

# Division of Laboratory Sciences

## Third Quarter 2023 Publications.

### National Biomonitoring Program.

[Per- and Polyfluoroalkyl Substances \(PFAS\) and Lipid Trajectories in Women 45-56 Years of Age: The Study of Women's Health Across the Nation.](#) Kang H, Ding N, Karvonen-Gutierrez CA, Mukherjee B, Calafat AM, Park SK. Environ Health Perspect. 2023 Aug;131(8):87004. doi: 10.1289/EHP12351. Epub 2023 Aug 8.

[Urinary Glyphosate Concentrations among Pregnant Participants in a Randomized, Crossover Trial of Organic and Conventional Diets.](#) Hyland C, Spivak M, Sheppard L, Lanphear BP, Antoniou M, Ospina M, Calafat AM, Curl CL. Environ Health Perspect. 2023 Jul;131(7):77005. doi: 10.1289/EHP12155. Epub 2023 Jul 26.

[A Nested Case-Control Study of Serum Per- and Polyfluoroalkyl Substances and Testicular Germ Cell Tumors among U.S. Air Force Servicemen.](#) Purdue MP, Rhee J, Denic-Roberts H, McGlynn KA, Byrne C, Sampson J, Botelho JC, Calafat AM, Rusiecki J. Environ Health Perspect. 2023 Jul;131(7):77007. doi: 10.1289/EHP12603. Epub 2023 Jul 17.

[Mixtures of urinary concentrations of phenols and phthalate biomarkers in relation to the ovarian reserve among women attending a fertility clinic.](#) Génard-Walton M, McGee G, Williams PL, Souter I, Ford JB, Chavarro JE, Calafat AM, Hauser R, Mínguez-Alarcón L. Sci Total Environ. 2023 Nov 10;898:165536. doi: 10.1016/j.scitotenv.2023.165536. Epub 2023 Jul 14.

[Temporal trends in urinary concentrations of phenols, phthalate metabolites and phthalate replacements between 2000 and 2017 in Boston, MA.](#) Jiang VS, Calafat AM, Williams PL, Chavarro JE, Ford JB, Souter I, Hauser R, Mínguez-Alarcón L. Sci Total Environ. 2023 Nov 10;898:165353. doi: 10.1016/j.scitotenv.2023.165353. Epub 2023 Jul 16.

[Perioperative exposure to volatile organic compounds in neonates undergoing cardiac surgery.](#) Gaynor JW, Graham EM, Bhandari D, Fenchel M, Bradman A, Klepczynski B, Collier H, Ittenbach RF, Reese CM, Blount BC. J Thorac Cardiovasc Surg. 2023 Aug 7:S0022-5223(23)00658-X. doi: 10.1016/j.jtcvs.2023.07.049.

[Midpregnancy Phthalate and Phenol Biomarkers in Relation to Infant Body Composition: The Healthy Start Prospective Cohort.](#) Stevens DR, Starling AP, Bommarito PA, Keil AP, Nakiwala D, Calafat AM, Adgate JL, Dabelea D, Ferguson KK. Environ Health Perspect. 2023 Aug;131(8):87017. doi: 10.1289/EHP12500. Epub 2023 Aug 24.

[Urinary Paraben Concentrations and Associations with the Periconceptional Urinary Metabolome: Untargeted and Targeted Metabolomics Analyses of Participants from the Early Pregnancy Study.](#) Rosen Vollmar AK, Rattray NJW, Cai Y, Jain A, Yan H, Deziel NC, Calafat AM, Wilcox AJ, Jukic AMZ, Johnson CH. Environ Health Perspect. 2023 Sep;131(9):97006. doi: 10.1289/EHP12125. Epub 2023 Sep 13.

[Variability and Longitudinal Trajectories of Phthalate and Replacement Biomarkers across Pregnancy in the Human Placenta and Phthalates Study.](#) Rosen EM, Stevens DR, McNell EE, Wood ME, Engel SM, Keil AP, Calafat AM, Botelho JC, Sinkovskaya E, Przybylska A, Saade G, Abuhamad A, Ferguson KK. Environ Sci Technol. 2023 Sep 5;57(35):13036-13046. doi: 10.1021/acs.est.3c04043. Epub 2023 Aug 22.

