

EPIDEMIOLOGY NEWS

April 30, 2010

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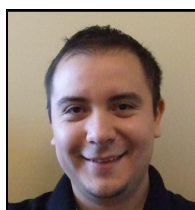
DOCTORAL STUDENTS GARNER AWARDS

INSIDE THIS ISSUE:

Chair's message	2
Upcoming	2
Faculty Honors	3
ACCORD	3
Featured Articles	4
IOM and NYAS	5
Submitted Grants	5
Staff Profile	6
Alan Berkman Memorial	6
Student Profile	7
University Seminar	7
Faculty Profile	8
More Featured Articles	9
IMSD	9

IRVING INSTITUTE FOR clinical and translational research

Jorge Luna, MPH, a doctoral trainee in infectious disease epidemiology, received a CTSA Transform T32 award in support of his work evaluating infectious disease precipitants of stroke events using longitudinally linked NYS hospitalization data. The award is an excellent interdisciplinary training opportunity for doctoral students. It provides a means to obtain formal mentorship in a new discipline, and engenders a greater understanding of interdisciplinary approaches to research through seminars and funding for additional coursework. In Mr. Luna's words, "This is definitely one of Columbia's gem doctoral training programs."



In addition to the CTSA award, Mr. Luna has been selected to serve as Global Health Fellow Intern at the US Agency for International Development in the HIV/AIDS Surveillance Office for Summer 2010. During the program, he will be working with epidemiologists to write a comparative surveillance systems report/protocol for USAID to direct future surveillance system building.



Epidemiology doctoral student **Miriam Fenton, MPH** received a student merit award to attend the 33rd annual Research Society on Alcoholism (RSA) conference this June in San Antonio Texas, where she will present her poster "Intoxicated Driving in the United States: Incidence and Persistence." Ms. Fenton and her co-authors developed estimates of one-year incidence and three-year persistence of intoxicated driving, using data from the National Epidemiologic Survey of Alcohol and Related Conditions, and have identified demographic and behavioral risk factors, with the aim of developing population-level educational interventions to reduce the risk of intoxicated driving.



Cancer training fellow **Catherine Richards, MPH** will travel to the American Society of Preventive Oncology to present her poster "Neighborhood Socio-Economic Status and Individual Smoking Status Interact to Predict PAH-DNA Adduct Levels in Prostate Tissue." This work is one of the first examples of research that links neighborhood contextual factors to molecular biomarkers in prostate tissue. Our findings show that one primary source of exposure to polycyclic aromatic hydrocarbons (PAH), whether at the individual or contextual level, may play a critical role in whether PAH-DNA adducts form in prostate tissue.



MESSAGE FROM THE CHAIR



Welcome to the third issue of our newsletter. It's been an eventful two months since our last issue, with two terrific CUEGR lectures from Sonia Hernandez-Diaz and Alain Jacques Valleron, and two dynamic faculty meetings. And we shouldn't forget the biggest milestone of the past two months: Liliane Zaretsky became a grandmother when young Benjamin Aaron Zaretsky was born on April 13.

May brings its own excitement with a major focus on our students. Our front page features students whose work has been recognized in a variety of arenas. Elsewhere in the newsletter we highlight student work appearing in prominent journals. We look forward to graduation on the afternoon of May 17, with a special awards ceremony for doctoral students that morning. We'll hold our second Epi social event, a doctoral graduation party in Hess Commons, on May 18.

We're very proud of our outstanding graduating class and confident they will represent us well as they embark on careers in public health. I am also extremely impressed with our excellent incoming class, and looking forward to all that they will accomplish as our students.

Warm regards,

UPCOMING: MAY AND JUNE 2010

May 5	Dean's Grand Rounds: Richard F. Daines
May 6	Calderone Awards Ceremony
May 14	Epi Faculty Meeting: Master's program
May 18	Epi Social: Doctoral Graduation Party
May 19	CUEGR: Jay Kaufman
May 28	Epi Department Seminar: Ryan Demmer
June 11	Epi Faculty Meeting
June 18	Epi Department Seminar: Magdalena Cerda

*Please Note: The May 7 faculty mixer with Biostatistics has been postponed and will take place in the fall.

