIDS research and has become an important source of strength for the department's academic program. Another initiative, a critical one, has been in the area of minority training. Nan has worked closely with Louise Ryan to build the Summer Program in Biostatistics, and in 1998 the department won the first minority doctoral training grant ever awarded by NIH. Recognizing the necessity for both robust connections to practice and core funding for academic programs, Nan has guided the department in developing close relationships with pharmaceutical companies. These partnerships with Schering-Plough, Pfizer Pharmaceuticals, and the Genetics Institute have become invaluable. Finally, and in large part because of Nan's interest and enthusiasm, the department has begun building a program in statistical genetics, nurtured by close ties to the Program for Population Genetics at the School.

The quality of Nan's leadership has been equally manifest in the domain of education. Not only has she held everyone—faculty and students alike—to the highest academic standard, but she herself has been intensely involved in course development and in training. During her chairmanship, she served as dissertation adviser for nine graduate students, and she is the co-principal investigator for the psychiatric epidemiology training grant. And, in the midst of all these obligations, Nan's own research flourished. In this period, Nan co-authored some fifty peer-reviewed publications, including articles on longitudinal data, statistical genetics, and psychiatric statistics.

Nan has led the department in an admirable way and has established an atmosphere of intellectual vitality that is compelling and contagious. The department owes her a great deal. I salute Nan and look forward to more years of enriching collegial association.

NEWS ABOUT THIS YEAR'S HARVARD / SCHERING-PLOUGH WORKSHOP
by Joseph Ibrahim

The Harvard-Schering Plough workshop was held on June 3-4, 1999. The theme for this year's workshop was Bayesian Methods in Clinical Trials. Many interesting topics were discussed including Bayesian design and monitoring of clinical trials, prior specification, robustness, software, and implementation. The workshop focused on several case studies and the implementation of the Bayesian paradigm in practice. Practical examples of Bayesian methods were demonstrated in several settings including phase III clinical trials, phase I trials, and medical device trials. Advantages and limitations of Bayesian methods were discussed and comparisons were made to frequentist approaches. For example, advantages of Bayesian methods were demonstrated in monitoring trials and in the development of formal methods for incorporation of historical data into the current analysis. FDA and NIH perspectives were also discussed with a focus on the relative merits of Bayesian methodology in regulatory development.

Bayesian methods have been successfully emerging in clinical trials, including in academia, industry, and government. Part of the reason is due to advances in computational technology as well as algorithmic technology such as the Gibbs sampler and other related Markov chain Monte Carlo methods. The availability of statistical software such as BUGS has also made implementation of Bayesian methods more popular and practical.

The research and use of Bayesian methods in clinical trials and the health sciences in general is definitely on the rise. Part of the reason for this is due to flexibility in modeling, computational accuracy and feasibility, and the existence of large databases from which to construct priors. Much data from various clinical trials have been obtained in the past 20 years, and that information can be used to analyze and design current trials using formal Bayesian methods. These aspects were all demonstrated over the course of the workshop.

Visitors *(cont'd from previous page)*

analysis, and she is now investigating the censoring of covariate problems in the Cox Regression Model. Sungim sat in on a course on clinical trials and found it very impressive. In her free time, Sungim explored Boston and discovered many beautiful things such as attending "La Boheme", jazz concerts, and sampling various ethnic foods.

John Nwangwu is a Columbia-trained epidemiologist, originally from Nigeria. This past year John visited Harvard and Dana-Farber from Connecticut, where he is a professor of Public Health at Southern Connecticut State University. He teaches Epidemiology in New Haven (SCSU) and Infectious Disease Control in Farmington (UCONN). He also teaches Quantitative Methods in Clinical Studies at Yale School of Medicine. His primary interest is in microbial diseases, especially in the control issues. He recently returned from Africa where he worked on a disease control project of Lassa fever. His primary project at Dana-Farber was on clinical trials in metastatic soft tissue sarcomas. While at the School, John liked spending much of his time sitting in on Biostatistical and Epidemiological lectures and found the scholarly environment here very refreshing.

Sven Samuelsen is associate professor in the Statistics Division of the Department of Mathematics at the University of Oslo, Norway. His main research interests are survival analysis, particularly in connection with epidemiological designs like case-cohort and nested case-control studies. While visiting Harvard this past year Sven worked with Louise Ryan and Matt Wand on case-control designs related to longitudinal data.

INTERVIEW WITH STEVE LAGAKOS

by Cyrus R. Mehta

Steve Lagakos has what one might call a charismatic personality. He has presence. At faculty meetings, for example, one will definitely remember if he was present. Additionally he is blessed with an amiable nature, a sense of humor and a quick wit. These are all marks of a leader and indeed, leadership comes naturally to Steve. Whether on faculty committees, on research projects, or in a classroom setting, he is unlikely to play second fiddle to anyone. I met Steve for the first time 22 years ago in Buffalo. I met all the members of Dr. Zelen's statistical laboratory that day, but the only person I clearly remembered was Steve. He impressed me as someone who really loves what he does and plunges into it whole-heartedly. The advice he gave me then was "Try to have a deeper understanding of the actual medical problem before attempting to formulate and solve the corresponding statistical problem." Evidently he has held onto this conviction all these years for it clearly comes through in this interview, which I conducted in Steve's office shortly after he had been appointed the new Chairman of the Department of Biostatistics.

