News at a Glance

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CEG
Center for Environmental Genetics

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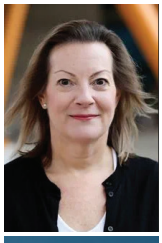
Yolton, Ryan, Cecil earn 5-year, $5 million R01Award



CEG Internal Advisory Board member **Kimberly Yolton, PhD**, Professor and Director of Research Section, General and Community Pediatrics, Cincinnati Children's Hospital Medical Center, and fellow CEG members **Patrick H. Ryan, PhD, MS**, Professor of Pediatrics, and **Kim Cecil, PhD,** Professor in the Department of Radiology, have received a new **NIEHS R01 award:** Longitudinal Impact of Air Pollution on Mental Health and Neuroimaging Outcomes during Adolescence in the Cincinnati Combined Childhood Cohorts (C4). R01 ES031621. Project start-end 3/3/2021–12/31/2025, total 2021 funding $1.1 million.

The team will use existing longitudinal data from the Cincinnati Childhood Allergy and Air Pollution Study (CCAAPS) and the Health Outcomes and Measures of the Environment (HOME) Study to address the hypothesis that exposure to air pollution during critical periods of brain development, including adolescence, is associated with adverse mental health outcomes. Both prospective cohorts have been followed from birth and evaluated with concordant measures of mental health and neuroimaging at age 12 years. The team will conduct new follow-up at age 18 years to assess the onset and persistence of mental health outcomes through adolescence and apply validated models for PM2.5 and TRAP to characterize air pollution exposure from conception through age 18 years. The team also will acquire novel neuroimaging outcomes, including brain-aminobutyric acid and glutathione concentrations accompanied by anatomical and functional magnetic resonance imaging. The team aims to determine the association between exposure to PM2.5 and TRAP during distinct developmental periods and the onset and persistence of mental health outcomes in adolescence; the association between exposure to PM2.5 and TRAP during distinct developmental periods and neuroimaging outcomes in late adolescence; and whether changes in brain volume, organization, metabolism, and function mediate associations between PM2.5 and TRAP exposure and mental health outcomes.

Recent Publications

Holmes R, Ma J, Andra SS, **Wang HS.** Effect of common consumer washing methods on Bisphenol A release in tritan drinking bottles. Chemosphere. 2021 Mar 2.

Czyzyk-Krzeska MF, Landero Figueroa JA, Gulati S, Cunningham JT, **Meller J,** Shamsael B, Vemuri B, Plas DR . Molecular and metabolic subtypes in sporadic and inherited clear cell renal cell carcinoma. Genes (Basel). 2021 Mar 9;12(3):388. Review. PMID: 33803184. PMCID: PMC7999481.

Mendy A, Wu X, Keller JL, **Fassler CS, Apewokin S, Mersha TB, Xie C, Pinney SM.** Long-term exposure to fine particulate matter and hospitalization in COVID-19 patients. Respir Med. 2021 Mar;178:106313. doi: 10.1016/j.rmed.2021.106313. PMID: 33550152. PMCID: PMC7835077.

Members in the News

Research by New Investigator Awardee **Angelico Mendy, MD, PhD, et al.** on the association between exposure to air pollution (> PM2.5) and COVID-19 severity drew the attention of **Consumer Affairs** (April 19) and **US News & World Report** (April 20). CEG member **Mary Beth Genter, PhD, DABT, Fellow ATS**, was interviewed for an April 12 **Healthline** report on brands of hand sanitizer found to contain hazardous chemicals, including benzene, a known carcinogen. Dr. Genter explained that there is no way to tell by looking at a label if benzene was used to denature the ethanol found in such products, so avoiding brands containing denatured ethanol might be the best precaution.

Transient BPA release in Tritan drinking bottles has been reported and is likely due to surface contamination in the manufacturing process. In an important discovery for consumers, this study by CEG member **Hong-Sheng Wang, PhD,** et al. found that **dishwashing** -- versus handwashing with soap and water or mere rinsing -- was effective in eliminating BPA contamination.