2010 Grant Attestation Due Dates:

Friday, April 30, 2010 (1st Quarter - January 1, 2010 - March 31, 2010)

Friday, July 30, 2010 (2nd Quarter - April 1, 2010 - June 30, 2010)

Friday, October 29, 2010 (3rd Quarter - July 1, 2010 - September 30, 2010)

Friday, January 28, 2011 (4th Quarter - October 1, 2010 - December 31, 2010)

FACULTY HONORS

Mary Beth Terry - Glenda Garvey Fellow



Associate Professor of Epidemiology **Mary Beth Terry, PhD** was selected as a fellow of the **Glenda Garvey Teaching Academy**. The Academy was established in 2005 to recognize excellence and innovation in

education, enhance the status of faculty educators, and have a transformative effect on education across the medical center campus. The health sciences- wide interdisciplinary model is designed to increase knowledge of and excellence in teaching in the health professions. The 2010 Garvey Fellows were honored on April 14th as part of the Morris Symposium featuring Provost Steele.



William Friedewald presents ACCORD findings at Leahy Lecture



Bill Friedewald, MD, Chairman of the Steering Committee for the ACCORD trial

On April 14, 2010, **William Friedewald, MD** presented his lecture, "The Randomized Clinical Trial as a Long and Complicated Journey: Lessons From the ACCORD Trial", at the Department of Medicine Grand Rounds Leahy Lecture . The Action to Control Cardiovascular Risk in Diabetes (ACCORD) study, primarily funded by the National Heart Lung and Blood Institute (NHLBI), is one of the largest studies ever conducted in adults with type 2 diabetes who were at especially high risk of cardiovascular disease. With more than 10,000 participants, this groundbreaking clinical trial tested three potential strategies to lower the risk of major cardiovascular events: intensive control of blood sugar, intensive control of blood pressure and treatment of multiple blood lipids.

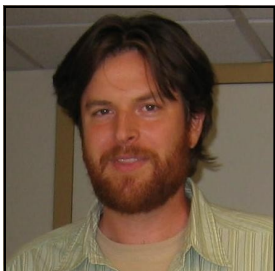
Dr. Friedewald, who is a Professor of Clinical Biostatistics, Epidemiology, and Medicine, and the Vice Chair of the Department of Epidemiology, acts as the chairman of the steering committee for the ACCORD clinical trial. As such, he functions as the lead investigator for this multicenter study, interacting with government sponsors as well as the study investigators.

The most recent results of the study, which appeared in the New England Journal of Medicine (NEJM) on April 29, 2010, showed that neither lowering blood pressure to normal levels nor treating multiple blood lipids with combination drug therapy significantly reduces the combined risk of fatal or nonfatal cardiovascular disease events. Previously in 2008, findings from the clinical trial indicated that intensively targeting blood sugar to near normal levels does not reduce the risk of major cardiovascular events and, in fact, increases the risk of death. The ACCORD trial now moves into a six year observational study period in which investigators will follow all current study subjects.



FEATURED ARTICLES

Advances in Cancer Care Adopted Unevenly Across SES Lines



Russell McBride, MPH, Cancer Training Fellow

The pathologic identification of 12 or more lymph nodes after colectomy for colon cancer became a quality indicator for surgery in 2001. Analyzing the records of over 110,000 colon cancer patients via the Surveillance, Epidemiology, and End Results (SEER) database, **Cancer Training Fellow Russell McBride, MPH**, and other cancer faculty investigated the influence of race, area socioeconomic status (SES), and other clinical and demographic characteristics on the number of lymph nodes examined. The findings of the study suggest that adoption of the more extensive (and effective) lymph node dissection surgery for colon cancer was differentially adopted across racial and socioeconomic lines.

McBride R, Lebowitz B, Hershman D, Neugut A. Impact of Socioeconomic Status on Extent of Lymph Node Dissection for Colon Cancer. *Cancer Epidemiology, Biomarkers & Prevention*. 2010; 19: 738.

Pesticide Chlorpyrifos Is Linked to Childhood Developmental Delays

Exposure to the pesticide chlorpyrifos—which is banned for use in U.S. households but is still widely used throughout the agricultural industry—is associated with early childhood developmental delays, according to a study by researchers at the Mailman School of Public Health. The study examined the association between exposure to the pesticide and mental and physical impairments in children in low-income areas of New York City neighborhoods in the South Bronx and Northern Manhattan. Chlorpyrifos was commonly used in these neighborhoods until it was banned for household use by the U.S. Environmental Protection Agency (EPA) in 2001. It is still used as an agricultural pesticide on fruits and vegetables. The EPA registration of chlorpyrifos for agricultural use is currently under review, with a public comment period scheduled for the coming months.