CRM: Steve, first of all, congratulations on your appointment as chairman of our department. Now, you joined the department when Fred Mosteller was the chairman. What are the major differences between the department of today and the department when Fred was the chairman?

SL: Boy there are a lot of differences. For one, there is a difference in the age distribution of the faculty. Then we had Fred Mosteller, Marvin, Marge Drolette and Bob Reed, and then a 20+ year age difference for all the rest of us. But in terms of activity, as you know, back then we had a much smaller department with a concentration in cancer clinical trials and very few other areas. Today we still have the cancer activities, but we also have our work in AIDS, the environment, psychiatric statistics and genetics. It's a much more heterogeneous department, and of course it's a much bigger department.

CRM: What do you think fueled this spectacular growth?

SL: I think Marvin's coming here was the first big jump. And that brought all the people in the cancer clinical trials. Another big jump was the AIDS project, where we've gone from really nothing in 1988 to 15 faculty, 8 research scientists and 25 master's level statisticians at the present time. The environmental work has also grown under Louise's [Ryan] leadership. A lot of methodology has come out of those areas. And that fuels research, which fuels postdocs, which fuels more research.

CRM: When I was working in ECOG our main tools were logistic regression, the Cox proportional hazards model and contingency tables. But I was recently looking at some of the AIDS reports. And these studies utilize extremely complex models with longitudinal end-points.

SL: It's gotten much more interesting and complicated. Cancer research has also changed, and is different than what it was then. And in AIDS, which I know better now, longitudinal data, failure time data, and their interface is at the heart of much of what is being done. And now, with genetics playing an increasing role, analyzing high dimensional data is going to be the wave of the future. AIDS research is fascinating in terms of the challenge. The field is changing so quickly.

CRM: There have been so many methodological advances in the last two decades. We have had big developments in mixed models and GEE techniques for longitudinal data, missing value problems, permutational inference, MCMC, bootstrap, and other computationally intensive techniques, developments in group-sequential methods for early stopping and, finally, Bayesian methods. Are our students getting a good training in all these areas?

SL: I think they are getting training in some of the new areas, but not in all areas. For example, you mentioned group-sequential inference. Our students probably get relatively little exposure to that. And yet, if you are involved in clinical trials you have to know this methodology since very few longer term trials are not monitored. But our students get only a little bit of exposure to that in our clinical trials course. They get a fair exposure to Bayesian methods through a special topics course. They can get exposure to exact methods when you are teaching your special topics course. But at present these specialized topics are not an integral part of our curriculum. Perhaps because there is so little time. Some people feel that we don't even spend enough time on very basic areas such as probability and inference. The mechanism for learning about these new methods is through our special topics courses. Fortunately there are quite a lot of them. At least six are being given this year, which is good. As to whether our students take many of them, I'm not sure. I think it's a question of time. I believe that in the coming years we are going to see the average duration of students here being more like five years instead of four years and a summer. And I think that with that additional time we will see more course work, and hopefully, more practical experience. If we implement the new "Practical Training Program" that the faculty have been discussing, students will actually be involved in environmental, cancer and AIDS studies while they are here; they will be gaining this valuable practical experience and will be paid for their efforts. Then they'll have to learn about interim analysis, for

Lagakos interview *(cont'd on next page)*

Lagakos interview *(cont'd from previous page)*

example. And they'll have to learn about exact methods. Given the many exciting applied projects that we are involved in, it would be great if our students could benefit from these more. When we asked students about this in an informal survey they felt that more access to applications was at the top of their list.

CRM: Can you say something about your role in reviewing manuscripts for *The New England Journal of Medicine*? How seriously does the *NEJM* take good statistical methods, and how much impact do you really have on the articles published by them?

SL: I'm one of three statistical consultants to *The New England Journal*, the other two being Jim Ware and Walter Willett. We form a review committee along with the editor, the executive editor, a consultant in microbiology, and 12 other associate or deputy editors. When papers come to *The New England Journal* they are first screened by the editor. Those that are deemed potentially good get sent out for review. And if they get good reviews, if they have survived all those hurdles, only then do they come to this committee. Every Thursday we review them, and we decide whether or not they are likely to be published. Many of them get turned down. I would say that in those sessions Jim, Walter and I play a very active role by voicing our opinions on the strengths and weaknesses of papers. And then after the meeting the papers that provisionally look good get divided up among us for a thorough review with extensive written comments. On average we each review about three papers a week. I spend Saturday mornings, Sunday evenings and one other evening doing it. It consumes about six hours a week, and the Thursday meeting takes about two and a half additional hours. It's a pretty big time commitment, but I love it. The reason I took this position is to broaden my knowledge of medicine. What I didn't realize, and what I really love about it, is the fact that I feel that I have an important role in determining the ultimate disposition of papers and on the statistical methods that are used in these papers. They (editors) frequently call on us for advice. They are brilliant physicians and have a good general understanding of quantitative methods. But when it comes to technical things they really have to rely completely on us. The *NEJM* is very concerned about its reputation and in publishing research results of the highest quality. So it has been an interesting and incredibly rewarding experience.