[Online solid phase extraction high-performance liquid chromatography - Isotope dilution - Tandem mass spectrometry quantification of organophosphate pesticides, synthetic pyrethroids, and selected herbicide metabolites in human urine.](#) Wambua D, Roman W, Vidanage I, Vidal M, Calafat AM, Ospina M. Chemosphere. 2023 Nov;340:139863. doi: 10.1016/j.chemosphere.2023.139863. Epub 2023 Aug 18.

[Serum concentrations of per- and polyfluoroalkyl substances and risk of renal cell carcinoma in the Multiethnic Cohort Study.](#) Rhee J, Chang VC, Cheng I, Calafat AM, Botelho JC, Shearer JJ, Sampson JN, Setiawan VW, Wilkens LR, Silverman DT, Purdue MP, Hofmann JN. Environ Int. 2023 Oct;180:108197. doi: 10.1016/j.envint.2023.108197. Epub 2023 Sep 14.

[Patterns of urinary organophosphate ester metabolite trajectories in children: the HOME Study.](#) Yang W, Braun JM, Vuong AM, Percy Z, Xu Y, Xie C, Deka R, Calafat AM, Ospina M, Yolton K, Cecil KM, Lanphear BP, Chen A. J Expo Sci Environ Epidemiol. 2023 Sep 30. doi: 10.1038/s41370-023-00605-2.

[Temporal trends and predictors of gestational exposure to organophosphate ester flame retardants and plasticizers.](#) Bommarito PA, Friedman A, Welch BM, Cantonwine DE, Ospina M, Calafat AM, Meeker JD, McElrath TF, Ferguson KK. Environ Int. 2023 Oct;180:108194. doi: 10.1016/j.envint.2023.108194. Epub 2023 Sep 7.

## Tobacco Laboratory.

[Assessment of urinary 6-hydroxy-2,4-cyclohexadienyl mercapturic acid as a novel biomarker of benzene exposure.](#) Bowman BA, Lewis EV, Goldy DW, Kim JY, Elio DM, Blount BC, Bhandari D. J Anal Toxicol. 2023 Sep 15;47(7):597-605. doi: 10.1093/jat/bkad056.

[HPLC-MS/MS Method for Measuring Cotinine and Trans-3'-Hydroxycotinine in Bronchoalveolar Lavage Fluid of Patients with e-Cigarette, or Vaping, Product Use-Associated Lung Injury \(EVALI\).](#) Seyler T, Blount BC, Wang L. J Anal Toxicol. 2023 Sep 28:bkad077. doi: 10.1093/jat/bkad077.

## Nutrition, Chronic, and Infectious Disease Laboratories.

[Practical considerations for accurate determination of free thyroxine by equilibrium dialysis.](#) Ribera A, Zhang L, Ribeiro C, Vazquez N, Thonkulpitak J, Botelho JC, Danilenko U, van Uytvanghe K, Vesper HW. J Mass Spectrom Adv Clin Lab. 2023 Jun 23;29:9-15. doi: 10.1016/j.jmsacl.2023.06.001. eCollection 2023 Aug.

[Recommendations for Setting a Criterion for Assessing Commutability of Secondary Calibrator Certified Reference Materials.](#) Miller WG, Keller T, Budd J, Johansen JV, Panteghini M, Greenberg N, Delatour V, Ceriotti F, Deprez L, Rej R, Camara JE, MacKenzie F, Lyle AN, van der Hagen E, Burns C, Fauskanger P, Sandberg S. Clin Chem. 2023 Sep 1;69(9):966-975. doi: 10.1093/clinchem/hvad104.

[Recommendations for Setting a Criterion and Assessing Commutability of Sample Materials Used in External Quality Assessment/Proficiency Testing Schemes.](#) Sandberg S, Fauskanger P, Johansen JV,

Keller T, Budd J, Greenberg N, Rej R, Panteghini M, Delatour V, Ceriotti F, Deprez L, Camara JE, MacKenzie F, Lyle AN, van der Hagen E, Burns C, Greg Miller W. Clin Chem. 2023 Sep 19:hvad135. doi: 10.1093/clinchem/hvad135.

## **Radiologic Threats Laboratory.**

[Alpha and beta spillover in liquid scintillation counting analysis of urine samples.](#) Piraner, Olga, Eardley, Karlee, Button, Jonathan. Journal of Radioanalytical and Nuclear Chemistry 332, 3837-3844 (2023). <https://doi.org/10.1007/s10967-023-09035-8>.