Gina Lovasi, PhD, Assistant Professor of Epidemiology and co-Author

Lovasi GS, Quinn JW, Rauh VA, Perera FP, Andrews HF, Garfinkel R, Hoepner L, Whyatt R, Rundle A. Chlorpyrifos Exposure and Urban Residential Environment Characteristics as Determinants of Early Childhood Neurodevelopment. *Am J Public Health*. 2010.

Lesbian, Gay and Bisexual Individuals at Increased Risk of Psychiatric Disorders Stemming From Discriminatory Policies



Katherine Keyes, MPH, Psychiatric Epidemiology Training Fellow and Co-Author

A study published in the March issue of the *American Journal of Public Health*, examining the effects of institutional discrimination on the psychiatric health of lesbian, gay and bisexual (LGB) individuals found an increase in psychiatric disorders among the LGB population living in states that instituted bans on same-sex marriage. Senior author Deborah Hasin, PhD, Professor of Clinical Epidemiology (in Psychiatry) and colleagues at the NYS Psychiatric Institute and Harvard University analyzed data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). **Psychiatric Epidemiology Training Fellow Katherine Keyes, MPH**, worked closely with Dr. Hasin on the study.

Hatzenbuehler ML, McLaughlin KA, Keyes KM, Hasin DS. The Impact of Institutional Discrimination on Psychiatric Disorders in Lesbian, Gay, and Bisexual Populations: A Prospective Study. *Am J Public Health*. 2010; 100(3):452-9.

More Featured Articles on Page 9

BRIEF MENTIONS: IOM AND NYAS

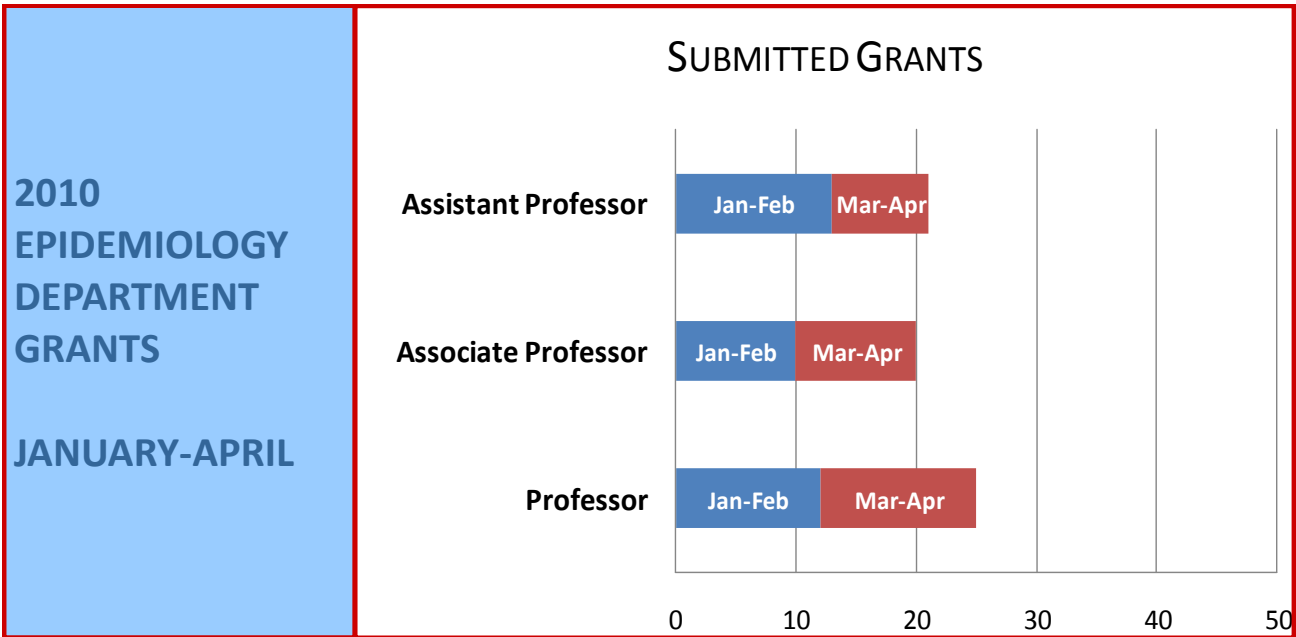
Sandro Galea, MD, DrPH, Chair of the Department of Epidemiology, and other leading investigators presented their recommendations for the readjustment needs of troops, veterans and their families to the Institute of Medicine (IOM) on March 31, 2010. The panel, which now plans to start a second two-year examination of veterans' health issues, urged the Veterans Affairs Department to begin planning for the long term needs of the Iraq and Afghanistan veter-