CRM: You've been involved in some fairly high-profile studies. When you first came here you were involved in the Red-40 carcinogenicity problem. Then you were involved in the Woburn health survey. And, as I recall, you also went to China to set up a WHO study. What did you learn from those types of activities?

SL: All those were examples of things that were removed from my regular research. Red-40 was something that Fred [Mosteller] dragged me into, and it was a great pleasure and honor to work with him. This experience got me interested in carcinogenicity testing. Subsequently, Tom Louis (now at University of Minnesota) and I started working on some statistical problems arising in these studies along with Louise Ryan, who was a student at the time. This probably was how Louise first became involved in environmental statistics. And Woburn too was something of an aside. It began when this minister, Bruce Young, told us about one of the mothers in his church, Anne Anderson, who had just lost a child to leukemia. He said there was a high rate of leukemia in the town and that they had recently discovered that wells that serviced part of the town were contaminated, and they wanted to know if there was a connection. So we got involved. We designed the study and used 300 volunteers from both Harvard and the town to collect information about the health of the community. It was an extraordinary effort and in the end I was very proud of what we did. I think the citizens groups felt that we were honest with them. They trusted us. One of the problems they had before was that they didn't have a lot of trust in some of the health organizations in the country. I think we crossed that bridge and even though they didn't like some of the things we said, they felt that we were speaking as honestly as we could and that we didn't have a hidden agenda. That part was really important. That was an amazing experience. I wouldn't trade it for anything in the world. But Marvin really deserves the credit for this. He was the one who had the vision and whose first reaction was to help, and not worry about the consequences in terms of his own time.

CRM: That is the usual Marvin style isn't it?

SL: That is the usual Marvin style. If he feels right about something he just does it. Too many of us worry about the consequences. How is this going to affect my career, my income, my CV? But looking back, I wouldn't have traded those experiences that resulted from an impulse for anything. Take the work on the AIDS project for instance. The administrative aspects of forming and running the AIDS project for all those years took up an enormous amount of my research time. Yet when I look at what we have accomplished I wouldn't trade it for anything in the world because I feel we did and are doing something really important. So what I've learned from all this is that if something sounds interesting, you should go for it. It may not always pay off, but in the long run it has really enriched me. So I would advise the younger people, "Don't worry so much about the future, and go with what your heart tells you is something important." If you worry too much about the implications for your career, CV, income, etc, you might miss out on some very exciting things!

Lagakos interview *(cont'd on p. 14)*

NEWS FROM RESEARCH AND EDUCATIONAL GROUPS IN OUR DEPARTMENT

by Donna L. Spiegelman and Louise M. Ryan

Dana-Farber Cancer Institute (DFCI)

The Department of Biostatistical Science at DFCI continues to maintain a close partnership with our department. Its faculty and master's level statisticians provide collaborative research in cancer by providing expert consultation on the experimental design and analysis of clinical, laboratory, and population based studies and develop new statistical methods for cancer research. Several statisticians in the department have gained international reputation in the cancer research community for work in breast cancer and hematologic malignancies. Statisticians in the department have also made seminal contributions to methods for the analysis of clinical trials, to the understanding of methods for event time data, to computationally efficient algorithms for analyzing sparse data sets, to the gathering and analysis of quality of life data from clinical studies, and to methods for analyzing toxicology data. The department continues to serve as the Statistical Center for the Eastern Cooperative Oncology Group (ECOG), and the Statistical Center for the International Breast Cancer Study Group (IBCSG) is also located in the department. Department members are involved in methodologic research in the areas of carcinogenicity, statistical issues in the early detection of disease, methods for analyzing correlated, sequential measurements, robust methods for survival data, mechanisms of mortality/morbidity due to air particles, and the development of software for toxicological risk assessment.

Center for Biostatistics in AIDS Research (CBAR)

CBAR is a fast growing Center strongly linked to the Department of Biostatistics through faculty appointments, teaching and collaborations. CBAR has established itself internationally in the field of adult and pediatric AIDS research with studies such as ACTG 019 (Dr. Lagakos), the first study to show that AZT delays the symptoms in asymptomatic HIV-infected adults with fewer than 500 CD4+ cells; ACTG 076 (Dr. Gelber), the study which established the efficacy of AZT, given to mothers and infants, for dramatically reducing the risk of perinatal transmission of HIV; and ACTG 320 (Dr. Hughes), which defined the current treatment standard for HIV-infected adults with protease inhibitor combination therapy. CBAR is currently responsible for 59 pediatric studies and 92 adult studies. Today, CBAR employs over 90 people, a combination of faculty, doctoral and master's level statisticians, statistical programmers, administration and computing staff. A current active area of statistical research at CBAR involves the development of statistical methods for the analysis of RNA data, which can be censored due to limits of quantification of the assays. Drs. Betensky and DeGruttola conducted an analysis of data from two studies, to determine how to accommodate censoring in analysis of endpoints based on change in HIV-1 RNA levels over time. Methods that accounted for censoring were compared to commonly used methods of analysis, and the standard methods were found to be highly prone to bias.

