SPHHP External Awards Received between 07/01/2017 and 12/31/2017

At 6-month intervals, we acknowledge and celebrate the success of faculty and staff within the SPHHP who have garnered external funding. Listed below are the SPHHP faculty and staff (alphabetized by department and centers) who received new or renewal/continuation awards, as UB principal investigators, between 07/01/2017 and 12/31/2017.

DEPARTMENT OF BIOSTATISTICS

Lili Tian, Associate Chair and Professor of Biostatistics, is PI on a new award from Health Research, Inc. (Roswell Park Cancer Institute)/National Cancer Institute for the project entitled, *Combating Cetuximab Resistance in Colorectal Cancer.* The study will evaluate hPEPDG278D, a recombinant enzymatically inactive mutant of human peptidase D, for overcoming resistence to Cetuximab, an antibody used to treat colorectal cancer.

Albert Vexler, Professor of Biostatistics, and **Jihnhee Yu**, Associate Professor of Biostatistics, are Co-PIs on a continuation award from the National Library of Medicine/NIH for the project entitled *Modern Empirical Likelihood Methods in Biomedicine and Health.* The outcome of their work has resulted in a book entitled *Empirical Likelihood Method in Epidemiology,* currently under review. The book will provide a systematic framework for the innovative biostatistical techniques and practice of research studies that are used to analyze and compare data essential to Biomedicine and Health.

Dr. Vexler also is co-author on a soon to be released book published by Chapman & Hall/CRC, *Statistics in the Health Sciences: Theory, Applications, and Computing.*

CENTER FOR ASSISTIVE TECHNOLOGY

Joseph Lane, Director of the Center for Assistive Technology, is PI on a continuation award from the Administration for Community Living, Disability and Rehabilitation Research Program/Dept. of Health and Human Services, for the project entitled *Disability and Rehabilitation Research Program.* The Center's focus is on improving the performance of federal programs designed to generate technology-based innovations – the primary applications are devices and services for persons with disabilities and the elderly. Co-Investigators from CAT include **Jennifer Flagg**, Project Administrative Officer; **James Leahy**, Research Assistant Professor; and **Vathsala Stone**, Research Assistant Professor.

Christine Oddo, Director of Client Service, Center for Assistive Technology, is PI on a continuation award from the New York State Office of Child and Family Services for the project entitled *Equipment Loan Closet*. The program will continue to loan adaptive equipment to legally blind persons for educational and work purposes.

DEPARTMENT OF COMMUNITY HEALTH AND HEALTH BEHAVIOR

R. Lorraine Collins, Professor of Community Health and Health Behavior and Associate Dean for Research in SPHHP, is PI on a new award from Health Research Inc. (Roswell Park Cancer Institute)/NIH for the project entitled *The Influence of Social Network Size, Composition and Function of Psychological Outcomes of Pediatric Cancer Caregiving: Relationships across Time and Around Periods of Distress.* The study will examine how social network experiences influence parental coping over time and surrounding especially stressful treatment procedures.

Lucia Leone, Assistant Professor of Community Health and Health Behavior, is PI on a new award from the National Cancer Institute/NIH for the project entitled *Effectiveness and Implementation of a Research Tested Mobile Produce Market Designed to Improve Diet in Underserved Communities.* A previous pilot study led by Dr. Leone showed that a mobile produce market can have a significant positive impact on diets of residents in lower-income communities. This study will implement the program with eight organizations nationwide to

determine if the effect can be replicated and develop a best-practices toolkit to help others sustainably implement the program.

Heather Orom, Associate Professor of Community Health and Health Behavior, is PI on a continuation award from the National Cancer Institute/NIH for the project entitled *"Don't Know" Responses to Risk Perception Questions: Identifying Mechanisms and Solutions*. The study will continue to explore reasons why a significant proportion of people do not know their risk for two highly preventable diseases, Type 2 diabetes and colorectal cancer, despite the proliferation of risk-based prevention messages about these diseases. **Marc Kiviniemi**, Associate Professor of Community Health and Health Behavior, is a Co-Investigator.