A new report on the ways in which enhanced medical technologies in the field of genetic mutations can help in the struggle to understand Gulf War Syndrome was presented to the Institute of Medicine (IOM) on April 19, 2010. **Ezra Susser, MD, DrPH**, Professor of Epidemiology, Professor of Psychiatry and IOM committee member, was among those researchers who identified chronic multi-symptom illnesses as a group of illnesses that are clearly associated with deployment.



Stephen S. Morse, PhD, Professor of Clinical Epidemiology and director of the U.S. Agency for International Development's (USAID) PREDICT joined with other experts in climate change, climate policy, emerging infectious diseases and public health at a symposium at the New York Academy of Sciences entitled, "Emerging Infectious Diseases in Response to Climate Change." Dr. Morse noted the difficulty in predicting the effects of climate change on infectious disease distribution and transmission but suggested that impacts are likely to be profound. He talked about the need for a deeper understanding of ecological and environmental drivers of disease emergence, distribution, and transmission to better predict likely outcomes of climate changes and to help develop and target appropriate actions. While public health policy should first emphasize prevention whenever possible, global surveillance at the interfaces between humans and other animals to identify significant changes at the earliest is also essential.



STAFF PROFILE: TONISHA ALEXANDER

Tonisha Alexander managed to complete a bachelor of science degree in organizational management while working full time and looking after her husband and two small children. Maintaining a high level of functioning in multiple arenas seems to come naturally to her, and this ability pays off for the faculty and staff in the Oral Infections and Vascular Disease Epidemiology Study (INVEST) group, which Tonisha joined as administrative assistant in 2007, shortly after completing her degree.

“It’s a great work environment and I have a great relationship with my boss,” says Tonisha. The job has evolved since Tonisha’s arrival, as Principal Investigator Moïse Desvarieux, MD, PhD, has expanded the range of his research and training activities in the department, the school, and internationally. Tonisha relishes the dynamic environment and the opportunity to grow and learn something new every day. There are hard days, but she works best under pressure. “I know I can get it done, because I strive toward excellence and I work hard to support not only my boss, but his whole team.”



The boss seems happy with how things have turned out. Dr. Desvarieux reports, “Tonisha is highly competent, direct yet polite, organized yet flexible, truly curious about understanding things, and she really cares about the quality of her work. Because of all that and her dead-on deadpan, I knew she would be great when I hired her!”

Tonisha is busy on the home front as well, with “2.5 kids”: Jaydon, 10, Kaelyn, 6, and a baby boy due this summer. What’s uppermost on her mind these days? Figuring out who will cover for her during maternity leave. “I’m very protective of my boss,” she affirms, “so whoever replaces me won’t just have to get Moïse’s stamp of approval, they have to get mine, too!”

A MEMORIAL TO CELEBRATE ALAN BERKMAN, MD



On April 23, the Mailman School of Public Health held a memorial to honor Alan Berkman, MD (1945—2009). As Vice Chair of the Epidemiology department and associate professor of epidemiology and sociomedical sciences, Dr. Berkman was an integral part of the Mailman School of Public Health; as a scholar, mentor, AIDS physician, and crusader for social justice, he was an important figure in the field of public health, touching the lives of countless individuals.

Epidemiology department chair, Sandro Galea, MD, DrPH announced that the department is committed to an annual Alan Berkman Lecture. Through this lecture, we aim to continue to engage, instruct, and inspire the Columbia community, with talks by public health leaders from around the globe whose work embodies Alan’s ideals.

STUDENT PROFILE: HAFEEZ LADHA, MPH 2009



When **Hafeez Ladha, MPH**, graduated from Columbia's Mailman School of Public Health with an MPH in Epidemiology in May of 2009, there were many opportunities available to him. He was recruited by the Aurum Institute in Johannesburg, South Africa to work as a Clinical Trial Research Manager on an HIV prevention clinical trial. Hafeez is currently managing a trial aimed at assessing the efficacy of a microbicide to prevent transmission of HIV in women within Africa. If proven effective, this microbicide could have a revolutionary impact on the field of HIV prevention. Hafeez chose to join the Aurum Institute for its outstanding international reputation and for the opportunity to work alongside world-renowned researchers in the field. Hafeez's experience thus far has given him first hand working knowledge of research operations in a remote setting, extensive management experience and the ability to apply the knowledge and skill set that he acquired here at the Mailman School.