Environmental Statistics

The Department of Biostatistics has an active group interested in environmental statistics and risk assessment. Eight pre-doctoral students and two postdoctoral fellows are supported by an NIEHS training grant to pursue research in Environmental Statistics. Two former training grant fellows (Sally Thurston and Brent Coull) have successfully obtained their own individual grants from NIEHS. Approximately five departmental faculty consider environmental statistics to be their primary methodological research focus and work on problems motivated by toxicology, risk assessment, occupational health and environmental epidemiology. Paul Catalano, Louise Ryan, and Paige Williams all share interests in statistical methods for toxicology and risk assessment. Paul has particular interests in respiratory, neuro- and developmental toxicity, Paige and Louise in carcinogenicity and developmental toxicity. Joe Ibrahim is also interested in statistical methods for toxicology, especially Bayesian methods for incorporating historical control data. Donna Spiegelman works on the development and application of measurement error models for environmental and occupational epidemiology, while Matt Wand studies the use of smoothing methods in that setting. Matt is also interested in spatial disease mapping, and is presently working with Louise on a cancer mapping project for Cape Cod. David Wypij works on applications of repeated measures and longitudinal methods for environmental epidemiology, particularly as concerns the health effects of air pollution. Our group collaborates with colleagues in the Department of Environmental Health here at the School, as well as with the USEPA, the local department of public health and other groups. We maintain several active seminar groups and working groups. Further details can be found at our environmental statistics web page, http://www.biostat.harvard.edu/~mwand/envi/envi.html.

 (cont'd on next page)

Research & Educational Groups *(cont'd from previous page)*

Epidemiology

There is a growing group of biostatistics faculty, postdoctoral fellows and staff whose work is focused on the application of statistics to epidemiologic research. At the Channing Laboratory, Drs. Rosner, Lee, Carey, and Berkey conduct statistical research on measurement error methods applied to prospective studies of diet, lifestyle and chronic diseases such as cancer and cardiovascular diseases, on methods for outlier detection, and methods for the analysis of clustered and longitudinal data. This research is motivated by problems which arise in their statistical support of the Nurses' Health Study, a prospective study of over 100,000 registered nurses which began in 1976, and the Nurses' Health blood study, a nested-case control study of over 30,000 prospectively collected blood samples which are used to investigate the relationship between serum hormones, genetic polymorphisms, and biomarkers of dietary intake, with the incidence of breast cancer and other chronic diseases, laboratory studies of the action of antibiotics on bacteria and their toxins, and projects relating biomarkers of lifetime environmental exposure to lead on aging and chronic disease. At the Department of Epidemiology, Drs. Spiegelman, Robins and postdoctoral fellow Handan Wand (two more postdocs will be joining us in the fall!) conduct statistical research on measurement error methods as they arise in epidemiologic studies of the effects of nutrition, occupation and the environment on health, on causal inference in observational studies and on semi-parametric estimating equations for modeling conditional means in the presence of missing data, non-compliance, measurement error, and selection bias. Statistical support is provided by this group for the Nurses' Health Study II, a prospective study of over 100,000 younger registered nurses which began in 1989, the Health Professionals' Follow-up Study, a prospective study of over 50,000 male health professionals which began in 1986, a vitamin trial for prevention of perinatal transmission and disease progression among HIV-infected mothers and their children based in Dar es Salaam, Tanzania, and the Pooling Project on Diet and Cancer in Men and Women, in which the eight studies worldwide with prospective data on diet and cancer in men and women are being pooled to obtain summary estimates of effect, investigate associations with rarer cancers, and perform other subgroup analyses for which relevant biologic hypotheses exist.

Massachusetts General Hospital (MGH)

The biostatistics group at MGH, which includes Dianne Finkelstein, Dave Schoenfeld and Steve Skates, has moved into a new office suite at the MGH, located at 50 Staniford Street, Suite 560. They continue efforts working on NIH projects including the Cancer Genetics Network Coordinating Center, an Adult Respiratory Distress Syndrome Coordinating Center, as well as collaborations in the MGH with the Cancer Center, the GCRC and the Medical Practices Evaluation Unit.