Dr. Orom also received a new award with **Scott Wersinger**, Adjunct Instructor in Exercise and Nutrition Sciences and Educator in International Student Services, from the J. Warren Perry and Charles Donald Perry Memorial Fund/Community Foundation for Greater Buffalo. The project, entitled *Peer Difference Education to Improve STEM Success for Minority & Low Income Students*, will test a brief, evidence-based, easily disseminated peer difference-education intervention to improve grades in science, technological, engineering, and math (STEM) and pre-health degree subjects among underrepresented minority, low income, and first generation college students.

Sarahmona Przybyla, Assistant Professor of Community Health & Health Behavior, serves as both PI or Co-PI on three new awards. Dr. Przybyla is Co-PI on an award from the University of Rochester Center for AIDS Research/National Institute of Allergy & Infectious Disease/NIH, for the project entitled, *Assessment of Knowledge and Attitudes toward Pre-Exposure Prophylaxis (PrEP) among Future Health Professionals*. The research team will conduct a web-based survey of students training in medical, nursing, and pharmacy programs to examine knowledge and attitudes towards PrEP among future health professionals.

Also from the University of Rochester, Dr. Przybyla is Co-PI on an award for the project entitled, *Tenofovir in Hair Assay Development.* The study seeks to develop a liquid chromatography tandem mass spectrometry-based assay that quantifies tenofovir concentrations in hair samples.

Dr. Przybyla is PI on a third award from the New York State Department of Health AIDS Institute for the project entitled, *Using a Social Ecological Model to Facilitate Adoption of Pre-Exposure Prophylaxis (PrEP): Understanding Patient and Provider Perspectives.* The study team will conduct interviews with four subpopulations: 1) patients on PrEP; 2) those who are at high risk for HIV acquisition but do not take PrEP; 3) health care providers who prescribe PrEP; and, providers
who do not prescribe PrEP.

DEPARTMENT OF EPIDEMIOLOGY AND ENVIRONMENTAL HEALTH

Jo Freudenheim, UB Distinguished Professor and Chair of Epidemiology and Environmental Health, is PI on a 5-year renewal from the National Cancer Institute/NIH for the project entitled *Interdisciplinary Training in Cancer Epidemiology at UB*. The program provides training and hands-on opportunities for pre-doctoral and post-doctoral fellows to develop research skills in epidemiology, as well as other related disciplines.

Katarzyna Kordas, Associate Professor of Epidemiology and Environmental Health, is PI on a new award from Cardiff University, United Kingdom, entitled, *Neural Correlates of APOE Genotypes in Young Adults*. The goal of this study is to understand if APOE ε4 carriers show selective brain and behavioral differences (compared to non-carriers) in early adulthood that mirror the early cognitive and anatomical markers of detrimental aging, and whether lifestyle factors may moderate these early declines.

Lina Mu, Associate Professor of Epidemiology and Environmental Health, is PI on a continuation award from the National Institute of Environmental Health Sciences/NIH for the project entitled *Metabolomics Profiling of Biological Responses to Changes in Air Pollution Levels.* The research will continue to evaluate metabolic changes in response to air pollution exposure and provide insight on potential mechanisms through which air pollution may increase the risk of various diseases. **Matthew Bonner**, Associate Professor of Epidemiology and Environmental Health and **Rachel Hageman Blair**, Assistant Professor of Biostatistics, are Co-Investigators.

Pavani Ram, Associate Professor of Epidemiology and Environmental Health, is PI on a new award from the Board of Trustees of the Leland Stanford Junior University for the project entitled *Optimizing Windows to Improve Ventilation in Dhaka Slums.* In Bangladesh, more than one-third of the population live in dwellings lacking windows and with high concentrations of indoor air pollution. Acute lower respiratory infections lead to

22% of deaths in children under five years of age. The study seeks to develop designs to improve ventilation that are practical, affordable and easily constructed by local artisans using locally available materials.

