Alexander East, B.S.

SCIENTIST III

CONTACT INFORMATION

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PROFESSIONAL PROFILE

Alexander East is an environmental scientist in ToxStrategies' Exposure Sciences practice. He specializes in computational exposure, with a focus on population dynamics and residential scenarios, complemented by practical experience in both laboratory procedures and field work. Mr. East received a bachelor's degree in Environmental Policy and Management, participating in the university Honors Program and graduating with distinction in Environmental Studies. He has since worked in both a governmental regulatory agency (computational toxicology) and the private sector (laboratory setting). His skill set includes R (statistical approaches, data curation, ggplot, meta-analysis), Python (AI, machine learning), and geographic information system (GIS) software. Relevant and recent analyses include benchmark dose calculations, random and fixed effects modeling, and refinement of existing systematic review approaches. Since 2020, Mr. East has presented two posters and spoken at two symposiums at scientific conferences, and has first-authored three manuscripts in scientific journals, with a fourth currently under review.

EDUCATION AND DEGREES EARNED

2018 B.S., Environmental Policy and Management; minors in Mathematics and Economics, University of North Carolina at Asheville

PROFESSIONAL ASSOCIATIONS

2022—2025 International Society of Exposure Science (ISES)

SELECTED PROFESSIONAL EXPERIENCE

Research Scientist

Estimated exposures to PFOA and PFOS for American adults and children from dust, water, indoor and outdoor air, soil, and dietary intake (see published manuscript below).

Developed an R package to estimate concentrations from limited summary statistics and generate synthetic exposure curves for any chemical, individual, and medium.

Enhanced existing population model software by improving ease of use, runtime, and distribution for the Residential Population Generator (RPGen). Presented the benefits of RPGen and compared to SHEDS-HT in a published manuscript (see below).

Drove a systematic review of physiologically based pharmacokinetic (PBPK) models used for PFAS in literature, leveraging the R Package Bibliometrix to characterize change in the corpus of literature over time.

Presented posters at SOT 2022, SETAC 2020, and symposiums at ISES 2021 and ISES 2024.

Laboratory Analyst

Used polarized light microscopy (PLM) to analyze building materials using EPA Method 600 for the purpose of identifying asbestiform fibers at <1% mass or less at an NVLAP-accredited laboratory.

Performed point counts in low-percentage asbestos materials and analyzed heat-altered asbestos from 2019 California wildfires.

MANUSCRIPTS

Doepker C, Franzen A, Brorby G, Brown L, Choksi N, **East A**, Wikoff D. 2026. Smoke flavoring—A case study demonstrating the value of using benefit-risk analysis for foods (BRAFO) to provide transparency for risk management decisions. Regul Toxicol Pharmacol 106033. Advance online publication Jan. 21, 2026; doi: 10.1016/j.yrtph.2026.106033. PMID: 41577161.

Heintz MM, Buerger AN, Haws LC, Cullen JM, **East AW**, Thompson CM. 2025. Comparison of phenotypic and transcriptomic profiles between HFPO-DA and prototypical PPARα, PPARγ, and cytotoxic agents in wild-type and *Ppara*-null mouse livers. Toxicol Sci 206(1):183-201; doi: 10.1093/toxsci/kfaf049. PMID: 40216583.

Heintz MM, Klaren WD, **East AW**, Haws LC, McGreal SR, Campbell RR, Thompson CM. 2024. Comparison of transcriptomic profiles between HFPO-DA and prototypical PPARα, PPARγ, and cytotoxic agents in wild-type and PPARα knockout mouse hepatocytes. Toxicol Sci 200(1):183–198; doi: 10.1093/toxsci/kfae045. PMID: 38574385.

Heintz MM, Klaren WD, **East AW**, Haws LC, McGreal SR, Campbell RR, Thompson CM. 2024. Comparison of transcriptomic profiles between HFPO-DA and prototypical PPARα, PPARγ, and cytotoxic agents in mouse, rat, and pooled human hepatocytes. Toxicol Sci 200(1):165–182; doi: 10.1093/toxsci/kfae044. PMID: 38574381.

East A, Dawson DE, Brady S, Vallero DA, Tornero-Velez R. 2023. A scoping assessment of implemented toxicokinetic models of per- and polyfluoro-alkyl substances, with a focus on one-compartment models. Toxics 11(2):163; doi: https://doi.org/10.3390/toxics11020163. PMID: 36851038.

East A, Egeghy PP, Cohen Hubal EA, Slover R, Vallero DA. 2023. Computational estimates of daily aggregate exposure to PFOA/PFOS from 2011 to 2017 using a basic intake model. J Expos Sci Environ Epidemiol 33(1):56-68; doi:10.1038/s41370-021-00374-w. PMID: 34373583.

