IN MAY, THE SYMPOSIUM “POVERTY, THE BRAIN, AND MENTAL HEALTH” brought together scientists, advocates, and policymakers to scrutinize the latest research on childhood stress.

“We have moved beyond thinking about stress as a feeling and begun to think of it as a profound experience that affects our whole body,” said New York City Health Commissioner Mary Travis Bassett, MD, MPH, in her opening remarks. “We know that families, children, and whole neighborhoods that are experiencing protracted, concentrated disadvantage are disproportionately burdened by stressors.”

Co-presented by the Mailman School, the nonprofit Partnership with Children, and the American Museum of Natural History, which also hosted the event, the program included talks by Virginia Rauh, ScD, professor of Population and Family Health and deputy director of the Columbia Center for Children’s Environmental Health; Margaret Crotty, executive director of Partnership with Children; and Renée Wilson-Simmons, PhD, director of the Mailman School’s National Center for Children in Poverty.

Rauh spoke of her research showing how toxic stress triggers physical changes in a child’s developing brain that are visible with an MRI. Consequences include cognitive deficits, emotional disorders, and learning disabilities. The good news is that with the right kinds of support, children can recover: responsive parenting and learning environments work together to buffer against adverse experiences. “The brain is a very adaptable organ,” she explained.

To foster what it calls “safe learning environments,” Partnership with Children works with New York City schools to provide trauma-informed counseling for children and families experiencing toxic stress. “The antidote to toxic stress—nurturing relationships and consistent feelings of safety—works if it’s in all the child’s environments,” said Crotty, who is also an executive MPH student at Mailman.

To promote access to the kinds of interventions researchers have already shown can help, NCCP and the Department of Health and Mental Hygiene are collaborating on two pilot projects to help parents and other caregivers attend to the social and emotional needs of their children. Says Wilson-Simmons:

“CHILDREN DO BETTER WHEN FAMILIES DO BETTER.”

**STRESS-BUSTERS**

**CHILDHOOD TRAUMA UNDER THE MICROSCOPE**

**HONOR ROLL**

**A SAMPLING OF AWARDS**

- Director of the Center for Infection and Immunity Ian Lipkin, MD, PhD, recipient of the International Science and Technology Cooperation Award, China’s top science honor for foreign scientists.
- The Lerner Center, recipient of a $1 million gift from the family of John Rowe, MD, Julius B. Richmond Professor of Health Policy and Aging and chairman of the School’s Board of Overseers.
- Professor of Population and Family Health A. Musharreza Raza Chowdhury, recipient of an award for outstanding leadership from University of Dhaka in Bangladesh.
HONOR ROLL

Carlos Cuevas, MPA ’12, MPH ’12, honored with the Mailman School’s Outstanding Recent Alumni Award.


John A. MacPhee, MPH ’12, honored with the Allan Rosenfield Alumni Award for Excellence.

Yuanjia Wang, PhD, associate professor of Biostatistics, named a fellow of the American Statistical Association.

THE OTHER HALF
TEEN PREGNANCY PREVENTION TARGETS BOYS

IT TAKES TWO TO TANGO, and yet the vast majority of teen pregnancy interventions focus on young women. In November 2015, the U.S. Centers for Disease Control and Prevention awarded its first-ever grant for a teen pregnancy prevention program focused on young men to David Bell, MD, MPH, associate professor of Population and Family Health.

Known as “motivational interviewing,” the approach helps people define what they want to change, what that change looks like, and how they can create that change. In one arm of Bell’s study, coaches will work with young men to encourage pregnancy-prevention measures like using condoms, talking with their partners about contraception, and utilizing healthcare services; the control group will be motivated to develop healthier diets and exercise habits and to stop smoking.

“We have so very few, if any, evidence-based models on working with guys to reduce teen pregnancy,” says Bell. With the five-year, $3.6-million CDC award, Bell is partnering with Melanie Gold, PhD, professor of Population and Family Health (and of Pediatrics at Columbia University Medical Center), to tailor a program developed by Gold that has been proven among young women to reduce rates of unprotected sex.

MATCHMAKER NAMED TO FORGE PARTNERSHIPS FOR PUBLIC HEALTH

Sebastian Fries, PhD, MA, joined the Mailman School in May as executive director for the Columbia Population Health Partnerships (CPHP). He is charged with leading the School’s efforts to forge partnerships with the public and private sectors. A former chief giving officer of Toms, a socially conscious shoe company that matches each purchase with a donation, Fries brings years of experience blending purpose and profit in the private sector. He previously worked at Pfizer, where he developed business models in emerging markets.

Under Fries’ direction, CPHP seeks to build relationships with partners across sectors in pursuit of population health goals. Working with the Dean’s executive team and with faculty across departments, Fries sees potential for collaboration everywhere but plans to start from academia’s comfort zone: spurring improvements to the health-care system by connecting hospitals, insurance providers, and policymakers with the research, analysis, and expertise of Mailman School faculty.

In a tough funding environment, partnerships with private companies promise public health scholars increased access to resources, expanded influence, and opportunities to scale up proven pilot projects. “We can find common ground and common values between stakeholders—that’s the power of coalitions,” says Fries. “We’re from different worlds, but they can overlap for the greater good.”
OVER THE LAST 100 YEARS, LIFE SPANS HAVE INCREASED BY NEARLY THREE DECADES; societies around the world now boast unprecedented numbers of elders. Perhaps nowhere is the demographic shift more evident than in China, which is already home to more than 900 million people over age 60. In October, experts from around the world gathered in Shanghai at the Columbia-Fudan Global Summit on Aging and Health to explore the science that keeps people healthy into older ages and how to cox clinically relevant insights from the tsunami of data generated by emerging methods of genomic sequencing.