Laura Smith, Assistant Professor of Epidemiology and Environmental Health, is PI on two transfer awards. The first, from Cornell University/NIEHS, is entitled *Mycotoxins in Pregnancy and Birth Outcomes in Zimbabwe.* The study will the hypothesis that Mycotoxins are a novel cause of adverse birth outcomes**,** with significant implications for health globally, in infancy and later in life.

The second award is from Cornell University/Bill and Melinda Gates Foundation for the project entitled *Establishing the Link between Mycotoxin Exposure, Gut Dysfunction and Stunting in Zimbabwean Infants.* The project aims to investigate mycotoxin exposure during infancy in rural Zimbabwe and the potential relationship with the environmental enteropathy and stunting.

John Violanti, Research Professor of Epidemiology and Environmental Health, is Co-PI on a new award (Lead PI: Janet Shucard, Neurology), from the National Institute of Justice for the project entitled *The Effects of Trauma Exposure on Neurophysical, Cognitive, and Psychological Function in Active Duty Police Officers.* The study will investigate the effects of PTSD symptoms on attention and cognitive control in police, and to identify neural markers associated with deficits in these processes.

Dr. Violanti is also PI on a continuation award from the National Institute for Occupational Safety and Health/CDC for the project entitled *Stressors and Cardio-Metabolic Disease in Police: A 12-Year Longitudinal Study*. The research will continue to examine the impact of occupational stressors on early signs of cardiovascular and metabolic diseases in police officers to further knowledge on this topic and enhance prevention efforts in the field. **Jean Wactawski-Wende**, Dean of SPHHP and SUNY Distinguished Professor of Epidemiology and Environmental Health is Co-Investigator.

Jean Wactawski-Wende, Dean of SPHHP and SUNY Distinguished Professor of Epidemiology and Environmental Health, and **Michael LaMonte**, Research Associate Professor of Epidemiology and Environmental Health, are Co-PIs on a continuation award from the Memorial Hospital of Rhode Island/NHLBI for the project entitled *WHISH-2-Prevent Heart Failure*. The study will continue to evaluate whether increasing physical activity, reducing sedentary behavior and increasing muscle strength through resistance training in elderly women will reduce the risk of atherosclerotic cardiovascular disease.

Dr. Wactawski-Wende is also PI on 2 continuation awards. The first, from the National Heart, Lung, and Blood Institute/NIH, is entitled *Women's Health Initiative – Regional Center*. As the Northeast Regional Center for the WHI, the study will continue to follow the health outcomes of the postmenopausal women who have been participants since the study launched in 1991. Co-Investigators from EEH are **Michael LaMonte**, Research Associate Professor, **Amy Millen**, Associate Professor, and **Heather Ochs-Balcom**, Associate Professor.

The second is from the National Institute of Dental and Craniofacial Research/NIH and is entitled *Oral Microbiome and Periodontitis: A Prospective Study in Postmenopausal Women.* Periodontal Disease is common in older adults. This study will further characterize oral bacteria that are associated with periodontal disease severity and progression in older women. In the future, this information could inform strategies for prevention and treatment of periodontal disease. **Michael LaMonte** and **Amy Millen** are Co-Investigators.

Jerome Yates, Clinical Professor of Epidemiology and Environmental Health, is PI on an award from the P2 Collaborative of Western New York Inc. entitled, *Population Health Improvement Program.* The P2 Collaborative is coordinating efforts to improve health in the eight counties of Western New York. Dr. Yates will participate in the committee evaluating the available public health data and the Steering Committee for the organization. He also will work to keep stakeholders aware of the relevant activities in UB's Jacob School of Medicine and Biomedical Sciences and School of Public Health and Health Professions.

