



# Exponent®

Engineering & Scientific Consulting

## Janet Anderson, Ph.D., DABT

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### Professional Profile

Dr. Janet Anderson is a human health toxicologist and risk assessor with over 15 years of experience providing toxicology expertise and consultation to federal agencies, municipalities, and private industry. Dr. Anderson is a Diplomate of the American Board of Toxicology and specializes in the synthesis of human health toxicology data into regulatory and legislative policies that govern corporate chemical risk management, environmental risk, product stewardship, and public health protection.

Dr. Anderson is an internationally recognized leader in unregulated and emerging chemicals, such as per- and polyfluoroalkyl substances (PFAS), 1,4-dioxane, and microplastics. She works regularly with legal counsel specializing in risk, compliance, and safety related to chemical and product stewardship in various industries, including national security, energy, aerospace, advanced materials manufacturing, technology, and specialty chemicals. She equips clients with the technical foundation to navigate varied governmental and legal actions across domestic and international jurisdictions. She also has extensive experience developing corporate risk management strategies for emerging and legacy chemicals, as well as providing clients with due diligence support concerning potential liability across the full lifecycle of product manufacturing, use, and disposal, as well as when evaluating mergers and acquisitions. She also conducts site-specific risk assessments, including for CERCLA and numerous state-led cleanup sites. With in-depth knowledge of federal, state, and international guidance and policies pertaining to chemicals and human health, she has developed strategies to mitigate potential human health impacts and address associated business risks for both private and public sector clients.

Dr. Anderson is a skilled communicator; she is often an invited speaker at high-level scientific conferences, regulatory meetings, webinars, and community stakeholder meetings. Dr. Anderson also serves as a testifying expert and supports clients in public and private stakeholder engagement. She excels at translating complex scientific information used to inform risk, regulatory, and public health decisions to different audiences and stakeholders. With a comprehensive background in evaluating emerging and legacy chemicals' toxic properties across divergent state, federal and international regulatory paradigms, she ensures that scientifically informed processes are utilized in decision-making.

### Academic Credentials & Professional Honors

Ph.D., Cell and Molecular Biology, University of Cincinnati, 2007

B.A., Biology, Wittenberg University, 2000

### Licenses and Certifications

Diplomate of the American Board of Toxicology (DABT)

## Prior Experience

Vice President and Principal, GSI Environmental Inc., Houston, Texas,

Senior Consultant, Integral Consulting Inc., San Antonio, Texas

Emerging Issues and Contaminants Program Manager, Subject Matter Specialist – Toxicology, US Air Force Civil Engineer Center, San Antonio, Texas, 2010 – 2015

Post-Doctoral Fellow, National Center for Environmental Assessment, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, Ohio, 2007 - 2010

## Professional Affiliations

Member of Society of Toxicology, Risk Assessment Specialty Section, Women in Toxicology Special Interest Group

Interstate Technology and Regulatory Council (ITRC) Workgroup member

- Per- and Polyfluoroalkyl substances (2017-2022)

- 1,4-Dioxane (2019- present)

- Microplastics (2022-2023)

Water and Health Advisory Council – Council member (2023-present)

## Publications

***(J.K. Anderson also Published as J.K. Hess-Wilson)***

Bowles, K.C., Anderson, J.K., Anderson, R., Bani, B., Barnes, C.M., Brusseau, M., Cousins, I.T., Cushing, P., DiGuseppi, B., Gray, B. and Higgins, C.P., 2024. Implications of grouping per-and polyfluoroalkyl substances for contaminated site regulation. *Remediation Journal*, 34(3), p.e21783.

Anderson, J.K., Schneider, D., Knutson, M. and Puchacz, Z., 2023. PFAS Source Differentiation Guide for Airports (No. ACRP Project 02-91). National Academies of Sciences, Engineering, and Medicine, Washington, DC: The National Academies Press. <https://doi.org/10.17226/27164>

Lafranconi, M., Anderson, J., Budinsky, R., Corey, L., Forsberg, N., Klapacz, J. and LeBaron, M.J., 2023. An integrated assessment of the 1, 4-dioxane cancer mode of action and threshold response in rodents. *Regulatory Toxicology and Pharmacology*, p.105428

Garvey, G.J., Anderson, J.K., Goodrum, P.E., Tyndall, K.H., Cox, L.A., Khatami, M., Morales-Montor, J., Schoeny, R.S., Seed, J.G., Tyagi, R.K. and Kirman, C.R., 2023. Weight of evidence evaluation for chemical-induced immunotoxicity for PFOA and PFOS: findings from an independent panel of experts. *Critical Reviews in Toxicology*, 53(1), pp.34-51.