Diversity Initiatives

This June was the 6th time the Department has held the Summer Program in Biostatistics, designed for under-represented minority students majoring in mathematics and related quantitative fields. This year, we had six outstanding students including Rebecca Hubbard from the University of Pittsburgh, Micean Johniken from Tuskegee University, Demetris Morgan from LeMoyne-Owen College, Erika Rhett from Claflin College and Harvey Samuels from University of the Virgin Islands. Since being awarded an NIH Initiative for Minority Student Development (IMSD) grant last year, our program has expanded to include research internships as well. This year's interns included Keshia Pollack from Tufts, Eric Tchetegen and Enyi Nwaneri from Yale and Petrona Varela-Mont from University of Puerto Rico. Three students who will start their graduate training at HSPH in the fall came early to work as interns: Andy Houseman and Shannon Escalante will both join the Biostatistics Department this fall, while Isa Williams will join Epidemiology. Isa was a student in the Summer Program last year. All our summer students were attendees at a special workshop held on June 28th, "Social Inequalities in Health: Race and Ethnicity" at the School. This years's speakers were Dr. Sherman James from University of Michigan, Dr. Javier Rojo from University of Texas, El Paso, Dr. Tony Earls from Harvard Medical School, as well as Aaron Foster and Dolores Acevedo-Garcia from the Harvard School of Public Health. The workshop was a great success, as seen from the smiling faces in the photo below.

18 STUDENTS EARN DEGREES IN 1998-99
by Kathryn Lunetta

A total of 18 students earned degrees in the 1998-1999 academic year. Judy Bebchuk, Patti Bernardo, Elizabeth Blackwell, Jason Fine, Nick Horton, Cheryl Jones, Mary Morrissey, Helen Parise, Meredith Regan, Zhenyu Wang, Janice Weinberg, and Beow Yeap all earned Doctor of Science degrees. Sean Carter, Karen Eckstein, Brooke Hayward, Miguel Hernan, Larissa Longnecker, and Beth Zamboni earned Master of Science Degrees.

Cheryl Jones, Jason Fine, and Janice Weinberg have all accepted positions in academia. Cheryl will join the faculty of the University of Texas at Houston School of Public Health, where she will teach, research, and work at the school's coordinating center for clinical trials. Jason is an Assistant Professor at the University of Wisconsin–Madison, where he has a joint appointment in the Department of Statistics and the Department of Biostatistics and Medical Informatics, and is also director of the Informatics Core at the General Clinical Research Center at the UW–Medical School. Janice is an assistant professor at the Boston University School of Public Health, Department of Epidemiology and Biostatistics.

Meredith Regan, Judy Bebchuk, and Mary Morrissey have remained in academia as well. Meredith is in Boston, in the Biometrics Center at the Beth Israel-Deaconess Medical Center. Judy is a research associate at the University of Minnesota in the Division of Biostatistics. Mary has spent the academic year as a visiting lecturer in the Statistics department at the University of Chicago.

Patti Bernardo, Beow Yeap, Nick Horton, and Helen Parise have all stayed close to their HSPH roots. Patti and Beow are postdoctoral research fellows at the Dana-Farber Cancer Institute and HSPH. Nick is a postdoctoral research fellow in the HSPH Biostatistics department, and Helen is a postdoctoral research fellow in the departments of Environmental Health and Biostatistics at HSPH.

Elizabeth Blackwell plans to start her summer with a (much deserved!) vacation and family visit, and then will start a job search in the Washington, DC or Seattle areas. Zhenyu Wang is now an associate in the Firmwide Risk Department at Goldman Sachs & Company, where he creates quantitative risk models using various statistical methods.

Two of the six recipients of Master of Science degrees this spring, Karen Eckstein and Beth Zamboni, will continue in our department's doctoral program. Brooke Hayward will spend the summer as an intern at Genome Therapeutic Corporation in Waltham, MA. Sean Carter will be returning to his hometown of Norfolk, Virginia to work as a statistician in the Glennan Center for Geriatrics and Gerontology at Eastern Virginia Medical School (EVMS). In the more distant future, Sean plans to return to school as a medical student, and become a urologist. Miguel Hernan finished a doctorate in Epidemiology as well as his master's in Biostatistics, and will stay on at HSPH as a postdoctoral researcher in the department of Epidemiology.

1999 Biostat Graduates: Bottom row-Patti Bernardo, Judy Bebchuk, Janice Weinberg. Top row-Brooke Hayward, Cheryl Jones, Miguel Hernan, Nick Horton, Lali Longnecker, Beth Zamboni, Helen Parise, Sean Carter. Not in photo: Elizabeth Blackwell, Karen Eckstein, Jason Fine, Mary Morrissey, Meredith Regan, Zhenyu Wang.

OUR FACULTY AND STUDENTS HAVE BEEN PROMINENT THIS YEAR IN ACADEMIC EXCELLENCE AND SERVICE TO THE PROFESSION
by Evelyn Ophir

As in past years, faculty and students in our department have been recognized by many institutions for their commitment and contributions in the field of biostatistics. They have assumed leadership roles, provided important service to the profession, and attained excellence in the areas of scholarship and teaching. Dr. James M. Robins, Professor of Epidemiology and Biostatistics, was named a Fellow of the American Statistical Association at the Joint Statistical Meetings held last August in Dallas. Dr. Robins was chosen to receive this honor "for advances in causal inference for observational studies; for development of semi-parametric efficient estimators for incomplete data; and or contributions to major public health issues". Dr. Joseph Ibrahim, Associate Professor of Biostatistics, will be named an ASA Fellow at the Joint Statistical Meetings to be held this coming August.

