Low Levels of Good Cholesterol May Increase Risk of Alzheimer’s

Low levels of high-density lipoproteins (HDL) may increase the risk of developing Alzheimer’s disease, according to a new study of elderly individuals senior authored by Dr. Jose Luchsinger, Associate Professor of Medicine and Epidemiology.

Low levels of good cholesterol are very common in the U.S. and are a well-known risk factor for heart disease. But the relationship between HDL and Alzheimer’s had previously been unclear, with some studies finding a connection and others not.

This new study provides a more complete picture of the relationship between HDL and Alzheimer’s because the researchers followed subjects for longer than past studies. They monitored 1,130 elderly northern Manhattan residents for an average of four years, finding that those with low HDL had a 40 percent higher rate of Alzheimer’s incidence.

Unlike similar studies, this study includes a large number of African Americans and Hispanics, and its findings suggest that low HDL is linked to a high risk of Alzheimer’s in many different ethnicities.

Scientists still do not understand why there is a link between HDL and Alzheimer’s, but the studies’ authors say that the two could be linked through stroke, since low HDL raises the risk of stroke.

The other possibility is that HDL works by itself to clear amyloid proteins from the brain, or is a marker for other factors related to amyloid clearance, such as insulin resistance. Amyloid proteins are associated with plaques, one of two abnormal structures that has been linked to Alzheimer’s. The other structures are called tangles. Both are seen in the brain cells of those with the disease and are believed to hinder communication in the nerve center by damaging or killing cells.

According to Dr. Luchsinger, the results of the study suggest that researchers should focus specifically on HDL—as opposed to general cholesterol levels—as a predictor of dementia in the elderly.

"Interventions that target HDL increase in the elderly may improve dementia risk,” he says.

About 5.3 million Americans have Alzheimer’s disease, according to the Alzheimer’s Association. It is the sixth leading cause of death in the U.S. and has been on the rise in recent years: From 2000 to 2006, deaths from the disease increased 46.1 percent, while other major causes of death like prostate cancer, breast cancer, heart disease HIV-related illnesses, and stroke saw a decline.

MESSAGE FROM THE CHAIR

Dear colleagues,

Welcome to the February 2011 issue of Two by Two, the Epidemiology Department newsletter. This issue is dedicated to innovation in the Department. In fostering innovation, we seek to build interdisciplinary collaborations; contribute to the intellectual discussion in our field; and expand the scope of our teaching, research, and service activities. The three new initiatives featured in this newsletter exemplify those aims.

The Epidemiology and Population Health Summer Institute at Columbia (EPIC) creates expanded learning opportunities for investigators and scholars from the health and social sciences, public health practitioners, clinicians, and industry professionals interested in population health research. EPIC features a full slate of week-long focused training courses in the month of June. Courses are developed and taught by Department faculty in collaboration with experts from across the Medical Center.

The Epidemiology, Design, Guidance, and Expertise (EDGE) program aims to provide epidemiologic expertise to investigators across Columbia University whose research might benefit from rigorous epidemiologic input on the research design. The program seeks to build collaborations between the Epidemiology Department and investigators across the University during the design and planning phase of projects and grant proposals so as to improve the design of the project and thus its potential for success.

The Global Mental Health Program (GMHP) is working to put global mental health squarely in the middle of the global health agenda at the School and the University, as well as in the broader global health conversation. It aims to promote innovative research, educate a new cohort of scholars and practitioners, and build capacity in research and intervention in low and middle income countries. The GMHP is a priority program of the Global Health Initiative (GHI) and works closely with leaders of the GHI to achieve its goals.

Each of these three initiatives benefits from substantial guidance and infrastructure from the Chair’s office. In highlighting them, we hope to inspire members of the Epidemiology community to develop bold new ideas, and to demonstrate that the Chair’s office stands ready to provide support to assure their successful implementation.

As a last note, in this newsletter we introduce a new feature, Giants Among Us. We aim on a regular basis to feature some of the senior faculty in the Department who have made seminal contributions to the field. We start by featuring Dr. Mervyn Susser, former Chair of this Department and a true giant in epidemiology.

Warm regards,

[Signature]

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CLUSTER SEMINARS
FEBRUARY — MARCH

SOCIAL EPIDEMIOLOGY
THURSDAY, FEBRUARY 3  10:00-11:30 AM
THURSDAY, FEBRUARY 17  12:30-2:00 PM
THURSDAY, MARCH 3  10:00-11:30 AM
THURSDAY, MARCH 31  10:00-11:30 AM