UNIVERSITY SEMINAR FEATURES EPIDEMIOLOGY SPEAKERS



On March 17, 2010 the University Seminar on Injury Prevention and Control, hosted a seminar entitled "Persistent Physical and Mental Health Effects of World Trade Center Survivors." **Steven Stellman, PhD**, Professor of Clinical Epidemiology and the Research Director at the World Trade Center Health Registry, and Dr. Mark Farfel, the Director of the World Trade Center Registry, presented findings from the large registry cohort of World Trade Center Disaster survivors.

Epidemiology department alumni **Regina Zimmerman, PhD**, and **Laura DiGrande, DrPH** of the NYC Department of Health and Mental Hygiene (DOHMH) came to the Mailman School of Public Health to give a presentation on injury epidemiology in New York City. Our own **Charles DiMaggio, PhD**, gave a reciprocal talk at the DOHMH on April 26, 2010 as part of their Epidemiology Grand Rounds.



Richard Hunt, MD, director of the Division of Injury Response at Center for Disease Control (CDC), will be giving a talk at the University Seminar on Injury Prevention and Control on May 12, 2010 in the 8th floor auditorium at the Mailman School of Public Health. All are welcome to come.

MAY 19 CUEGR: JAY KAUFMAN, PHD



Heteroeroticism in Epidemiology: Your Subgroups or Mine?

Jay Kaufman, PhD
McGill University
Associate Professor of Epidemiology
Department of Epidemiology, Biostatistics and Occupational Health

FACULTY PROFILE: DENIS NASH

Dr. Denis Nash is an Associate Professor of Epidemiology and directs the Monitoring and Evaluation (M&E) Unit within International Center for AIDS Care and Treatment Programs (ICAP).



Upon completing a PhD in Epidemiology in 1999, Dr. Nash completed a two-year post-doc in the Epidemic Intelligence Service (EIS) of the Centers for Disease Control and Prevention, based at the NYC Department of Health and Mental Hygiene (NYCDOHMH). There he was integrally involved in implementing NYC's newly expanded HIV/AIDS surveillance system, and played a key role in the West Nile virus outbreak investigation. Following EIS, Dr. Nash stayed at the NYCDOHMH and directed the HIV/AIDS Surveillance Unit, which is responsible for monitoring the city's HIV epidemic. He then spent a year at the Center for Urban Epidemiologic Studies (CUES) at the New York Academy of Medicine transitioning to a career in HIV-related epidemiologic research.

Dr. Nash joined ICAP and the Mailman School faculty in 2004 as ICAP's director of the M&E Unit, and helped lay the groundwork for the data collection and reporting for the rapidly expanding ICAP program with M&E staff in NY and in the countries themselves. The M&E Unit now oversees the routine collection, reporting, and analysis of aggregate and client-level data from approximately 1,200 ICAP-supported HIV service points in 11 sub-Saharan African countries. The ICAP M&E team has developed and implemented a number of scalable informatics solutions, including an innovative web-based reporting and dissemination system, an annual survey of over 500 HIV care clinics, a geographic information system (GIS), and a patient-level data warehouse with longitudinal data on over 266,000 patients from 104 HIV care clinics. These data are routinely disseminated to ICAP field teams for program monitoring and improvement, and the systems and tools are used by ICAP field staff and researchers for program evaluation and operations research.

Dr. Nash is principal investigator or co-investigator on a number of large operations research studies and public health evaluations on the scale-up of HIV-related service delivery aimed at identifying optimal models of HIV care and treatment service delivery in sub-Saharan Africa and in the US. He was an early grantee under the Doris Duke Charitable Foundation's Operations Research on AIDS Care and Treatment in Africa (ORACTA) program. His research is unique in that it combines aggregate and patient-level data on outcomes from many clinics and countries with clinic-level data from an ongoing survey on clinic capacity. These data are then analyzed to examine the multi-level factors (patient, program, and contextual) associated with HIV care and treatment program outcomes in the region. Most recently he received an NIH grant (R01 MH089831-01A1) entitled "Multi-level determinants of late ART initiation in sub-Saharan Africa", which will describe the upstream factors that may be driving the 10-26% fatality rate in the first 12 months following ART initiation in sub-Saharan African HIV care programs.