Dr. Louise M. Ryan, Professor of Biostatistics, received the "20th Century Distinguished Service Award" from the 9th Lukacs Symposium on Environmental and Ecological Statistics.

Dr. David P. Harrington, Professor of Biostatistics, assumed the position of chair of the Department of Biostatistical Science at the Dana-Farber Cancer Institute last July 1st following Professor Marvin Zelen's 21-year tenure. Dr. Harrington is also currently Jannssen Research Foundation Chair in Survival Analysis (first recipient) at Limburg Universitaire Centrum in Belgium.

Dept. recognition *(cont'd on next page)*

Dept. recognition *(cont'd from previous page)*

In July 1998 Dr. Dianne M. Finkelstein, Associate Professor of Biostatistics, was awarded Principal Investigator for the Statistics and Coordinating Center of the NCI's Cancer Genetics Network, a multi-center interdisciplinary cooperative that will supply the infrastructure for research investigations of the genetic basis of human cancer susceptibility, explore mechanisms for integrating this information into medical practice, and identify means to address the public health issues associated with human cancer genetics.

Dr. Donna L. Spiegelman, Associate Professor of Epidemiology and Biostatistics, became an Associate Editor of the *American Journal of Epidemiology*. Donna was also recently elected as Chair-elect of the Section on Statistics in Epidemiology of the American Statistical Association. Dr. Ronghui (Lily) Xu, Assistant Professor of Biostatistics, received the David P. Byar Young Investigator Award at last August's Joint Statistical Meetings in Dallas for her paper on "Estimating Average Regression Effect Under Nonproportional Hazards". This award is sponsored by the Biometrics Section of the ASA and is presented annually to a young investigator for the best paper.

Mahlet Tadesse and Lu Tian, both first year doctoral students, received Howard Hughes Fellowship awards, which consist of a fellowship that will fund Mahlet and Lu for the next three years with a possible extension of two years.

Cassandra Arroyo, a first year Master's student, was awarded third place in the Math and Physics Category at the Beta Kappa Chi National Conference held in Philadelphia in April, 1998 for a paper she presented on the analysis she and colleagues did on DNA adduct data. Cassandra also did a poster presentation on the project at the Morgan State University Undergraduate Science Research Symposium and won first place in the Biology Category.

Two of our students, Tianxi Cai and Jonathan French, won ENAR Student Awards this year for papers they submitted to the annual student competition and presented their papers at this March's ENAR spring meetings. Carrie Wager was named the Scottish Rite Schizophrenia Research Program Dissertation Research Fellow at Harvard University for 1999-2000.

Anna Legedza was awarded a student prize from the Biopharmaceutical Section of the ASA at last August's Joint Statistical Meetings for her and Dr. Joseph Ibrahim's paper entitled "Prior Elicitation and Computation in Phase I Clinical Trials."

Dr. Kimberlee Gauvreau, Assistant Professor, was selected by the student body to receive the HSPH Roger L. Nicholas Excellence in Teaching Award for her outstanding teaching of BIO 201ab, "Introduction to Statistical Methods". One of Dr. Gauvreau's TAs, Erin Kammann, described her teaching as "simply flawless and exemplary" and was struck by her attentiveness to student questions and challenges. Dr. David P. Harrington received a citation for his excellence in the teaching of BIO 230ab, "Probability Theory and Applications." Erin Kammann received this year's HSPH Teaching Assistant Award for her outstanding work as a teaching assistant in BIO 201ab, "Introduction to Statistical Methods" and BIO 210cd, "The Analysis of Rates and Proportions". Hatch Whitfield, who received last year's HSPH Teaching Assistant Award and is a fellow student in the department, remarked that "Erin approached her work as a teaching assistant with dedication, compassion, and wonderful humor, and she was known in the courses she taught in as the best TA ever."

Scarlett Bellamy and Stephen Lake were awarded the Robert B. Reed Prize at the HSPH Awards Dinner which took place in May. This prize is presented each year to one or two Biostatistics students for academic excellence.

Additionally, the Department presented tuition awards to several of its students in the 1998-99 academic year: Jolene Birmingham and Minghee Kang were named Schering Plough scholars; Lisa Miller, Meredith Slavick, and Stephen Lake were Pfizer scholars.

Congratulations to all of you for your outstanding scholarship, achievement, and dedication to the profession!

INCOMING CLASS STATISTICS
by Emily Martin

There are 19 in the incoming biostatistics class, outnumbering last year's class of 16. There are 16 DS candidates and 3 MS candidates. Twelve are US citizens and seven are international students or US permanent residents. Gender is evenly distributed (10 female, 9 male), in contrast to last year's class (12 female, 4 male). Degree and employment status are also evenly distributed. Nine have a prior master's degree and the remainder enter with bachelor's degrees. Nine were working full-time (at biomedical research organizations, pharmaceutical or biotech companies, as math teachers, etc.) and ten were students last year.

