Laurie Couture Haws, Ph.D., DABT, ATS

PRESIDENT
MANAGING PRINCIPAL SCIENTIST

CONTACT INFORMATION

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PROFESSIONAL PROFILE

Dr. Laurie Haws is President and a cofounder of ToxStrategies as well as a Managing Principal Scientist. Based in Austin, Texas, she is a board-certified toxicologist and a Fellow of the Academy of Toxicological Sciences (ATS), and she has more than 30 years of experience in the areas of toxicology, human health risk assessment, risk communication, and scientific and regulatory policy.

Dr. Haws has substantial experience evaluating potential human health risks associated with exposures to a wide variety of chemicals and metals present as additives, ingredients, or contaminants in foods, consumer products, personal care products, pharmaceuticals, medical devices, and environmental media (air, water, soil, and sediments). She also has extensive experience assessing potential human health risks associated with personal, occupational, and community-wide exposures to air contaminants, particularly related to chemical, petrochemical, and shale gas exploration and production activities. Dr. Haws is a recognized expert at evaluating data concerning modes and mechanisms of action and in using this type of data to assess the relevance of findings to humans. She routinely applies these skills in the development of state-of-the-science toxicity values via the application of both default and more rigorous approaches, such as benchmark dose modeling, application of weight-of-evidence techniques, and consideration of mode-of-action information. In addition, Dr. Haws also has experience designing, placing, and overseeing a broad range of toxicology laboratory studies, including ADME (absorption, distribution, metabolism, and excretion), developmental toxicity, and cross-fostering studies. She also has experience designing, conducting, and interpreting data from biomonitoring studies, and is adept at using such data to assess concerns regarding potential exposures.

While Dr. Haws is an internationally recognized authority on the toxicity of and exposures to dioxin-like compounds, she has conducted assessments involving many other toxicants throughout her career, including chlorinated hydrocarbons, aromatic hydrocarbons, volatile organic compounds, PFAS, pesticides, phthalates, glycol ethers, metals, persistent organic pollutants, and others. She is knowledgeable about numerous state and federal regulatory programs and has assisted in the preparation of reports for submission to regulatory agencies such as the FDA, EPA, and California's Proposition 65 program. Dr. Haws also has substantial experience working with federal, state, and local government agencies, industry, trade associations, legislative representatives, the media, and members of the general public on matters related to the toxicity of chemicals encountered in our daily lives.

Dr. Haws has a diverse background, having worked as a researcher, a regulatory toxicologist with a government agency, and a scientific consultant. In fact, a substantial portion of her career has been spent in the government sector, both as a researcher and most recently as a manager in the Toxicology and Risk Assessment Section at the Texas Commission on Environmental Quality (TCEQ). In her position with the TCEQ, Dr. Haws was responsible for overseeing all human health risk assessment activities and was one of the primary authors of the agency's comprehensive risk-based corrective action rule (the Texas Risk Reduction Program [TRRP] rule).

Dr. Haws is an author on over 60 peer-reviewed publications and has presented at many scientific conferences throughout her career. She is an active member of numerous professional societies, including the Society of Toxicology, Society for Risk Analysis, Toxicology Forum, American College of Toxicology, and the Regulatory Affairs Professional Society. Dr. Haws has served on numerous elected and appointed committees within the Society of Toxicology, including serving on Council, as well as serving as president of the Risk Assessment Specialty Section and the Women in Toxicology Special Interest Group.

Dr. Haws has participated in a number of scientific panels, technical workgroups, and advisory committees, including the World Health Organization's Toxic Equivalency Factor Review Panel. She was a panelist for a workshop convened in 2021 by the Alliance for Risk Assessment, discussing practical, problem-driven approaches to "fit-for-purpose" risk assessments. She also chaired the International Symposium on Halogenated and Persistent Organic Pollutants, held in San Antonio, Texas, in September 2010, and served on the Exposure and Human Health Committee of the USEPA's Science Advisory Board.

EDUCATION AND DEGREES EARNED

1990	Ph.D., Toxicology, School of Medicine, Curriculum in Toxicology, University of North Carolina (Chapel Hill)
1987	M.S., Environmental Sciences & Engineering (Toxicology), School of Public Health, University of North Carolina (Chapel Hill)
1985	B.S., Environmental Biology *(magna cum laude),* Long Island University (Southampton, NY)

CERTIFICATIONS

1994—present	Diplomate, American Board of Toxicology

PROFESSIONAL HONORS/AWARDS

2021	Fellow of the Academy of Toxicological Sciences
1989, 1990	Society of Toxicology—Student Travel Award
1988	Level III Scientific & Technological Achievement Award (National Institute of Environmental Health Sciences)
1987, 1990	North Carolina Chapter of the Society of Toxicology—Student Travel Award
1983–1985	Presidential Scholarship
1983	Faculty Honors Award
1983	Outstanding Campus Leadership Award
1984–1985	Beta Beta Beta; Biological Honor Society