Jeff Goldsmith, PhD / $1.8 million: The assistant professor will analyze post-stroke neuroimaging data to guide the development of more effective rehabilitation techniques to combat the leading cause of physical disability in the United States.

Min Qian, PhD / $400,000: The assistant professor will leverage machine learning to help clinicians identify the best behavioral interventions for people who have suffered a heart attack and are at risk of depression, a disease that increases the risk of subsequent coronary damage and death.

Ying Wei, PhD / $1.2 million: The associate professor will develop analytical tools to reveal how genetic variants influence gene expression at the molecular level.

Ken Cheung, PhD / $1.6 million: The professor will develop and validate statistical methods for analyzing the efficacy of treating depression with behavioral interventions which leverage technologies like mobile apps to augment or replace psychotherapy for people constrained by geography, finances, or other impediments to face-to-face treatment.

Iuliana Ionita-Laza, PhD / $1.2 million: The associate professor will create statistical methods to integrate data from multiple next-generation genomic sequencing techniques to reveal the causal variants associated with autism and schizophrenia within the abundant natural variations among people whose genomic and clinical data has been collected.

BIG MONEY
BIOSTATISTICS NETS NIH AWARDS

THIS YEAR, FACULTY IN THE DEPARTMENT OF BIOSTATISTICS GARNERED $6.2 MILLION IN NEW AWARDS FROM THE NATIONAL INSTITUTES OF HEALTH. OVER THE NEXT FIVE YEARS, THEY WILL USE THE FUNDS TO EXPLORE SUCH QUESTIONS AS HOW TO TRAIN COMPUTERS TO PERSONALIZE TREATMENT PROTOCOLS FOLLOWING A HEART ATTACK AND HOW TO COAX CLINICALLY RELEVANT INSIGHTS FROM THE TSUNAMI OF DATA GENERATED BY EMERGING METHODS OF GENOMIC SEQUENCING.

PopUlation Dynamics
Aging Conference in Shanghai

"This Summit is a watershed moment for the science of healthy aging," says Dean Linda P. Fried, MD, MPH. "The wisdom garnered over years of studying public health interventions for older people will finally take center stage in China, a country that has always had an unparalleled capacity to instigate change."

HOT PROSPECT
PARIS CLIMATE ACCORD PUTS HEALTH ON THE FRONT BURNER

At the November 2015 COP21 Climate Conference in Paris, the Mailman School joined forces with the White House to encourage schools of public health, nursing, and medicine to form a global coalition to prepare health professionals to contend with the effect of climate change on human health. To date, more than 100 schools in 14 nations have signed on to the Mailman-led campaign.
THE U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION has given its top designation for evidence-based interventions to six HIV-prevention programs—including a suite of curricula known as Sisters Informing Sisters about Topics in AIDS (SISTA)—designed by Gina Wingood, ScD, MPH. Wingood has headed 20 National Institutes of Health–funded grants and penned more than 240 peer-reviewed articles. In 2015, the Mailman School named her the Sidney and Helaine Lerner Professor and founding director of Columbia’s Lerner Center of Public Health Promotion.

What’s a health challenge you’ve confronted? I’ve had severe asthma since birth. I can’t leave my house without an EpiPen—it could be disastrous. I also receive monthly shots to help control my asthma; without them, I would be very sick. I am also severely allergic to all nuts, nut oils, and nut products. Accidentally eating a nut can send me to the hospital for several days.

That sounds pretty scary. How do those experiences affect your approach to health promotion? It has been fascinating to apply my scholarship on behavioral-change intervention and realize what a tremendous impact my own health actions have. I’m also struck by how essential the efforts of my family have been in helping me cope with my serious asthma and allergies.

What features are common to the best health-promotion programs? It all boils down to problem-solving, communication, and decision-making skills. In HIV prevention, there is a lot of focus on condom use. But women don’t use condoms. So how do we, as women, communicate the need to use a condom in a way that’s not threatening or demeaning or demanding and that gets our needs across? If you’re all mean and in your partner’s face or you’re so uncomfortable you can’t even look the person in the eye, that’s not going to work. In the SISTA programs, we role-play asking partners to use condoms in diverse situations, with different kinds of partners—someone older, someone you love, someone who abuses drugs or alcohol. You can use the same principles with any population, any problem. We all need these problem-solving, communication, and decision-making skills.

What are the implications for schools of public health? Even students in schools of public health need communication skills. This fall, the New York State Department of Health approved a new Health Communication Certificate, which we now offer through the Lerner Center.

What enticed you to move north? Typically, we public health scholars focus on grants and publications. The Lerner Center is asking, How can we promote our research to diverse audiences? My interest is not just developing HIV-prevention programs but actually disseminating them widely to diverse populations throughout the U.S.

How is that going? The SISTA Program is in South Africa, Oklahoma—all over the place. We have a suite of programs: one for older women, one for women living with HIV, one for teens. The interventions all have the same framework and emphasize the same skills.

What’s the next SISTA Program expansion opportunity? The megachurches can reach tens of thousands of people in the Southern U.S. I’m working with a number of them to have a more powerful impact in the area of HIV prevention. Now we’re expanding to diabetes, which is also prevalent among African-American women in the South.