PSYCH / NEURO EPIDEMIOLOGY
THURSDAY, FEBRUARY 3  12:30-2:00 PM
THURSDAY, MARCH 10  12:30-2:00 PM

LIFECOURSE EPIDEMIOLOGY
TUESDAY, FEBRUARY 8  1:00-2:30 PM
TUESDAY, MARCH 8  1:00-2:30 PM

EPIDEMIOLOGY INNOVATION
WEDNESDAY, FEBRUARY 16  8:30-10:00 AM
WEDNESDAY, MARCH 16  8:30-10:00 AM

CHRONIC DISEASE EPIDEMIOLOGY
FRIDAY, FEBRUARY 4  12:00-1:00 PM
FRIDAY, MARCH 4  12:00-1:00 PM

INFECTIOUS DISEASE EPIDEMIOLOGY
FRIDAY, FEBRUARY 25  3:00-4:30 PM
FRIDAY, MARCH 25  3:00-4:30 PM

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UPCOMING FEBRUARY — MARCH

FRIDAY, FEBRUARY 11, 2011  DEPARTMENT SEMINAR: NICOLE SCHUPF, PHD, DRPH
TUESDAY, FEBRUARY 15, 2011  SPECIAL LECTURE: SHAKIRA SUGLIA, SCD
FRIDAY, FEBRUARY 18, 2011  FACULTY MEETING
TUESDAY, FEBRUARY 22, 2011  SPECIAL LECTURE: JENNIFER SMITH
WEDNESDAY, FEBRUARY 23, 2011  CUEGR: DANIEL M. FOX, PHD
WEDNESDAY, MARCH 2, 2011  CUEGR: GEORGE DAVEY-SMITH, MD, DSC
THURSDAY, MARCH 10, 2011  SPECIAL LECTURE: MIGUEL HERNAN
FRIDAY, MARCH 11, 2011  DEPARTMENT SEMINAR: ALFREDO MORABIA, MD, PHD
FRIDAY, MARCH 25, 2011  FACULTY MEETING
Nicotine dependence associated with personality disorders

A substantial percentage of adults who have personality disorders are addicted to smoking, according to a new study senior authored by Dr. Renee Goodwin, Associate Professor of Epidemiology. The study is the first to find a relationship between cigarette smoking and personality disorders. Using data from 43,083 adults in the U.S., the investigators found that the association between personality disorders and smoking varies by the specific disorder. Antisocial personality disorder was most strongly associated with nicotine dependency, the study found.

“Personality disorders may increase vulnerability to dependence on nicotine, and may impede efforts to quit,” says Dr. Goodwin. “This information may be useful in the development of more effective smoking cessation programs.”


HPV in female HIV patients tied to dysfunctioning mucosal immune system

It is established that Human papillomavirus (HPV) increases in prevalence among individuals with HIV. A new study senior authored by Dr. Louise Kuhn, Professor of Epidemiology [in the Gertrude H. Sergievsky Center], shows that a dysfunctioning mucosal immune system—the part of the immune system that provides protection to an organism’s mucous membranes—may influence HPV-related diseases. She and fellow researchers conducted a South African cervical cancer screening trial, in which 5,595 women 35–65 years of age were followed for 36 months. They found that detection of HPV infection increases rapidly within the first years after HIV seroconversion, suggesting HPV may be related to the dysfunctioning of the mucosal immune system.

1 in 26 will develop epilepsy during lifetime

One in 26 people will develop epilepsy in their lifetime, according to a new study conducted by Dr. Dale Hesdorffer, Associate Professor of Clinical Epidemiology (in the Sergievsky Center), which was published in the January 4 issue of Neurology. The population-based study is the first to measure lifetime risk for epilepsy. Unlike previous studies, this one accounted for death, which prevented the overestimation of epilepsy risk. Dr. Hesdorffer and her colleagues looked at the medical records of residents of Rochester, Minn. from 1960-1979. They found that lifetime risk increased as people got older: at age 50, the risk was 1.6%, and at age 80, it was 3%.

“This information can be used to better communicate risk of epilepsy to patients and to health care policy makers,” Dr. Hesdorffer says.


Over 3,000 9/11 survivors have long-term PTSD symptoms

Over 3,000 survivors of the September 11, 2001, World Trade Center attacks have long-term post-traumatic stress disorder (PTSD) symptoms, according to a new study senior authored by Dr. Sandro Galea, Gelman Professor and Chair of the Department of Epidemiology, in conjunction with the New York City Department of Health and Mental Hygiene and the federal Agency for Toxic Substances Disease Registry (ATSDR).

A full 95.6% of the 3,271 people who evacuated the Twin Towers have experienced long-term PTSD symptoms, and 15% screened positive for the disorder two to three years after the disaster. The biggest predictors of PTSD were initiating evacuation late, being on a high floor in the towers, being caught in the dust cloud that resulted from the tower collapses, personally witnessing horror, and sustaining an injury.

BRIEF MENTIONS

APPA Annual Meeting in New York

The 101st Annual American PsychoPathological Association (APPA) meeting will take place March 3-5 at the Grand Hyatt New York. Among the speakers are Epidemiology faculty members Dr. Patricia Cohen, Professor of Clinical Epidemiology (in Psychiatry), and Dr. Sandro Galea, Gelman Professor and Chair of the Department. In addition, Dr. Cohen and Dr. Ezra Susser, Professor of Epidemiology and Psychiatry, (currently President-elect of APPA) will be honored at the conference with special awards.

Series of Department-EHESP meetings

In November, the Department hosted the first in a series of collaborative meetings between faculty from the Mailman School and our French partners at Ecole des Hautes Etudes en Santé Publique who are researching chronic diseases. Faculty discussed, among other things, the “Spin” project, which aims to identify and quantify bias in reporting on observational epidemiologic studies. The next meeting will take place in March in Paris.