PROFESSIONAL ASSOCIATIONS

Society of Toxicology

- Council, Vice President-Elect (2022–2023), Vice President (2023–2024), President (2024–2025), and Past President (2025–2026)
- Audit Committee (2021–2024)
- Council, Secretary-Elect (2017–2018), Secretary (2018–2020)
- Risk Assessment Specialty Section, Councilor (2008–2010), Vice President-Elect (2011–2012), Vice President (2012–2013), President (2013–2014), Past President (2014–2015)
- Women in Toxicology, Councilor (2013–2015), Vice President (2015–2016), President-Elect (2016–2017), President (2017–2018), Past President (2018–2019)
- Scientific Liaison Coalition (2015–present)
- Special Interest Group Collaboration and Communication Group (2016–2017)
- Contemporary Concepts in Toxicology Committee Chair (2013–2014), Co-chair (2012–2013), member (2011–2014)
- Nominating Committee member (2008–2010)
- Continuing Education Committee, Chair (2006–2007), member (2004–2007)

Toxicology Forum

- Past President (2023–2024)
- President (2022–2023)
- Vice President (2020–2022)
- Secretary (2018–2020)
- Board of Directors, Member (2016–2018)
- Program Planning Committee, member (2015), co-chair (2016), chair (2017)

American College of Toxicology

Product Stewardship Society

Regulatory Affairs Professionals Society

Society of Risk Analysis

SCIENTIFIC ADVISORY PANELS, COMMITTEES, & WORKGROUPS

2021	Panelist for an Alliance for Risk Assessment (ARA) virtual workshop titled, *Beyond Science & Decisions: From Problem Formulation to Dose-Response Assessment*
2010	Chair, International Symposium on Halogenated Persistent Organic Pollutants, San Antonio, Texas
2009–2017	U.S. Environmental Protection Agency Scientific Advisory Board Exposure and Human Health Committee
2007–2017	International Advisory Board Member, International Symposium on Halogenated Persistent Organic Pollutants
2005	Resource Expert, World Health Organization, Dioxins Toxic Equivalency Factor Review, Geneva, Switzerland, June 27–30
2001–2003	STAPPA/ALAPCO Residual Risk Steering Committee
2001	USEPA-State-Tribal Risk Assessment Workshop Planning Committee
1999–2003	Texas Risk Reduction Program Rule Target Chemicals of Concern (COC) Workgroup
1999–2003	Texas Risk Reduction Program Rule Chemicals of Concern (COC) Screening Workgroup
1999–2003	Texas Risk Reduction Program Rule Representative Concentrations Workgroup
1999–2003	Texas Risk Reduction Program Rule Exposure Factors Workgroup
1999–2001	Texas Risk Reduction Program Rule Probabilistic Risk Assessment Workgroup
1996–2003	Texas Commission on Environmental Quality Combustion Strategy Implementation Team
1995–1998	EPA Workgroup on Maximum Achievable Control Technology (MACT) Standards for Hazardous Waste Combustors
1995–2003	Federal/State Toxicology and Risk Analysis Committee
1994–1997	Texas Medical Association Committee on the Environment
1994–1999	Scientific Advisory Committee on Birth Defects in Texas

PUBLICATIONS

Kennedy SB, Heintz MM, Klaren WD, Wikoff DS, **Haws LC**, Fitch SE. 2025. An integrated ecotoxicological study reliability (EcoSR) framework for use in toxicity value development. Environ Tox Chem; doi: 10.1093/etojnl/vgaf030. Online ahead of print 28 Jan 2025. PMID: 39873747.

Wikoff DS, Vincent MJ, Heintz MM, Pastula ST, Reichert H, Klaren WD, **Haws LC**. 2025. Application of a quantitative uncertainty assessment to develop ranges of plausible toxicity values when using observational data in risk assessment: A case study examining associations between PFOA and PFOS exposures and vaccine response. Toxicol Sci; doi: 10.1093/toxsci/kfae152. Online ahead of print 10 Jan 2025. PMID: 39792025.

Thompson CM, Dewhurst N, Moundous D, Borghoff SJ, **Haws LC**, Vasquez MZ. 2024. Assessment of the genotoxicity of tert-butyl alcohol in an in vivo thyroid comet assay. Environ Mol Mutagen 65(3–4):129–136; doi: 10.1002/em.22601.

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.