Anderson, J.K., Brecher, R.W., Cousins, I.T., DeWitt, J., Fiedler, H., Kannan, K., Kirman, C.R., Lipscomb, J., Priestly, B., Schoeny, R. and Seed, J., 2022. Grouping of PFAS for human health risk assessment: Findings from an independent panel of experts. *Regulatory Toxicology and Pharmacology*. 134: 105-226

Fey, M.E., Goodrum, P.E., Razavi, N.R., Whipps, C.M., Fernando, S. and Anderson, J.K., 2022. Is Mixtures' Additivity Supported by Empirical Data? A Case Study of Developmental Toxicity of PFOS and 6:2 FTS in Wildtype Zebrafish Embryos. *Toxics*, 10(8), p.418.

Guelfo, J.L., Korzeniowski, S., Mills, M.A., Anderson, J., Anderson, R.H., Arblaster, J.A., Conder, J.M., Cousins, I.T., Dasu, K., Henry, B.J. and Lee, L.S., 2020. Environmental Sources, Chemistry, Fate and Transport of Per- and Polyfluoroalkyl Substances: State of the Science, Key Knowledge Gaps, and Recommendations Presented at the August 2019 SETAC Focus Topic Meeting. Environmental Toxicology and Chemistr

Zodrow, J., Vedagiri, U., Sorell, T., McIntosh, L., Larson, E., Hall, L., ... & Anderson, J. (2022). PFAS Experts Symposium 2: PFAS Toxicology and Risk Assessment in 2021—Contemporary issues in human and ecological risk assessment of PFAS. *Remediation Journal*, 32(1-2), 29-44.

Goodrum, P.E., Anderson, J.K., Luz, A.L. and Ansell, G.K., 2021. Application of a framework for grouping and mixtures toxicity assessment of PFAS: A closer examination of dose-additivity approaches. *Toxicological Sciences*, 179(2), pp.262-2

Mohr, T.K., DiGuseppi, W.H., Hatton, J.W. and Anderson, J.K., 2020. Environmental investigation and remediation: 1, 4-dioxane and other solvent stabilizers. CRC Press.

Iwai, H., A.M. Hoberman, P.E. Goodrum, E. Mendelsohn, and J.K. Anderson. 2019. Addendum to Iwai and Hoberman (2014) – Reassessment of developmental toxicity of PFHxA in mice. *Internat J Tox.* 38(3):183-191.

Anderson, J.K., A.L. Luz, and P. Goodrum. 2019. Response to “Overgeneralization by Anderson et al. and Luz et al. regarding safety of fluorotelomer-base chemistry”. *Reg Tox Pharm.* 105:100-10

Anderson, J.K., A.L. Luz, P. Goodrum, and J. Durda. 2019. Perfluorohexanoic acid toxicity, part II: application of human health toxicity value for risk characterization. *Reg Tox Pharm.* 103: 10-20.

Luz, A.L., J.K. Anderson, P. Goodrum, and J. Durda. 2019. Perfluorohexanoic acid toxicity, part I: development of a chronic human health toxicity value for use in risk assessment. *Reg Tox Pharm.* 103: 41-55.

Anderson, J.K., J. Wilhelm, and P. Goodrum. 2016. Emerging contaminants: An analysis of inconsistent U.S. regulations. *Daily Environment Report*. Bloomberg Bureau of National Affairs. August.

Anderson, R.H., G.C. Long, R.C. Porter, and J.K. Anderson. 2016. Occurrence of select perfluoroalkyl substances at U.S. Air Force aqueous film-forming foam release sites other than fire-training areas: field-validation of critical fate and transport properties. *Chemosphere.* 150:678–685.

Anderson, R.H., J.K. Anderson, and P.A. Bower. 2012. Co-occurrence of 1,4-dioxane with trichloroethylene in chlorinated solvent groundwater plumes at U.S. Air Force installations; fact or fiction. *Integr Environ Assess Manag.* 8(4):731–737.

Wang, N.C.Y., Q.J. Zhao, S.C. Wesselkamper, J.C. Lambert, D. Peterson, and J.K. Hess-Wilson. 2012. Application of computational toxicological tools and approaches in human health risk assessment I. A tiered surrogate approach. *Regul Toxicol Pharmacol.* 63:10–19.

