News at a Glance
May 23, 2019

The Center for Environmental Genetics welcomes new member Melinda Mahabee-Gittens, M.D., M.S., C.T.T.S., a professor of Pediatrics at the University of Cincinnati and attending physician in the Cincinnati Children's Hospital Medical Center (CCHMC) Division of Emergency Medicine. Dr. Mahabee Gittens’ interests and expertise include research on tobacco prevention and education in medical settings. She has been funded by the National Cancer Institute (K23CA117864; K22CA163747), the Agency for Healthcare Research and Quality (R03HS11038), the American Lung Association (CG-004-N), and the Charlotte R. Schmidlapp Woman Scholars Award. With support from the National Institute of Environmental Health Sciences (NIEHS R01 ES027815), Dr. Mahabee-Gittens is currently studying the contribution of thirdhand smoke to overall tobacco smoke exposure in pediatric patients. Thirdhand smoke is the persistent residue emanating from secondhand smoke that accumulates in dust, in objects, and on surfaces in homes where tobacco has been used. The homes of smokers become reservoirs of persistent toxic pollutants (e.g., nicotine, polycyclic aromatic hydrocarbons (PAH) and tobacco-specific nitrosamines, to which children may remain vulnerable, even after the smokers quit smoking.

CEG members Kelly Brunst, Pat Ryan, Kim Yolton, Grace LeMasters, and Kim Cecil, et al., have published an article in Environmental Research indicating a link between traffic-related air pollution (TRAP) and anxiety symptoms in children. As part of the Cincinnati Childhood Allergy and Air Pollution Study and in work funded in part through a $40,000 CEG pilot award (2018), the team sought to evaluate the impact of TRAP on brain metabolism and its relation to anxiety symptoms. A sample of 145 adolescents underwent magnetic resonance spectroscopy. The researchers measured in the anteriorcingulate cortex several brain metabolites, including myo-inositol, N-acetylasparrante, creatine, choline, glutamate, glutamate plus glutamine, and glutathione. This is the first study of children to utilize neuroimaging to link TRAP exposure, metabolite dysregulation in the brain, and generalized anxiety symptoms among otherwise healthy children. Brunst and colleagues posit that TRAP may elicit atypical excitatory neurotransmission and glial inflammatory responses leading to increased metabolite levels and subsequent anxiety symptoms.

Long-time CEG member Gurjit Khurana Hershey, M.D., Ph.D., is one of four 2019 recipients of the Daniel Drake Medical from the UC College of Medicine. The prestigious award is given annually to living faculty members or alumni for their outstanding contributions to medical education, scholarship and research. CEG clinical member Brett Kissela, M.D., Professor and Chair of Neurology and Rehabilitation Medicine, has been accepted into the 2019–2020 Class of the Association of American Medical Colleges (AAMC) Council of Deans Fellows.

Recent Publications