East A, Dawson D, Glen G, Isaacs K, Dionisio K, Price PS, et al. 2021. The Residential Population Generator (RPGen): Parameterization of residential, demographic, and physiological data to model intraindividual exposure, dose, and risk. Toxics 9(11):303; doi: 10.3390/toxics9110303. PMID: 34822694.

ABSTRACTS AND PRESENTATIONS

East A, Wheeler M, Kennedy S**.** Artificial intelligence application to critical appraisal of published literature: A case example using the Criteria for Reporting and Evaluating Ecotoxicity Data (CRED) evaluation method. Poster presentation, Health and Environmental Sciences Institute (HESI) Biannual Meeting, Washington, DC, June 2025.

Heintz MM, Buerger AN, Haws LC, **East AW**, Cullen JM, Thompson CM. Comparison of phenotypic and transcriptomic profiles between HFPO-DA and prototypical PPARα, PPARγ, and cytotoxic agents in wild-type and PPARα knockout mice. Abstract 3972, Society of Toxicology 64th Annual Meeting, Orlando, FL, March 2025.

East A, Klaren W, Covington T, Rish W. Exploring biomarker-based methods to incorporate non-chemical stressor exposures into cumulative assessments for potentially vulnerable population groups. International Society of Exposure Science Annual Meeting, Montreal, Canada, October 2024.

Heintz M, Klaren W, **East A**, Haws L, Thompson C. Delayed transcriptomic responses in PPARa knockout mouse hepatocytes compared to wild-type hepatocytes exposed to HFPO-DA or PPARa agonist GW7647: Support for a PPARa-dependent mode of action for HFPO-DA in mouse hepatocytes. Abstract 4100, Society of Toxicology 63rd Annual Meeting, Salt Lake City, UT, March 2024.

East A, Rish W, Klaren WD. Using NHANES data to characterize the magnitude of allostatic load in vulnerable communities: Impact to existing risk assessment uncertainty/variability factors. Poster presented at Society of Toxicology 62nd Annual Meeting, Nashville, TN, March 2023.

Klaren WD, Heintz MM, **East AW**, Thompson CM, Haws LC. *In vitro* transcriptomic analyses informing the mode of action of HFPO-DA (GenX) in the liver. Poster presented at Society of Toxicology 62nd Annual Meeting, Nashville, TN, March 2023.

East, A, Dalton C, Egeghy P, Vallero D. Estimating exposure across chemical, individual, and media using sparse summary statistics with the Lorber-Egeghy-East Method R Package. Poster presented at Society of Toxicology 61st Annual Meeting, San Diego, CA, March 2022; doi: 10.23645/epacomptox.20110814. Open access online.

Tornero-Velez R, Dawson D, **East A**, Breen M, Brady S, Vallero D, Hubal EC, Wambaugh J. Using systematic evidence mapping to track the development of toxicokinetic models of PFAS from 2000–2021. Poster presented at Society of Toxicology 61st Annual Meeting, San Diego, CA, March 2022; doi 10.23645/epacomptox.19333283. Open access online.

Dalton C, **East A**, Price P, Vallero D. The role of product use scheduler for estimating exposure to methyl, ethyl, propyl, and butyl parabenzoic acid (parabens) within the Combined Human Exposure Model. Poster presented at Society of Toxicology 61st Annual Meeting, San Diego, CA, March 2022; doi: 10.23645/epacomptox.1934935. Open access online.

Fisher H, **East A**, Vallero D. Estimating longitudinal aggregate exposure — The third module of CHEM: Source to dose. Symposium presented at International Society of Exposure Science Annual Meeting, virtual conference, September 2021; doi: 10.23645/epacomptox.16630675. Open access online.

East A, Brady S, Isaacs K, Vallero D. The role of the Product Use Scheduler (PUS) in determining product use categories (PUCs) for owners and renters in the Combined Human Exposure Model (CHEM). Symposium

presented at International Society of Exposure Science Annual Meeting, virtual conference, September 2021; doi: 10.23645/epacomptox.16632271. Open access online.

East A, Isaacs K, Vallero D. Application of the Residential Population Generator (RPGen) in prediction of exposure outcomes for owners and renters from consumer products using the Combined Human Exposure Model (CHEM). Symposium presented at International Society of Exposure Science Annual Meeting, virtual conference, September 2021; doi: 10.23645/epacomptox.16632319. Open access online.

East A, Price P, Dawson D, Glen G, Dionisio K, Isaacs K, Hubal EC, Vallero D. The Residential Population Generator (RPGen): Parameterization of residential, demographic, and physiological data to model intraindividual exposure, dose, and risk (presentation). Poster presented at Society of Environmental Toxicology and Chemistry North America 41st Annual Meeting, virtual conference, 2020; doi: 10.23645/epacomptox.13476864. Open access online.