Thomas, R.S., H.C. Clewell, B.C. Allen, S.C. Wesselkamper, N.Y. Wang, J.C. Lambert, J.K. Hess-Wilson, Q.J. Zhao, and M.E. Andersen. 2011. Application of transcriptional benchmark dose values in quantitative cancer and noncancer risk assessment. *Toxicol Sci.* 120(1):194–205.

Mazur, C.S., J.F. Kenneke, J.K. Hess-Wilson, and J.L. Lipscomb. 2010. Differences between human and rat intestinal and hepatic bisphenol A glucuronidation and the influence of alamethicin on in vitro kinetic measurements. *Drug Metab Dispos.* 38(12):2232–2238.

Hess-Wilson, J.K. 2009. Bisphenol A may reduce the efficacy of androgen deprivation therapy in prostate cancer. *Cancer Causes and Control.* 20(7):1029–1037.

Shah, S., J.K. Hess-Wilson, S. Webb, H. Daly, S. Godoy-Tundidor, J. Kim, J. Boldison, Y. Daaka, and K.E. Knudsen. 2008. 2,2-Bis(4-chlorophenyl)-1,1-dichloroethylene stimulates androgen independence in prostate cancer cells through combinatorial activation of mutant androgen receptor and mitogen-activated protein kinase pathways. *Mol Cancer Res.* 6(9):1507–1520

Hess-Wilson, J.K., S.L. Webb, H.K. Daly, Y. K. Leung, J. Boldison, C.E.S. Comstock, M.A. Sartor, S.M. Ho, and K.E. Knudsen. 2007. Unique bisphenol A transcriptome in prostate cancer: novel effects on ER $\beta$  expression that correspond to AR mutation status. *Environ Health Perspect.* 115(11):1646–1653.

Sharma, A., E.S. Knudsen, J.K. Hess-Wilson, L.M. Morey, J. Barrera, and K.E. Knudsen. 2007. Retinoblastoma tumor suppressor status is a critical determinant of therapeutic response in prostate cancer cells. *Cancer Res.* 67(13):6192–6203.

Hess-Wilson, J.K., H.K. Daly, W.A. Zagorski, C.P. Montville, and K.E. Knudsen. 2006. Mitogenic action of the androgen receptor sensitizes prostate cancer cells to taxane-based cytotoxic insult. *Cancer Res.* 66(24):11998– 12008.

Wetherill, Y.B., \* J.K. Hess-Wilson,\* C.E.S. Comstock, S.A. Shah, C.R. Buncher, L. Sallans, P.A. Limbach, S. Schwemberger, G.F. Babcock, and K.E. Knudsen. 2006. Bisphenol A facilitates bypass of androgen ablation therapy in prostate cancer. *Mol Cancer Ther.* 5(12):3181–3190. \*Co-first authors

Hess-Wilson, J.K., J. Boldison, K.E. Weaver, and K.E. Knudsen. 2006. Xenoestrogen action in breast cancer: impact on ER-dependent transcription and mitogenesis. *Breast Cancer Res Treat.* 96(3):279–292

Hess-Wilson, J.K., and K.E. Knudsen. 2006. Endocrine disrupting compounds and prostate cancer. *Cancer Lett.* 241(1):1–12—Invited review.

## **EPA Documents**

USEPA. 2011. Volume I. EPA's re-analysis of key issues related to dioxin toxicity and response to NAS comments. Final review draft. EPA/600/R-10/038F. U.S. Environmental Protection Agency, Washington, DC. Contributing author.

USEPA. 2010. Provisional Peer-Reviewed Toxicity Values for 1,2-Dichloroethane (CASRN 107-06-2). EPA/690/R- 10/011F. Superfund Health Risk Technical Support Center, National Center for Environmental Assessment, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH. Chemical Manager

USEPA. 2010. Recommended toxicity equivalence factors (TEFs) for human health risk assessments of 2,3,7,8- tetrachlorodibenzo-p-dioxin and dioxin-like compounds. EPA/100/R 10/005. U.S. Environmental Protection Agency, Risk Assessment Forum, Washington, DC. Coauthor.

## **Presentations**

Anderson, J.K. 2024. IUPAC Project no. 2024-006-3-100. Terminology and Classification of Per- and Poly- Fluoroalkyl substances (PFAS). “The Dose Makes the Poison, Not the Name.” Invited Speaker. December 5.

Anderson, J.K. 2024. 36th Annual Product Liability Conference, University of Wisconsin-Madison; Changing Landscape Related to PFAS, TSCA, and Product Liability. Invited Speaker. October 15.