Holiday Party 2010

On December 13, 2010, the Department hosted its yearly holiday party in the Hammer Building’s Riverview Lounge. The event brought together people from across the Department and the Mailman School to celebrate the season and enjoy food, drinks, and socializing with one another.

World AIDS Day

Dr. Wafaa El-Sadr, Professor of Epidemiology and Medicine and Director of the International Center for AIDS Care and Treatment Programs (ICAP), used the occasion of World AIDS Day 2010 to underscore that the U.S. still has far to go in the fight against HIV/AIDS. Dr. El-Sadr assembled a panel of experts in HIV prevention, infectious diseases, mental health, and policy who are on the frontline of fighting the epidemic in the U.S., for a discussion called “The HIV Epidemic in the United States: A Time for Action.” The event also served to launch an ICAP-sponsored issue of the Journal of Acquired Immunodeficiency Syndrome dedicated to key challenges related to the U.S. HIV epidemic.

In a year that was marked by incredible developments in the testing of drugs that prevent HIV, and at a time when treatment is able to extend the lives of those infected longer than ever anticipated, there is the risk that the epidemic will recede from public consciousness, panelists warned.

As Dr. El-Sadr put it, “AIDS in America is forgotten but not gone.”
Dr. Lawrence Yang receives two awards

Dr. Lawrence Yang, Assistant Professor of Epidemiology, was awarded the Council of National Psychological Associations for the Advancement of Ethnic Minority Interests’ (CNPAEMI) 2010 Henry Tomes Award for Significant Contributions to the Advancement of Ethnic Minority Psychology by an Emerging Leader. The award was given to Dr. Yang for his research into the stigma in China around schizophrenia and how it impedes symptomatic and social recovery.

He was also awarded a two-year $60,000 National Alliance for Research on Schizophrenia and Depression (NARSAD) grant for his project entitled “Stigma Associated with a High-Risk State for Psychosis among Adolescents: Impacts on Identity and Recovery.” The principal goal of this prospective study is to systematically examine impacts of stigma of the new ‘high-risk’ for psychosis designation on adolescent identity to optimize transition to adulthood.

Dr. Gina Lovasi awarded Active Living Research grant

Dr. Gina Lovasi, Assistant Professor of Epidemiology, was awarded an Active Living Research grant from the Robert Wood Johnson Foundation. She will conduct a quantitative meta-analysis and meta-regression project on the relationship of the built environment with physical activity and obesity across multiple U.S. sites.

To a large extent the health relevant aspects of the built environments, such as walkable urban form or the presence of large parks, are the unintended consequences of policies and actions designed for the pursuit of other social and economic goals. The links between built environment and physical activity have relevance to obesity and a range of chronic disease outcomes, but studies to date have not provided a consistent, cohesive picture.

Recent work by Dr. Lovasi in collaboration with the Built Environment and Health project, an interdisciplinary research program at Columbia University, has highlighted the possibility that commonly measured aspects of the built environment are modified by population and area characteristics such as poverty. This project, an interdisciplinary research program at Columbia University, represents an opportunity to continue this line of investigation by seeking patterns across the U.S. literature.

Dr. Lovasi’s project “uses meta-analytic methods to test hypotheses about effect modification that go beyond what the individual studies were assessing,” she says. This effort will be supported by an interdisciplinary research team that includes epidemiologist Dr. Andrew Rundle, as well as Drs. Christopher Weiss and Michael Bader, sociologists at Columbia and University of Pennsylvania, respectively, and Dr. Malo André Hutson, an urban planner at the University of California-Berkeley.


Faculty’s hunger studies featured in Nature

Dr. L.H. Lumey, Associate Clinical Professor of Epidemiology, was featured in Nature’s December 2010 issue, in an article about epigenetic studies of people conceived during periods of famine. Dr. Lumey is currently studying the impact of the Dutch Honderwinter (hunger winter) of 1944-45, when parts of Holland were blocked by WWII military action from receiving food supplies. Dr. Lumey and other researchers discovered that the famine through a process called DNA methylation deactivated the expression of certain genes associated with human growth and development. Dr. Lumey is now looking at whether the genomic methylation patterns of those conceived during famine are at a variance from their “unexposed” siblings. If so, this might explain how changes in the early life environment could play an important role in the development of adult diseases.

The New York Times

Dr. Ian Lipkin profiled in New York Times

Dr. W. Ian Lipkin, the Director of the Center for Infection & Immunity (CII) and the John Snow Professor of Epidemiology, was featured in an article in The New York Times about his virus hunting operations at the CII. Since the Center started in 2002, Dr. Lipkin and his team have discovered 400 viruses, using a technique he developed that involves identifying a virus by its genetic signature. Dr. Lipkin used the method to identify West Nile virus in 1999 after studying the blood of encephalitis patients in New York. It was the first time the deadly virus had been identified in the Western Hemisphere.

“If scientists are lucky, they’ll identify one novel virus in their whole life,” said Dr. Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases, who is quoted in the article. “Lipkin really stands out from the crowd.”

Science Watch profiles

Dean Linda Fried and her pioneering work with healthy aging

Science Watch recently profiled the pioneering research on aging and frailty in older adults of Dr. Linda Fried, Dean of the Mailman School of Public Health and Professor of Epidemiology. Dr. Fried has dedicated 25 years to the goal of keeping people healthy as they age, and her efforts have led to major advances in the field of geriatrics and gerontology. Science Watch, a publication of Thomson Reuters, ranked her one of the most-cited researchers in the field over the last decade.