We welcome the new crop of students and look forward to the transformation of each one from a statistic to a biostatistician!

UPCOMING DEPARTMENTAL EVENTS
(all events held at HSPH)

1) **Myrto Lefkopoulou Distinguished Lecture, September 23, 1999, 4:00-5:00 p.m. Reception to follow lecture.**
Dr. Giovanni Parmigiani, Institute of Statistics and Decision Sciences, Duke University will speak on "Breast Cancer Genes: Modeling and Medical Care"

2) **Schering-Plough Workshop, June 1-2, 2000**

3) **Zelen Leadership Award Lecture, June 2, 2000**

Lagakos Interview *(cont'd from p. 9)*

CRM: What can you do as department chairman, in terms of the quality of life for the junior faculty?

SL: The situation for junior faculty is challenging. You can come here and do extremely well, but that doesn't mean you are going to become tenured. I think what we have tried to do is create as many opportunities for tenure as possible, but at the same time make the environment for junior faculty enriching so that even if they don't get tenure, their stay here will be extraordinarily valuable. This means opportunities must be created to engage in interesting research, to teach, to work with students, to enjoy Boston. The ideal situation, if junior faculty members leave to become Professors elsewhere, is that they feel that their days at Harvard were among the best years of their lives.

CRM: But there should be a camaraderie. I've heard Colin Begg, David Schoenfeld and others from the Buffalo days say that they shared a sort of spirit. They felt that they all belonged to a very nice, very happy family.

SL: Yes I know. I felt the same way. That was so important. Because it meant that the time you had there was very special. But we've grown. It's harder to do that as a department becomes larger. And things are probably more competitive now. And some people worry a lot more about, "what does this mean for my career?", etc. Sometimes there are advantages not to worry so much.

CRM: I think your leadership can help.

SL: I hope so. You know, the quality of the academic environment is something I care deeply about. How to maintain a high level is not easy. I think it's a question of making people's responsibilities as pleasant as possible and making this an enjoyable environment. I remember that spirit from Buffalo and I cherish it. It still carries on. So I am hopeful. Five years from now we can make an assessment. Hopefully we can look back and be pleased.

Frisbee Players: Front-Roger Logan, 1st row-Florin Vaida, Matt Wand, Nick Horton, Nathan Taback, 2nd row-Ron Bosch, David Shapiro, Carrie Wager, 3rd row-Paige Williams, Erin Kammann

Alumni & Friends *(cont'd from p. 15)*

Martha Contreras (Research Fellow '93-'95) and Roger Rennes are the happy parents of a baby girl, Martina Contreras-Rennels, just born at 8 pounds, 13 ounces. The family lives in Ithaca, NY, where Martha is an Assistant Professor in the Department of Biometrics at Cornell University. (martha@growth.biom.cornell.edu)

Jesse Berlin (ScD '88), Russell Localio (MS '84), Sue Marcus (MS '79), Kathleen Propert (ScD '90), Mary Putt (ScD '98), Mary Dupuis Sammel (ScD '95), and Xin Tu (Research Fellow '90-'92), are pleased to announce the beginning of a new graduate program in Biostatistics at the University of Pennsylvania School of Medicine in Philadelphia, Pennsylvania beginning in the Fall of 2000. The program will offer MS and PhD degrees. Our alums are among the 16 core faculty which make up the Department of Biostatistics and Epidemiology. Their website is http://cceb.med.upenn.edu/main/education/edugeneral.html.

Marcia Polansky (ScD '84) is an associate professor at MCP-Hahnemann University, School of Public Health in Philadelphia. Marcia enjoys her teaching responsibilities and is also able to combine her research interests in biostatistics and health policy. (polansky @auhs.edu)

We would be happy to receive any news updates from you! Please send them to ophir@hsph.harvard. edu.

THE FRISBEE WORKING GROUP

by Erin Kammann

What Department of Biostatistics working group requires its attendees to come suited up for a challenging, fast and fun workout involving a game where every member has both quarterback and receiver-like responsibilities? Where every member has hopes of passing the game point hammer throw? Where it is common to see the working group chair rolling on the grass with frisbee secure in hand after an all-out leap and graceful catch mid-air? Every Wednesday at 5pm a dedicated group of Harvard biostatisticians leave their bootstrapping, SAS code, and Cox models behind to head out onto the medical school quad for an invigorating meeting of the Frisbee Working Group (FWG), where the strategic science of ultimate frisbee is dutifully played out.

The popular FWG, established in 1998 by Matt Wand, the presiding working group chair, is comprised of a diverse group of graduate students, faculty, postdocs, and research scientists from the Department of Biostatistics and CBAR. The FWG's official game disk is a 175 gram Discraft, a commonly used frisbee in ultimate known for its aerodynamic lift and gyroscopic stability.

For more information on the FWG, stop by or join in during game time on Wednesdays!