Anderson, J.K. Letitia Moore, Summer Nastich, Suzi Rosen. 2024. 33rd Annual Environmental Law Conference at Yosemite. The PFAS Paradox. Invited Session Chair and Speaker. September 14.

Anderson, J.K. 2024. U.S. Environmental Protection Agency, Toxic Substances Control Act PFAS

Workshop: State- of-the-science and data gaps associated with fluoropolymers. Invited Speaker. February 13.

Anderson, J.K. 2023. 91st Annual Meeting of the United States Conference of Mayors – PFAS Human Health Risk: What Are the Potential Community Impacts to Low Levels. Columbus, OH. June 3.

Anderson, J.K. 2023. The Dallas Bar Association, Environmental Law CLE Program. The PFAS Circus – Science, Regulations, Legal Implications. March 23. Webinar

Anderson, J.K. 2023. National Turkey Federation Annual Meeting, Technical and Regulatory Committee Session. What's Your Proximity to the PFAS Problem? Palm Springs, CA. February 25.

Anderson, J.K. 2022. National Groundwater Association, PFAS Conference – PFAS and the Toxicological Challenges it (sic) Presents; PFAS Toxicology Overview and Challenges. June 22. Webinar

Anderson, J.K. 2022. US Conference of Mayors, 90th Annual Meeting. PFAS Regulatory Overview and Challenges. June 3. Panel Presentation

Anderson, J.K. 2022 NEWMOA, The Science of PFAS Conference. Overview of Site-specific Baseline Risk Assessments: What Are the Key Variables & Uncertainties for Characterizing PFAS Risk to Receptors. April 5. Presentation

Anderson, J.K. 2022. ERIS Webinar. Distilling the Facts from Fiction: How to Identify and Manage PFAS Risks in CRE Transactions. PFAS Toxicology and Regulatory Overview. February 8. Webinar

Whitehead K, J.K. Anderson, J. Skaggs, P. Williams. 2021. Microplastics as Emerging Contaminants. Austin Bar Association. October. Webinar

Anderson, J.K. 2021. National Groundwater Association, PFAS State of the Science. June. Webinar

Anderson, J.K. and L. Dell. 2021. PFAS Experts Symposium 2, Remediation Journal. Toxicology and Risk Assessment Committee: Human Health Effects. June 29. Webinar

Anderson, J.K. 2021. PFAS: State of the Science: Health, Human Exposure and Toxicological Aspects. National Groundwater Association, Fate of PFAS: From Groundwater to Tap Water Conference. June 22. Webinar

Anderson, J.K. 2021. PFAS Regulations Under the New Administration. Dallas Bar Association. May 27, 2021. Webinar

Anderson, J.K. 2021. 1,4-Dioxane: Science, Characterization & Analysis, and Remediation; Regulatory Framework, and Toxicology and Risk Assessment Modules. EPA CLU-IN Training. Live March 10. Available online: <https://clu-in.org/conf/itrc/14D-1/>

Anderson, J.K. 2020. PFAS the "Forever Chemical" that May Be Impacting Your Operations. AFS 32nd Environmental, Health and Safety Conference. October 6. Webinar.

Anderson, J.K., and P. Goodrum. 2019. PFAS: Toxicology and Regulatory Actions. Webinar to the ACC Public Health Advisory Board. November 7, 2019

Luz, A., C. Hutchings, J. Anderson, P. Goodrum, J. Field. 2019. A Novel Approach for Assessing Hazard Associated with Firefighting Foams. Poster at the SETAC North American 40th Annual Meeting, Toronto Ontario, Canada. November 4.

Anderson, J.K. 2019. Federal and State Environmental Guidance/Policies that Impact Remedial Decisions for PFAS. Platform presentation at the Washington State Advanced Superfund Conference.

September 12, Seattle, WA.

Anderson, J.K. 2019. PFAS: Risk Characterization Panel. Invited panelist to the Society of Environmental Toxicology and Chemistry North America, Focused Technical Meeting on PFAS. Durham, NC. August.

Anderson, J.K., A. Luz, and P. Goodrum. 2019. Chronic human health toxicity value for perfluorohexanoate (PFHxA) and risk assessment relevant to current fluorotelomer-based chemistries. Poster for the Society of Toxicology 58th Meeting and ToxExpo, March 10–14, Baltimore, MD.