In a Q and A with editors in the January 2011 issue, Dr. Fried talks about how she first became interested in studying geriatrics, her hypothesis on the vicious cycle of frailty and how to intervene and/or postpone its consequences. Dr. Fried also addresses how contributing to society can make a difference in helping older people stay more physically, cognitively, and socially active.

Faculty’s HPV study featured on Reuters video

A study led by Dr. Louise Kuhn, Professor of Epidemiology (in the Gertrude H. Sergievsky Center), was featured in January in the Reuters Health Doctor’s Channel Daily Newscast. The results of the study show that a single test for high-risk human papillomavirus (HPV) infection followed by cryotherapy is an effective method to reduce high-grade cervical cancer precursors in HIV-infected women.

The video can be found here: http://thedoctorschannel.com/go/reuters/3627.html


CAPRISA researchers featured in O Magazine

Dr. Quarraisha Abdool Karim, Associate Professor of Clinical Epidemiology, and Dr. Salim S. Abdool Karim, Professor of Clinical Epidemiology, who were behind the groundbreaking study of HIV prevention vaginal gel, were featured in the November issue of O, The Oprah Magazine. The article discusses the results of the “CAPRISA 004 Trial” and the hope it brought to the female participants and to many women who are at-risk. Young women at the study site in Vulindlela, South Africa, have a high rate of HIV—by age 30, two-thirds of them have been infected—and very limited prevention options in a culture where they often must exchange sex for favors like taxi fare and food. These realities are what led the Karims to focus on developing a vaginal gel that is capable of delivering antiretrovirals (ARVs). The response to the request for volunteers was “overwhelming,” according to the O article. “HIV is killing our friends and sisters. I wanted to help stop that,” said Duduzile Ndlovu, a 27-year-old study participant.

The gel has brought new hope in a community that had many reasons to despair. “It has the potential to alter the pandemic, and prevent more than 800,000 deaths in the next twenty years. And it gives control to those who need it most—women,” Dr. Quarraisha Abdool Karim says.

The Oprah Magazine

Dr. quarraisha Abdool karim says.

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Although he will have to scale down his many commitments in the epidemiology world, Dr. Vlahov will be promoting the discipline as Dean at the UCSF School of Nursing, as nurses are on the front lines of public health initiatives.

“Nurses make great epidemiologists. Having attended births, visited homes, been at the bedside, seen and eased suffering, and comforted bereaved loved ones, nurses understand what is behind the binary code. They can visualize data in multiple dimensions,” he says.

Dr. Vlahov further points to three decades of studies demonstrating the effectiveness of nurse practitioners in primary and chronic disease management, not to mention other areas of advanced practice.

With 30 million new people expected to come into the health care system because of the Patient Protection and Affordable Care Act, the system will need well-trained nurses and nurse practitioners if it is able to meet the goal of “health for all,” he says.

Dr. Vlahov has an accomplished background in urban epidemiology, not only here at the Mailman School of Public Health, but also as Senior Vice President for Research and Director of the Center for Urban Epidemiologic Studies at the New York Academy of Medicine, where he has led studies in Harlem and the Bronx on racial and ethnic disparities in health care treatment and how they can be addressed.

He earned his BS and MS in nursing from University of Maryland and a PhD in epidemiology from Johns Hopkins University. Much of his research has been devoted to the study of urban health issues, including HIV. He remembers being a nurse in the mid-1980s, when the disease was thought to be only the province of white gay men, and watching as doctors puzzled over how a black female injection drug user could have contracted Pneumocystis carinii, a form of pneumonia that afflicts individuals with AIDS.

As a PhD student at Hopkins during a time when scientists were only beginning to realize that AIDS could become a major public health issue, he began studying HIV infection in injection drug users, setting up and upon graduation becoming Principal Investigator of ALIVE, a natural history study of street recruited out-of-treatment injection drug users in Baltimore.

The study was instrumental in defining incidence and risk factors of HIV infection as well as the spectrum of disease, rate of progression to AIDS, and survival. It also helped encourage the Maryland State Legislature’s passage of a law permitting needle exchange programs.

When he came to New York City, Dr. Vlahov assumed the position of Director of the Center for Urban Epidemiologic Studies, recently vacated by Dr. Ezra Susser. His work over the next ten years focused on HIV and hepatitis C infection among injection drug users, and an evaluation of the New York Expanded Syringe Access Program through pharmacies, a line of research expanded by Dr. Crystal Fuller. With Dr. Sandro Galea, he led the Center’s response to the events of September 11, 2001, conducting landmark population based assessments and follow-ups to understand the mental health of New York City residents after the terrorist attacks.

Dr. Vlahov will continue his active research career while he is Dean and also plans to continue as the editor of the Journal of Urban Health and to work with the International Society for Urban Health.
Although Dr. Fuller, has long been on the faculty, she had previously divided her time between here and the New York Academy of Medicine.

In the time that she has been in the Department, Dr. Fuller has made significant contributions to the rapidly growing literature in the area of drug abuse and related infectious diseases, namely HIV, Hepatitis, and sexually transmitted infections.