Dr. Nash is on the steering committee and actively engaged in several key international research collaborations that are addressing important epidemiologic research questions around HIV care and treatment scale-up in resource-limited settings. In addition to focusing on HIV care and treatment, Dr. Nash also conducts research using novel laboratory methods (e.g. STARHS) of estimating HIV incidence and factors associated with recently acquired HIV infection in cross-sectional samples, including the integration of such methods into routine HIV surveillance activities.

Dr. Nash is also faculty member of the Center of Infectious Disease Epidemiologic Research (CIDER) at Mailman, which focuses on infectious disease epidemiology research and training. He is engaged in training and mentorship of doctoral and masters students from the department of epidemiology and other units, and is part of the HIV Center for Clinical and Behavioral Studies. Finally, he brings his experience in applied public health and epidemiology to the classroom as the course director for the Department's Public Health Surveillance course.

MORE FEATURED ARTICLES



Graham Barr, MD, DrPH, Irving Assistant Professor of Medicine and Assistant Professor of Epidemiology

Percent Emphysema, Airflow Obstruction, and Impaired Left Ventricular Filling

Graham Barr, MD, DrPH, and other investigators measured left ventricular structure and function with the use of MRI in close to 3,000 persons. In the January 21, 2010 edition of the New England Journal of Medicine (NEJM), the results of the study showed that a 10-point increase in percent emphysema was linearly related to impaired left ventricular filling, reduced stroke volume, and lower cardiac output. The extent of airflow obstruction was similarly associated with ventricular structure and function, and smoking status had similar modifying effects on these associations.

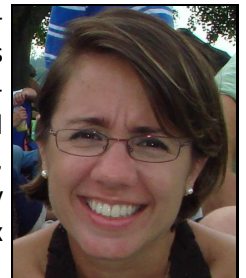
Barr RG, Bluemke DA, Ahmed FS, Carr JJ, Enright PL, Hoffman EA, Jiang R, Kawut SM, Kronmal RA, Lima JA, Shahar E, Smith LJ, Watson KE. Percent Emphysema, Airflow Obstruction, and Impaired Left Ventricular Filling. N Engl J Med. 2010 ; 362(3):217-27.

New Gene in Hair Loss Identified

The discovery of a new gene may lead to improved treatments for people suffering from male pattern baldness and other forms of hair loss. The gene, APCDD1, inhibits a signaling pathway that has long been shown to control hair growth in mouse models, but until now has not been linked to human hair loss. This finding is significant because it proves that hair growth patterns in humans and mice are more similar than previously thought. Epidemiology student and statistician for the study,



Lynn Petukhova, MS is part of the team at Columbia University Medical Center that is now working on deciphering the complex genetic causes of other forms of hair loss.



Lynn Petukhova, MS
Doctoral Student and
co-Author

Shimomura Y, Agalliu D, Vonica A, Luria V, Wajid M, Baumer A, Belli S, Petukhova L, Schinzel A, Brivanlou AH, Barres BA, Christiano AM. APCDD1 is a Novel Wnt Inhibitor Mutated in Hereditary Hypotrichosis Simplex. Nature. 2010; 464 (7291):1043-7.

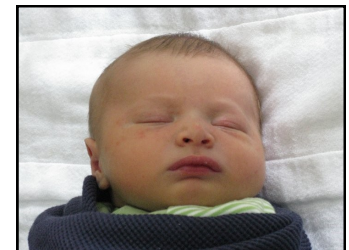
FINAL NOTES

IMSD

INITIATIVE FOR MAXIMIZING STUDENT DIVERSITY
AT COLUMBIA'S MAILMAN SCHOOL OF PUBLIC HEALTH

Funding Awarded to New Epidemiology Doctoral Students

Four doctoral students from the Epidemiology department — **Sabrina Hermosilla, MPH, Montina Befus, MPH, Allana Forde, MPH, and Kimberly Alvarez, MPH** — have been awarded funding from the MSPH Initiative Maximizing Student Diversity (IMSD) for 2010-2012. The purpose of this program is to increase the number of underrepresented students who receive doctoral training in public health. The IMSD provides partial tuition coverage, a graduate research assistantship placement with a faculty mentor, and travel to one scientific conference per year.



Liliane Zaretsky welcomed the newest addition to her family—grandson **Benjamin Aaron Zaretsky** was born on April 13, 2010. Congratulations to Liliane and family!