ALUMNI AND FRIENDS CONNECTIONS

Below is news we have received from Biostat alumni and friends since last year's issue of *Biostat Connections*.

Professor Richard B. Biritwum (MS '79) is married with five children and is Associate Professor in the Department of Community Health at Ghana Medical School where he teaches public health and biostatistics. He also undertakes short term assignments for W.H.O. on Health System Evaluation and worked in Geneva with the AIDS Program during 1988-1991. (biritwum@africaonline.com.gh)

Dr. Marian Pugh Ewell (ScD '93) is working as a statistician with the EMMES Corporation in Potomac, MD. She is married to Malcom Webster Ewell, Jr. and has two children, Cameron who is almost three and Benjamin who was just born last year! (mewell@emmes.com)

Dr. John Carlin (Research Fellow '84-'85 and Visiting Scholar '95) is Associate Professor and Deputy Head of the Clinical Epidemiology and Biostatistics Unit at Royal Children's Hospital in Coburg, Australia. John is currently a Visiting Associate Professor in the Department of Epidemiology and Biostatistics, College of Public Health, University of South Florida, Tampa until December 31st. (j.carlin@medicine.unimolb.edu.au)

Roger Day (ScD '84, Research Fellow '84-'86) has been delightfully married to Abby Resnick for 15 years. They have three children – Ben 14, Nathan 10, and Eva 8. Roger directs Biostatistics at the University of Pittsburgh Cancer Institute. He also directs the Educational Resource for Tumor Heterogeneity and is working on the development of the Oncology Thinking Cap (www.pci.upmc.edu/ tcap). Roger says hello to his old friends in Biostat! (day@zydeco.pci.upmc.edu)

Julia Bienias (ScD '93) has joined the faculty of Rush-Presbyterian-St. Luke's Medical Center in Chicago. She is working on aging at the Rush Institute for Healthy Aging. (jbienias@crha.rpsimc.edu)

Sheldon Fishman (MS '73) recently changed positions from Manager of Research Information Systems at the Federal Reserve Board to working at the software development company, Statistica, Inc., in Rosslyn, VA where he is Senior System Engineer. Last year Sheldon and his wife celebrated 25 years of marriage (incidence=1; prevalence=1; survival=25+ years). His oldest daughter has graduated college, two more are on track at Tufts, and the baby is a successful sophomore in high school. (fishmans@radix.net)

Catherine Spino (ScD '89 and Assistant Professor '90-'96) and family are moving to Ann Arbor this month!! Cathie took a position with Parke-Davis as Statistical Project Manager and will be working in Phase II and III clinical trials in the cardiovascular area, specifically anticoagulants. JJ is now in kindergarten, Anna just started pre-school, and Emily is 14 months old. (spino2stat@aol.com)

Joseph Hogan (ScD '96) is completing his 4th year as Assistant Professor of Biostatistics at Brown University in the Center for Statistical Sciences and was recently appointed from research track to tenure track. Joe has been working on several projects including a longitudinal study of natural history of HIV in women and a study to characterize predictors of success in in-vitro fertilization. He and wife Dawn just had their first child, a baby boy named John Ryan (Jack) born last December. (jhogan@pappus.stat.brown.edu)

Nicholas Lange (ScD '86) is Associate Professor of Psychiatry (Biostatistics), Consolidated Department of Psychiatry, Faculty of Medicine, Harvard University, and has been recently appointed as Director, Statistical Neuroimaging Laboratory, McLean Hospital, Belmont, MA. Nick's projects involve research in statistical neuroimaging in animal and human studies. His daughter, Sarah, just graduated from Bowdoin College in Mathematics and Computer Science. His son, Nick, will be a sophomore at Cornell University in the fall. He and his wife, Louise Ryan, plan to spend the transition of the new millenium on a beach north of Sydney, Australia. (lange@mclean.harvard.edu)

Tony Rossini (ScD '94) and wife Sally are now in Seattle, thanks to a great offer made by University of Washington to Sally. Tony spent most of 1998 with various small start-up companies before taking a position in the Biostatistics Department at University of Washington, where he's currently working at the Center for AIDS Research. He reports that coming back to academia from a series of small businesses is quite a change! (rossini@biostat.washington.edu)

Wendy Leisenring (ScD '92) is on the faculty at the Fred Hutchinson Cancer Research Center in Seattle where she collaborates on projects relating to bone marrow transplantation and reproductive epidemiology as well as developing methodology for the analysis of medical diagnostic test data. Wendy and her husband Marty Cohen have a nine-month old baby girl Anne and are enjoying her very much! (wendy@fhcrc.org)

Sonia Castillo (Research Fellow '93-'95) and Aaron Mannes were recently married in Baltimore, MD. Sonia currently works as a Mathematical Statistician at the FDA in Rockville, MD and Aaron is Director of Research at the Middle East Media and Research Institute (MEMRI) in Washington, DC. (castillos@cder.fed.gov)

Alumni & Friends *(cont'd on p. 14)*

***BIOSTAT* Connections** (1999)

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