As an infectious disease epidemiologist, her research has focused on HIV prevention and structural interventions among drug users and other marginalized populations in low-income, urban communities. At the same time she has expanded her body of work beyond infectious disease epidemiology to include social epidemiology, particularly the study of racial disparities in urban areas of the U.S.

For over 10 years, she has collaborated with community leaders and stakeholders in order to conduct community-based participatory research (CBPR) throughout New York City. She has directed large-scale public health program and policy evaluation studies aimed at reducing individual and community-wide disease rates, particularly within communities where racial disparities persist.

She has carried out several pilot and large-scale structural interventions among black and Hispanic drug users and their social networks. Many of these studies reach out to drug users in HIV burdened neighborhoods when they purchase syringes in pharmacies through the New York State Expanded Syringe Access Program (ESAP).

The pharmacy interventions Dr. Fuller has conducted have included increasing syringe access for drug users, connecting drug users to medical care and social services, using pharmacies as an HIV-testing venue and packaging these services with other chronic disease prevention services (i.e., blood pressure, glucose, and cholesterol screening) to reduce HIV testing stigma, and most recently, using pharmacies to help drug users gain access to antiretroviral therapy to help prevent HIV acquisition. These are based on the premise that intervention is optimized through targeting the individual and the social/structural environment.

Effective January 1, the Department became the official home for Crystal Fuller, PhD, MPH, Associate Professor of Clinical Epidemiology, and her research team.
Dr. Fuller’s 12-person research team—who often refer to themselves as a family—recently arrived at Columbia to carry out her studies on HIV/AIDS treatment intervention through pharmacy syringe purchases.

Among the group, there is a diverse range of experience in the public health field. Alexis Rivera, who was a student at Mailman, had Dr. Fuller as her adviser and thesis reader, which she said was a perfect fit, since her areas of interest were racial/ethnic disparities in HIV/AIDS.

Gregory Malave, a research assistant who has been with Dr. Fuller the longest—eight years—and is jokingly referred to as the father of the team, says that Dr. Fuller’s personal and professional support keeps everyone incredibly motivated.

That degree of motivation is evident in their work. For example, in order to recruit pharmacies for the ESAP studies, their team trekked across every borough in New York, even during evening hours and on weekends, in order to find as many participants as they could. In total, they interviewed over 400 pharmacies and were able to select more than 90 for the study.

The passion that team members feel for their work is reflected in the quality and integrity of what they do, says Natalie Crawford, project coordinator, who is also a doctoral student in the Department. “I think these things have greatly contributed to our ability to collect quality data and they have given me a personal sense of fulfillment in knowing that our studies are providing increased accessibility to health services through pharmacies in communities most at need,” Natalie says.

Not only does the team work hard together, but they are friends outside of work, celebrating one another’s birthdays and other events. “We’re a great team. We all play off of each other well,” says Brittany Novak, who has worked with Dr. Fuller since 2008 and plans to go to medical school.
At Autism Speaks—the world’s largest autism science and awareness organization—Michael’s epidemiology training has come directly into play. He works on the organization’s etiology team, manages its epidemiology and public health research program, and is part of a development team for the Global Autism Public Health Initiative.

“Epidemiology has played a major role in raising awareness of autism in the U.S. and around the world,” he says. “Today the prevalence of autism in the U.S. is 1 in 110, much more common than most people ever imagined,” he said.

Those figures have provided a platform for Autism Speaks’ advocacy of increased access to autism services and additional research funding from local and federal governments.

Michael originally became interested in epidemiology as an undergraduate at Binghamton University, through studying psychobiology and working in a lab that was researching causes of stress. As a graduate student, Michael combined his interests in epidemiology and biological psychology to study complex diseases—those influenced by both genes and environment—and did a research practicum in the genetic epidemiology of epilepsy with Dr. Ruth Ottman. Epilepsy may in fact be closely related to autism in terms of neurobiology, etiology, and potential treatment approaches, which made working at Autism Speaks a fitting choice for Michael.

Michael further says he owes much of his passion for his work to his cousin Paul who is affected by autism, and to Paul’s family.

Since joining Autism Speaks, Michael has worked with several Department faculty, including Dr. Ezra Susser, who is a member of Autism Speaks Scientific Advisory Committee, and Dr. Leslie Davidson, who is a co-investigator on a study co-funded by Autism Speaks, which involves surveying developmental disabilities—including autism—among the Zulu nation of Kwa-Zulu Natal.

“I owe much of where I am today to my time spent at Mailman, as well as to the amazing support of my colleagues at Autism Speaks,” Michael says.

Michael Rosanoff, who is currently the Associate Director of Public Health Research and Scientific Review at Autism Speaks in New York, earned his MPH in Epidemiology from the Mailman School in 2007.
Recognizing that injuries take a great toll on young Native Americans, each of the honorees will use the award to carry out a research project on injuries to Native Americans or other indigenous people of the U.S. or Canada. Their work aims to be an impetus for policy or environmental changes that benefit the population.

