

# Division of Laboratory Sciences

## First Quarter 2023 Publications.

### National Biomonitoring Program.

[Glyphosate exposure and urinary oxidative stress biomarkers in the Agricultural Health Study.](#) Chang VC, Andreotti G, Ospina M, Parks CG, Liu D, Shearer JJ, Rothman N, Silverman DT, Sandler DP, Calafat AM, Beane Freeman LE, Hofmann JN. J Natl Cancer Inst. 2023 Apr 11;115(4):394-404. doi: 10.1093/jnci/djac242.

[A prospective nested case-control study of serum concentrations of per- and polyfluoroalkyl substances and aggressive prostate cancer risk.](#) Rhee J, Barry KH, Huang WY, Sampson JN, Hofmann JN, Silverman DT, Calafat AM, Botelho JC, Kato K, Purdue MP, Berndt SI. Environ Res. 2023 Jul 1;228:115718. doi: 10.1016/j.envres.2023.115718. Epub 2023 Mar 22.

[Associations of urinary metabolite concentrations of phthalates and phthalate replacements with body composition from mid-childhood to early adolescence.](#) Rokoff LB, Seshasayee SM, Carwile JL, Rifas-Shiman SL, Botelho JC, Gordon CM, Hauser R, James-Todd T, Young JG, Rosen CJ, Calafat AM, Oken E, Fleisch AF. Environ Res. 2023 Jun 1;226:115629. doi: 10.1016/j.envres.2023.115629. Epub 2023 Mar 6.

[Pesticide exposure and asthma morbidity in children residing in urban, multi-family housing.](#) Werthmann DW, Rabito FA, Adamkiewicz G, Reponen T, Calafat AM, Ospina M, Chew GL. J Expo Sci Environ Epidemiol. 2023 Feb 10;10.1038/s41370-023-00524-2. doi: 10.1038/s41370-023-00524-2.

[Early-life exposure to a mixture of organophosphate esters and child behavior.](#) Percy Z, Chen A, Sucharew H, Yang W, Vuong AM, Braun JM, Lanphear B, Ospina M, Calafat AM, Cecil KM, Xu Y, Yolton K. Int J Hyg Environ Health. 2023 May;250:114162. doi: 10.1016/j.ijheh.2023.114162. Epub 2023 Mar 28.

### Tobacco Laboratory.

[Mouth Level Intake of Nicotine from Three Brands of Little Filtered Cigars with Widely Differing Product Characteristics Among Adult Consumers.](#) Ashley DL, Zhu W, Watson CH, Bravo R, Ngac PK, Valentin-Blasini L, Pickworth WB, Kurti AN, Cunningham C, Blount BC. Chem Res Toxicol. 2023 Jan 16;36(1):43-52. doi: 10.1021/acs.chemrestox.2c00261. Epub 2023 Jan 4.

[Distinguishing Exposure to Secondhand and Thirdhand Tobacco Smoke among U.S. Children Using Machine Learning: NHANES 2013-2016.](#) Merianos AL, Mahabee-Gittens EM, Stone TM, Jandarov RA, Wang L, Bhandari D, Blount BC, Matt GE. Environ Sci Technol. 2023 Feb 7;57(5):2042-2053. doi: 10.1021/acs.est.2c08121. Epub 2023 Jan 27.

### Newborn Screening Laboratories.

[Development of a Universal Second-Tier Newborn Screening LC-MS/MS Method for Amino Acids, Lysophosphatidylcholines, and Organic Acids.](#) Kilgore MB, Platis D, Lim T, Isenberg S, Pickens CA,

Cuthbert C, Petritis K. *Anal Chem*. 2023 Feb 14;95(6):3187-3194. doi: 10.1021/acs.analchem.2c03098. Epub 2023 Feb 1.

[Harmonization of Newborn Screening Results for Pompe Disease and Mucopolysaccharidosis Type I](#). Dorley MC, Dizikes GJ, Pickens CA, Cuthbert C, Basheeruddin K, Gulamali-Majid F, Hetterich P, Hietala A, Kelsey A, Klug T, Lesko B, Mills M, Moloney S, Neogi P, Orsini J, Singer D, Petritis K. *Int J Neonatal Screen*. 2023 Feb 27;9(1):11. doi: 10.3390/ijns9010011.

