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Integrative Technologies Support (ITS) Core will host workshop on Single-Cell RNA Sequencing, January 20

The ITS Core will offer a **Single-Cell RNA Sequencing** Workshop on Friday **January 20** from 11:00 AM–1:00 PM, Room 121 Kettering Laboratory Building. Expert speakers will include [Xiang Zhang, PhD](#), Research Associate Professor and Director of the Genomics & Epigenomic Sequencing Core (GESC); [Chia-I Ko, PhD](#); Adjunct Assistant Professor, Division of Environmental Genetics and Molecular Toxicology (EGMT); [Mario Medvedovic, PhD](#); Professor and Director of the Division of Biostatistics and Bioinformatics, UC Department of Environmental and Public Health Sciences; and [Rathnakumar Kumaragurubaran, PhD](#), Assistant Professor, Pediatrics and Developmental Biology, and Director, scRNA-seq Core, CCHMC.



Devin Koestler

Save the Date! Our Integrative Health Sciences Facilities & Bioinformatics Cores will host [Devin C. Koestler, Ph.D.](#), Director of the Quantitative 'Omics Core, Kansas Institute of Precision Medicine, for a 12 PM **February 9** online panel workshop on strategies for analyzing DNA methylation data in epidemiological studies using high-throughput profiling techniques. More details to come!



The Community Engagement Core was busy throughout 2022, participating in health fairs in Crosby Township and east Price Hill, as well as the Cincinnati Museum Center summer science camp, to name but a few activities. Pictured here are CEC leaders Nick Newman, DO, MS, FAAP and Michelle Burbage, PhD, helping to take CEG science to the community. Photo by Amy Itescu.

CEG grants Time-Sensitive Awards geared toward future NIEHS-funded, gene-environment studies

The CEG has issued Time-Sensitive Response (TSR) awards in support of these forward-looking projects:

- **Disruption of DNA methylation in zygote by TCDD exposure.** PI: Chia-I Ko, Ph.D., Adjunct Assistant Professor, Division of Environmental Genetics & Molecular Toxicology.
- **Breast cancer in women with environmental uranium exposure.** PI: Susan M. Pinney, PhD, FACE; Professor, Division of Epidemiology.
- **Single-cell transcriptomics to reveal PFOS induced hepatotoxicity in NASH.** PI: Chunying Du, PhD; Associate Professor, Department of Cancer & Cell Biology.
- **Climate Impact on Harmful Algal Bloom-related Health Risks: Cyanotoxin Congener Distribution and Gene-Toxin Interactions.** PI: Dionysios (Dion) D. Dionysiou, Ph.D., F. EurASc, F. AEESP, F. ACS, F. IWA, F. RSC, F. CSP, BCEEM; Professor of Environmental Engineering and Distinguished Research Professor (STEMM).

These projects are in keeping with NIEHS' emphasis on investigating how exposure to environmental agents, especially during windows of susceptibility and/or over time or in combination, may cause or exacerbate a variety of human diseases.

Recent Publications

Zundel CG, **Ryan P**, Brokamp C, Heeter A, Huang Y, Strawn JR, Marusak HA. Air Pollution, Depressive and Anxiety Disorders, and Brain Effects: A Systematic Review. *Neurotoxicology*. 2022 Oct 21. [PMID: 36280190](#).

Crist M, Yaniv B, Palackdharry S, Lehn MA, **Medvedovic M**, Stone T, Gulati S, et al. Metformin increases natural killer cell functions in head and neck squamous cell carcinoma through CXCL1 inhibition. *J Immunother Cancer*. 2022 Nov;10(11):e005632. [PMID: 36328378](#).

Zhang JZ, Heinsberg LW, Krishnan M, Hawley NL, Major TJ, Carlson JC, Harré Hindmarsh J, Watson H, Qasim M, Stamp LK, Dalbeth



N... **Deka R**, et al. Multivariate analysis of a missense variant in CREBRF reveals associations with measures of adiposity in people of Polynesian ancestries. *Genet Epidemiol*. 2022 Nov 9. [PMID: 36352773](#).

Mendy A, Burcham S, **Merianos AL**, **Mersha TB**, **Mahabee-Gittens EM**, Chen A, **Yolton K**. Urinary volatile organic compound metabolites and reduced lung function in U.S. adults. *Respir Med*. 2022 Nov 10;205:107053. [PMID: 36399896](#).