Kristyn Bigback, an MPH candidate, took first place, winning $2,000 for her proposal to use data from the Indian Health Service (IHS) 2003 Injury Focus report to look at the relationship between state Graduated Driver Licensing laws, tribal driver licensing laws, and motor vehicle crash injury and death rates. She further plans to compare the rates of motor vehicle hospitalizations reported by IHS to those reported by Healthcare Cost and Utilization Project HCUP in order to determine the degree of underreporting of motor vehicle crashes by the tribes to the states. (Motor vehicle-related death rates of Native Americans are twice the rates for other Americans). Kristyn was advised by Dr. Joyce Pressley.

Three other Epidemiology students won prizes of $500 each for their proposals. Carla Foster, an MPH candidate who was advised by Dr. Anne Paxton, won a prize for her proposal to assess moderate traumatic brain injury (MTBI) among Native American children. Specifically, she plans to evaluate its cause and determinants, and risk factors that determine outcome, in order to recommend prevention and intervention strategies.

Katherine Hensel, a doctoral candidate who was advised by Dr. Leslie Davidson, won the prize for her proposal to use data from the Youth Risk Behavior Surveillance System to analyze the association between gender-based violence and suicidal ideation in youth, as suicide rates among 15-24 year old Native Americans are more than double the rate for all U.S. races. Katherine also plans to look at substance abuse as a mediator for gender-based violence and suicidal ideation.

MPH candidate Charley Liu, who was advised by Dr. Li, won the prize for his proposal to compare injury death rates between the U.S. and Canada using data from the Center for Disease Control’s web-based Injury Statistics Query and Reporting System and the First Nations, Inuit, and Aboriginal Health branch of Health Canada.

Dr. Baker, a Professor at the Johns Hopkins Bloomberg School of Public Health, established the awards after winning the Mailman School's Frank A. Calderone Prize in Public Health In 2010.
Mervyn Susser, MB, BCH, Sergievsky Professor of Epidemiology Emeritus, is one of the pioneers of epidemiology in the twentieth century. His emphasis on the relationship between society and disease is foundational to the discipline as it is practiced today. He has also consistently drawn attention to the interrelationships between health, disease, and social injustice.

These are, however, only some of the ways in which he has shaped our field. His influence extends to the foundations of life course epidemiology, genetic epidemiology, epidemiology of neurodevelopmental disorders, global health (later including HIV/AIDS), and other areas.

Dr. Susser was born in South Africa in 1921, the son of immigrants who left the Russian Empire because of persecution of the Jewish population. Those circumstances shaped his opposition to racism in apartheid South Africa. In the early 1950s, he and his wife and partner Dr. Zena Stein—also a child of Jews who fled the Russian Empire—opened a clinic in the black township of Alexandra, Johannesburg, with a group of colleagues to provide medical care to non-whites at a time when they were largely ignored by the medical system. Though not formally trained in epidemiology, Drs. Susser and Stein carried out one of the first studies of community health in the developing world, published in 1955 in the Lancet, under the title, “Medical care in a South African township.” During the same period, working with Nelson Mandela and others, they became deeply involved in opposing the Afrikaner nationalist government created in 1948.
A brief stay in England for further study began decades of exile for Mervyn and Zena, following the arrest of political colleagues and friends in South Africa. With the help of the great epidemiologist, Jerry Morris, Drs. Susser and Stein were offered positions in the Department of Social and Preventive Medicine at the University of Manchester. Dr. Susser was also appointed Medical Officer for Mental Health in Salford, where Mervyn and Zena pioneered a transformation of mental health services, and established a psychiatric registry that they used to carry out the first study of incidence of mental disorders in a large urban population, described in his book *Community Psychiatry*. In this period, they were prolific, inaugurating influential studies in several areas. An example is their investigation of the relationship between social environment and the cognitive development of children. “It is evident from this investigation,” Drs. Susser and Stein wrote, “...that culture, social class and family function profoundly influence the diagnosis and management of the educationally subnormal child.” That observation reflected Dr. Susser’s consistent emphasis on the role of the social environment in the determination of diseases and disorders, in the treatment of diseases and disorders, and in social policy related to diseases and disorders. During this period he joined the anthropologist Dr. William Watson to write the classic textbook *Sociology in Medicine*, a landmark work which was one of the first to examine the relationships between historical and social context, social and family environment, and health across the lifecourse.

In 1965, Dr. Susser was invited to chair the Division of Epidemiology at the Columbia University School of Public Health. He “was faced with the challenge of articulating to a skeptical faculty the need to make a transition to the ‘chronic disease’ era of epidemiology while at the same time, retaining the insights about society and health described in *Sociology in Medicine*,” (Davey Smith GM and Susser E, *International Journal of Epidemiology*, 2002).

To do this, he gave a series of lectures that became the basis of one of his most influential works, *Causal Thinking in the Health Sciences*. “For me, *Causal Thinking in the Health Sciences* indicated how one pushes the understanding of social factors in health beyond whimsical speculation,” says Dr. Bruce Link.

The book “covers astonishing ground in unpacking the essence of epidemiology; 25 years later people were still writing review articles about the book, which is quite remarkable in a rapidly developing discipline like epidemiology,” says Dr. Landon Myer.

The book “given to me by a sociology professor became my inspiration to study epidemiology. It so influenced me that I still use parts of the text in advanced classes,” says Dr. Pam Factor-Litvak.