## Nutrition, Chronic, and Infectious Disease Laboratories.

[Vitamin C Status of US Adults Assessed as Part of the National Health and Nutrition Examination Survey Remained Unchanged between 2003-2006 and 2017-2018](#). Powers CD, Sternberg MR, Patel SB, Pfeiffer CM, Storandt RJ, Schleicher RL. *J Appl Lab Med*. 2023 Mar 6;8(2):272-284. doi: 10.1093/jalm/jfac093.

[Development of an equilibrium dialysis ID-UPLC-MS/MS candidate reference measurement procedure for free thyroxine in human serum](#). Ribera A, Zhang L, Dabbs-Brown A, Sugahara O, Poynter K, van Uytvanghe K, Shimizu E, van Herwaarden AE, Botelho JC, Danilenko U, Vesper HW. *Clin Biochem*. 2023 Jun;116:42-51. doi: 10.1016/j.clinbiochem.2023.03.010. Epub 2023 Mar 20.

[Description and validation of an equilibrium dialysis ID-LC-MS/MS candidate reference measurement procedure for free thyroxine in human serum](#). Jansen HI, van der Steen R, Brandt A, Olthaar AJ, Vesper HW, Shimizu E, Heijboer AC, Van Uytvanghe K, van Herwaarden AE. *Clin Chem Lab Med*. 2023 Mar 31;61(9):1605-1611. doi: 10.1515/cclm-2022-1134. Print 2023 Aug 28.

[Commutability Assessment of Candidate Reference Materials for Lipoprotein\(a\) by Comparison of a MS-based Candidate Reference Measurement Procedure with Immunoassays](#). Dikaios I, Althaus H, Angles-Cano E, Ceglarek U, Coassin S, Cobbaert CM, Delatour V, Dieplinger B, Grimmmer M, Hoofnagle AN, Kostner GM, Kronenberg F, Kuklenyik Z, Lyle AN, Prinzing U, Ruhaak LR, Scharnagl H, Vesper HW, Deprez L. *Clin Chem*. 2023 Mar 1;69(3):262-272. doi: 10.1093/clinchem/hvac203.

[Development of an LC-MRM-MS-Based Candidate Reference Measurement Procedure for Standardization of Serum Apolipoprotein \(a\) Tests](#). Ruhaak LR, Romijn FPHTM, Begcevic Brkovic I, Kuklenyik Z, Dittrich J, Ceglarek U, Hoofnagle AN, Althaus H, Angles-Cano E, Coassin S, Delatour V, Deprez L, Dikaios I, Kostner GM, Kronenberg F, Lyle A, Prinzing U, Vesper HW, Cobbaert CM. *Clin Chem*. 2023 Mar 1;69(3):251-261. doi: 10.1093/clinchem/hvac204.

[CDC's Vitamin A Laboratory-External Quality Assessment Program Shows Little Change in Laboratory Performance for Multiple Nutritional Biomarkers over a 10-Year Period \(2008-2017\)](#). Chaudhary-Webb M, Zhang M, Pfeiffer CM. *J Nutr*. 2023 Jan;153(1):373-384. doi: 10.1016/j.tjnut.2022.11.001. Epub 2022 Dec 21.

[Comparison of Current World Health Organization Guidelines with Physiologically Based Serum Ferritin Thresholds for Iron Deficiency in Healthy Young Children and Nonpregnant Women Using Data from the Third National Health and Nutrition Examination Survey](#). Mei Z, Addo OY, Jefferds MED, Sharma AJ, Flores-Ayala RC, Pfeiffer CM, Brittenham GM. *J Nutr*. 2023 Mar;153(3):771-780. doi: 10.1016/j.tjnut.2023.01.035. Epub 2023 Feb 2.

[A Randomized Trial of Quadruple-Fortified Salt for Anemia and Birth Defects Prevention in Southern India: Protocol Design and Methods](#). Finkelstein JL, Guetterman HM, Fothergill A, Johnson CB, Qi YP,

Jabbar S, Zhang M, Pfeiffer CM, Rose CE, Yeung LF, Williams JL, Krisher JT, Ruth C, Roy Choudhury D, Venkatramanan S, Haas JD, Kuriyan R, Mehta S, Bonam W, Crider KS. *Curr Dev Nutr.* 2023 Feb 21;7(3):100052. doi: 10.1016/j.cdnut.2023.100052. eCollection 2023 Mar.