DEPARTMENT OF EXERCISE AND NUTRTION SCIENCES

Blair Johnson, Assistant Professor of Exercise and Nutrition Sciences, is PI on a new award from the U.S. Navy Office of Naval Research/DOD for the project entitled *Autonomic Activity and Water Immersion.* The research seeks to determine whether changes in sympathetic nerve activity occur in divers during both thermoneutral and cold water immersion conditions while 1) breathing 100% oxygen air as compared to air breathing and; 2) breathing hypercapnic air compared to air breathing.

Elizabeth Mietlicki-Baase, Assistant Professor of Exercise & Nutrition Sciences, is PI on two new awards. The first, from the Brain and Behavior Research Foundation, is entitled *Hindbrain Glucagon-Like Peptide-1 Receptor Signaling: Role in Drug-Seeking Behavior*. The research will test the role of NTS glucagon-like peptide-1 receptor (GLP-1R) signaling in cocaine seeking. The results of the study will advance the knowledge of the neurobiology underlying addiction and drug seeking and broaden the understanding of the neural control of motivated behavior.

The second, from the National Institute of Diabetes and Digestive and Kidney Diseases/NIH, is entitled *Impact of Sex and Diet on Mesolimbic Amylin Signaling for Energy Balance Control*. The study will test the roles of sex differences and diet on the ability of the hormone amylin to promote weight loss and hypophagia through actions in the ventral tegmental area (VTA), a brain nucleus important for feeding, reward, and motivated behavior.

Dr. Mietlicki-Baase is also PI on a continuation award from the National Institute of Diabetes and Digestive and Kidney Diseases/NIH. The study, entitled *Amylin-Mediated Control of Energy Balance in the Mesolimbic Reward System,* seeks to deepen our understanding of how amylin activates distributed nuclei in the brain to regulate feeding and energy balance, thus providing important information for the development of more effective obesity pharmacotherapies.

Todd Rideout, Associate Professor of Exercise and Nutrition Sciences, is PI on a continuation award from the National Center for Complementary and Alternative Medicine/NIH for the project entitled *Cardiovascular Protection by Phytosterols in Dyslipidemic Mothers and Progeny*. Dr. Rideout's research will continue to examine phytosterol intervention from pre-pregnancy to weaning on cardiovascular disease risk in hamsters, both in mothers and offspring.

Zachary Schlader, Assistant Professor of Exercise and Nutrition Sciences, is PI on a new award from the Naval Sea Systems Command, for the project entitled *Hyperthermia and Hypohydration in a Disabled Pressurized Rescue Module.* The study will determine the determine the magnitude of increases in core body temperature or reductions in body fluids incurred in a warm and humid disabled Pressurized Rescue Module scenario at sea level and at depth for up to 24 hours.

DEPARTMENT OF REHABILIATION SCIENCE

Jeanne Langan, Assistant Professor of Rehabilitation Science, is PI on a new award from the Eunice Kennedy Shriver National Institute of Child Health & Human Development/NIH, for the project entitled, *A Functional Upper Limb Training and Assessment Tool to Enhance Efficacy and Scalability of Rehabilitation in Ecological Environments.* Interventions promoting optimum motor performance across the lifespan are a priority after a neurological insult such as stroke. The proposed research incorporates smart devices and 3D printing to create patient-centered rehabilitation devices that are scalable. This innovative blend of technology and principles of neuroplasticity can advance standards of practice in healthcare.

Machiko Tomita, Clinical Professor of Rehabilitation Science, is PI on a new award from The Ralph C. Wilson, Jr. Foundation for the project entitled *Providing Support for Caregivers of Frail Older Adults with Cognitive Impairments.* The project aims to support caregivers of older adults who are enrollees of the Program for All-inclusive Care for the Elderly (PACE). Occupational Therapy (OT) students will work directly with caregivers to learn more about the problems and challenges they are experiencing and provide OT interventions to reduce caregiver burden, depression and fatigue, and increase positive aspects of caregiving and self-efficacy. **Jo Schweitzer**, Clinical Assistant Professor of Rehabilitation Science, is Co-Investigator.