At Columbia, Dr. Susser also initiated groundbreaking studies in a remarkably wide range of areas. Especially noteworthy among the earlier studies was the landmark investigation of the Dutch Hunger Winter of 1944-45 led by him and Dr. Stein. The Dutch Hunger Winter resulted from a Nazi blockade of Holland at the end of World War II. Drs. Susser and Stein rigorously tested the causal relationship

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**LETTER FROM NELSON MANDELA ON THE OCCASION OF THE 80TH BIRTHDAYS OF DR. SUSSER AND STEIN**

Dear Zena and Mervyn,

As someone who became an octogenarian three years ago, I have great pleasure in saying ‘Welcome to the Club’. Over the years, especially when we were in prison, we managed to get trickles of information about you. It was always heartening to know that, albeit under different circumstances and many miles from bars, your commitments and active contribution to struggle for democracy remained undiminished.

Although we are divided by a great distance today, please know that our thoughts and best wishes are with you, and with all the friends who are joining you in the celebration.

Hearty congratulations!

Nelson Mandela

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“**For me, *Causal Thinking in the Health Sciences* indicated how one pushes the understanding of social factors in health beyond whimsical speculation.**”

—DR. BRUCE LINK

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Hearty congratulations!

Nelson Mandela
DR. SUSSER’S COLLEAGUES ARE NOT ONLY INFLUENCED BY HIS WORK BUT CREDIT IT WITH SHAPING THE DISCIPLINE AND THEIR OWN CAREERS

“One nugget in Sociology in Medicine frames my entire career. It reads as follows, ‘Societies in part create the disease they experience and, further, they materially shape the way diseases are to be experienced.’ As a social epidemiologist my job is to understand the social ‘creating’ and ‘shaping’ of population health and to effectively communicate that understanding to others.”

—Dr. Bruce Link

“Mervyn put THINKING back into epidemiology and he is thoroughly impatient with cookbook approaches that undermine serious, incisive thinking.”

—Dr. Louise Kuhn

“The totality of Mervyn’s work weaves a path to understanding the underlying goals of epidemiology; they are truly to have a macro to micro perspective on health and disease, from the social environment to subcellular processes.”

—Dr. Pam Factor-Litvak

“To me, one of Dr. Susser’s most influential works is Causal Thinking in the Health Sciences. Its clarity and economy make it a timeless reference and a pleasure to read. Dr. Susser is a truly integrative thinker, a brilliant epidemiologist, and an extraordinary writer. In this slim volume, he demonstrates beautifully that epidemiology is at once a science and an art.”

—Dr. Dana March

“Who could envision inverting the continental drift and reuniting Africa and South America? Sounds crazy, but Mervyn did something similar when he began to re-unify two drifting intellectual continents: sociology and epidemiology. Sociologists dig into causal processes, while epidemiologists are after distant, yet effective associations. With Causal Thinking in the Health Sciences, Mervyn began to enrich epidemiology with sociological thought. This seminal attempt has imprinted the theory of confounding and interaction, still resonates in the emerging interest for so-called causal models, and is bound to have further repercussions of geological magnitude.”

—Dr. Alfredo Morabia

between prenatal nutrition and child cognitive development by comparing Dutch men exposed and unexposed to famine at the age of 18 when they were seen for military induction. Ultimately the study showed that prenatal famine did not impact IQ at age 18 in a developed society. Although the finding was not what they and others had hoped for (they sought an empirical basis for providing nutritional supplements to improve child development), they always believed that it was essential to combine intellectual integrity and rigorous science with attempts to improve public health. The negative finding proved important in leading to the current deeper understanding of how prenatal nutrition influences development.

Especially noteworthy in later years, after he had founded the Gertrude H. Sergievsky Center, was that when the HIV/AIDS epidemic broke out in New York City in the 1980s, he and Dr. Stein became absorbed by this public health tragedy. They were among a small group of established chronic disease epidemiologists who worked to fight the epidemic at home.

HIV/AIDS would soon draw his and Dr. Stein’s attention back to their other home, South Africa, where, by the late 1980s, the epidemic was seen as a potentially grave threat to the black population. They helped organize a 1990 conference of anti-apartheid health activists and members of the African National Congress in Maputo, several weeks following Nelson Mandela’s release after 27 years of government confinement. That and other activities helped influence the newly formed democratic government in 1994 to make the first serious moves to address the epidemic.

Around the same time, Dr. Susser and his son Dr. Ezra Susser wrote a seminal piece called, “Choosing a Future for Epidemiology” in the American Journal of Public Health. This paper challenged epidemiologists to think out of the black box, to re-think the social environment, and to re-think pathways leading to disease causation.

Moreover, many Department faculty are here because of him, including Dr. Salim Abdool Karim, a South African whose important work on AIDS stemmed from the influence of Drs. Susser and Stein and who first came to Columbia University in 1977 on a Rockefeller Fellowship under Dr. Susser’s mentorship.

Now in his ninth decade, Dr. Susser’s influence is still great. The year 2009 saw the publication of his and Dr. Stein’s book Eras in Epidemiology: The Evolution of Ideas, which describes the historical evolution of epidemiology and, like so much of Dr. Susser’s work, will shape the field for years to come.

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The Department has been nurturing new initiatives that build on our strengths and capitalize on opportunities for growth. The three new initiatives featured on the following pages exemplify this.