Goodrum, P., J.K. Anderson, and A. Luz. 2019. Perfluoroalkyl acid mixtures—Data analysis steps to uncover clues hidden in biomonitoring data. Poster for the Society of Toxicology 58th Meeting and ToxExpo, March 10–14, Baltimore, MD.

Luz, A., J.K. Anderson, and P. Goodrum. 2019. Approaches for Assessing Perfluoroalkyl Acid Mixture Toxicity. Poster for the Society of Toxicology 58th Meeting and ToxExpo, March 10–14, Baltimore, MD.

Opdyke, D., J. Benaman, J.K. Anderson, and J. Durda. 2019. An introduction to PFAS at contaminated sediment sites: Scientific and regulatory overview. Short course at Tenth International Conference on the Remediation and Management of Contaminated Sediments, February 11–14, New Orleans, LA.

Wilhelm, J., J.K. Anderson, A. Luz, and P. Goodrum. 2018. PFAAs and ecorisk: Development of a hazard ranking system by evaluating functional groups vs. chain lengths as primary risk drivers for ecological receptors. Poster presentation. SETAC North American 39th Annual Meeting, November 4–7, Sacramento, CA.

Luz, A.L., L. Tolbert, J.K. Anderson, P. Goodrum, D. Farrar, and S. Korzeniowski. 2018. PFHxA human health risks, margin of safety, and comparison with PFOA. Platform presentation. Society of Environmental Toxicology and Chemistry North America 39th Annual Meeting. November 4–8. Sacramento, CA.

Anderson, J.K. 2018. Emerging contaminants—per- and polyfluoroalkyl substances: A case study. Invited speaker. Texas Environmental Superconference, August, Austin, TX.

Anderson, J.K., and P. Goodrum. 2018. Internal and external dosimetry—the holy grail to decoding perfluoroalkyl acid toxicity? Poster presented at the Emerging Contaminants Summit, March 6–7, Westminster, CO.

Anderson, J.K., and P. Goodrum. 2018. What does that blood level mean? The assumptions underlying interpretations of health effects from internal doses. Poster presented at the Society of Toxicology 57th Annual Meeting and ToxExpo, March 11–15, San Antonio, TX.

Goodrum, P., and J.K. Anderson. 2018. Application of internal dosimetry for perfluoroalkyl acids and methods to assess uncertainty factors used in risk assessment. Poster presented at the Society of Toxicology 57th Annual Meeting and ToxExpo, March 11–15, San Antonio, TX.

Anderson, J.K. 2017. Uncertainty in the science of toxicology and emerging contaminants. Remediation of Emerging Contaminants: Trends in Science and Regulations. Montclair State University Continuing Education Course. June.

Anderson, J.K. 2017. Why the inconsistent and dynamic state and federal chemical regulatory landscape. RTM Communications Conference, Philadelphia, PA. April.

Anderson, J.K. 2016. Inconsistent and dynamic state and federal chemical regulations: Roadmap to success. Consumer Specialty Product Association annual conference. December.

Anderson, J.K. 2016. How did we get here from there? State and Federal regulatory actions for PFAS.

AEHS Annual East Coast Conference. October.

Frankel, A., P.E. Goodrum, J.K. Anderson, and K. Tsitonaki. 2016. Water quality standards for perfluoroalkyl compounds—Crossroads between regulatory toxicology and remedy selection. Platform presentation, Battelle 10th International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Palm Springs, CA.

Anderson, J.K., N. Edlin, and S. Herman. 2016. Keeping a watchful eye on emerging contaminants. Environmental and Emerging Claim Managers Association annual conference. April.

Anderson, J.K. 2016. Emerging contaminants: analytical, toxicity, regulatory, and legal frontiers. Invited panelist to the Emerging Contaminants Summit. March.

Anderson, J.K., and P.E. Goodrum. 2016. Emerging contaminants: crossroads of uncertain science and risk management. Integral Webinar Series. February.

Anderson, J.K., and P.E. Goodrum. 2015. Status of regulatory decisions for perfluoroalkyl compounds: is the level of protection to the general public worth the uncertainty and cost? Poster presented at Society for Risk Analysis, Washington, DC.

Anderson, J.K. 2015. Overview of regulatory toxicology in the development of federal and state MCLs for perfluoroalkyl compounds. AEHS Annual East Coast Conference. October.

### Additional Education & Training

Post-Doctoral Fellow, EPA Office of Research and Development National Center for Environmental Assessment, Cincinnati, Ohio, 2007-2010

### Peer Reviews

Toxicological Sciences