**EPIC**

The Epidemiology and Population Health Summer Institute at Columbia (EPIC) creates expanded learning opportunities for investigators and scholars from the health and social sciences, public health practitioners, clinicians, and industry professionals interested in population health research.

**EDGE**

The Epidemiology, Design, Guidance, and Expertise (EDGE) program aims to provide epidemiologic expertise to investigators across Columbia University whose work might benefit from rigorous epidemiologic input on design and analysis.

**GMHP**

The Global Mental Health Program (GMHP) is working to put global mental health squarely in the middle of the global health agenda at the School and the University, as well as in the broader global health conversation.
Epidemiology and Population Health Summer Institute at Columbia (EPIC)

This summer, the Epidemiology Department will host the first annual Epidemiology and Population Health Summer Institute at Columbia University (EPIC), providing public health and other professionals and students a unique opportunity to learn population research skills they would not otherwise have the time or resources to acquire.

With the increasing popularity and relevance of epidemiology to a broad range of disciplines, EPIC fills an unmet demand for a learning institute in New York City.

“EPIC will help enhance the Department’s visibility while also providing a valuable service to professionals interested in population-based research,” says Dr. Ryan Demmer, Assistant Professor of Epidemiology, and the co-director of EPIC.

Over 25 intensive week-long courses will be offered in topics such as Applied Epidemiologic Analysis Using SAS, Multi-Level Modeling, and Psychiatric Epidemiology. The courses are open to anyone, including students and professionals in the biological sciences, medicine, nursing, dentistry, public health, and social sciences.

EPIC courses will be taught by experts both within the Department and outside who offer a comprehensive set of population study design skills and expertise across all epidemiology sub-fields.

“Planning for EPIC has given me the opportunity to connect with creative and experienced instructors, and I’ve found their enthusiasm for teaching contagious,” says Dr. Gina Lovasi, Assistant Professor of Epidemiology, and co-director of EPIC.

For more information about EPIC, please go to http://cuepissummer.org
Epidemiology, Design, Guidance, and Expertise (EDGE)

The newly-launched Epidemiology, Design, Guidance, and Expertise (EDGE) program is building collaborations across the University by providing the expertise of our Department to researchers who could benefit from rigorous epidemiologic input on design and analysis.

“The goal is to look outwards from the Department and seek opportunities to develop new trans-disciplinary research projects that can improve public health and clinical practice,” says Dr. Andrew Rundle, Associate Professor of Epidemiology, who is leading EDGE.

Our faculty are trained in a core set of methods and theories that are critical to the successful conduct of a broad range of health studies. Faculty members work with outside investigators during the design and planning phase of projects and grant proposals to improve the project’s chance for success.

EDGE is designed to foster lasting interdisciplinary collaborations rather than the provision of a finite service.

Expertise provided by the Epidemiology faculty includes, but is not limited to:

- Study design and conduct
- Methodological development
- Questionnaire and scale development
- Assessment of bias, confounding, interaction, and mediation
- Causal inference
- Multi-level methodologies; linking data on neighborhood, individual, and molecular risk factors or phenomena
- Statistical analyses
- Large data set and secondary data set analyses (SEER-Medicare, Census, medical claims, digital medical record)
- Analysis of geospatial data
- Simulation and modeling analyses

Dr. Rundle will be leading an effort to reach out to the rest of the University community about EDGE in the coming months.
Global Mental Health Program (GMHP)

Although mental health is central to the health of populations—with mental disorders being a leading cause of disability worldwide—it has been a low priority on the global health agenda and disproportionately few resources, both in research and in service provision, are dedicated to it.

The time has come for a public health institution with such a strong faculty in psychiatry to spotlight this issue, say the program’s organizers.

“Global mental health is like the Cinderella of global health. Until now, it has been neglected, but it is beginning to flower, and in my view it is destined to become the most interesting area of all in global health,” says Dr. Ezra Susser, Professor of Epidemiology and Psychiatry, who runs the program, along with Dr. Sandro Galea, Gelman Professor and Chair of the Department of Epidemiology.

Working to change the status quo, the Epidemiology Department’s new Global Mental Health Program (GMHP) is putting global mental health squarely in the middle of the global health agenda at the Mailman School, the University, and in the larger global conversation. The GMHP is a Priority Program of the Mailman School’s Global Health Initiative (GHI).

“Global mental health is about taking on one of the most stigmatized forms of human suffering and overcoming the life and death consequences of ignoring it,” says Dr. Francine Cournos, who is also actively involved in the program.

The GMHP partners on a variety of mental health initiatives with government, global agencies, and programs at Columbia and other universities that are engaged in global mental health. So far, it has collaborated with programs in the School of Social Work, the Institute for Social and Economic Research and Policy, the New York State Psychiatric Institute, and the Earth Institute.

Its partnerships take on many forms, including hosting seminars, promoting interdisciplinary research and interventions, nurturing young scholars interested in global mental health, building capacity in global mental health research, and interventions in partner institutions in low and middle-income countries.

In 2010 GMHP held four seminars on such varied subjects as preventing HIV in psychiatric patients in Brazil and whether global health can cross the “quality chasm.” There will be eight seminars held in 2011.
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