Fitch S, Blanchette A, **Haws LC**, Franke K, Ring C, DeVito M,… Wikoff DS. 2024. Systematic update to the mammalian relative potency estimate database and development of best estimate toxic equivalency factors for dioxin-like compounds. Regul Toxicol Pharmacol 147:105571; doi: 10.1016/j.yrtph.2024.105571.

DeVito M, Bokkers B, van Duursen MBM, van Ede K, Feeley M, Antunes Fernandes Gaspar E, **Haws L**,… Wikoff DD, et al. 2024. The 2022 World Health Organization reevaluation of human and mammalian toxic equivalency factors for polychlorinated dioxins, dibenzofurans and biphenyls. Regul Toxicol Pharmacol 146:105525; doi: 10.1016/j.yrtph.2023.105525. Online before print.

Thompson CM, Heintz MM, Cullen JM, **Haws LC**. 2024. Letter to the Editor of Environmental Pollution: In regard to Wan et al. (2024), "GenX caused liver injury and potential hepatocellular carcinoma of mice via drinking water even at environmental concentration." Environ Pollut, May 20:124171; doi: 10.1016/j.envpol.2024.1241741.

Wikoff D, Ring C, DeVito M, Walker N, Birnbaum L, **Haws L**. 2023. Development and application of a systematic and quantitative weighting framework to evaluate the quality and relevance of relative potency estimates for dioxin-like compounds (DLCs) for human health risk assessment. Regul Toxicol Pharmacol 145: 105500; doi: 10.1016/j.yrtph.2023.105500.

Ring C, Blanchette A, Klaren WD, Fitch S, **Haws L**, Wheeler MW, DeVito MJ, Walker N, Wikoff D. 2023. A multi-tiered hierarchical Bayesian approach to derive toxic equivalency factors for dioxin-like compounds. Regul Toxicol Pharmacol 143(11):105464; doi: 10.1016/j.yrtph.2023.105464.

Heintz MM, **Haws LC**, Klaunig JE, Cullen JM, Thompson CM. 2023. Assessment of the mode of action underlying development of liver lesions in mice following oral exposure to HFPO-DA and relevance to humans. Toxicol Sci 192(1):15-29; doi: 10.1093/toxsci/kfad004. PMID: 36629480; PMCID: PMC10025879.

Thompson CM, Heintz MM, Wolf JC, Cheru R, **Haws LC**, Cullen JM. 2023. Assessment of mouse liver histopathology following exposure to HFPO-DA with emphasis on understanding mechanisms of hepatocellular death. Toxicol Pathol Mar29:1926233231159078; doi: 10.1177/01926233231159078. Epub ahead of print. PMID: 36987989.

Rogers JM, Heintz MM, Thompson CM, **Haws LC**. 2023. A putative adverse outcome network for neonatal mortality and lower birth weight in rodents: Applicability to per- and polyfluoroalkyl substances and relevance to human health. Birth Defects Res 115(11):1011–1062; doi: 10.1002/bdr2.2185.

Heintz MM, Chappell GA, Thompson CM, **Haws LC**. 2022. Evaluation of transcriptomic responses in livers of mice exposed to the short-chain PFAS compound HFPO-DA. Front Toxicol 4:937168; https://doi.org/10.3389/ftox.2022.937168.

Thompson CM, Bhat VS, Brorby GP, **Haws LC**. 2021. Development of updated RfD and RfC values for medium carbon range aromatic and aliphatic total petroleum hydrocarbon fractions. J Air Waste Manag Assoc 71(12):1555–1567; doi: 10.1080/10962247.2021.1974123.

Chappell GA, Heintz MM, **Haws LC**. 2021. Transcriptomic analyses of livers from mice exposed to 1,4-dioxane for up to 90 days to assess potential mode(s) of action underlying liver tumor development. Curr Res Toxicol 2:30–41; https://doi.org/10.1016/j.crtox.2021.01.003.

Heintz MM, **Haws LC**. 2021. Correspondence to the Editor Regarding Guillette et al. 2020, Elevated levels of per- and polyfluoroalkyl substances in Cape Fear River striped bass (Morone saxatilis) are associated with biomarkers of altered immune and liver function. Environ Int 146:106299; doi: 10.1016/j.envint.2020.106299.

Wikoff DS, Urban JD, Ring C, Britt J, Fitch S, **Haws LC**. 2020. Development of a range of plausible non-cancer toxicity values for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) based on effects on sperm count: Application of systematic review methods and quantitative integration of dose response using meta-regression. Toxicol Sci 179(2):162–182; https://doi.org/10.1093/toxsci/kfaa171.

Urban JD, Wikoff DS, Chappell GA, Harris C, **Haws LC**. 2020. Systematic evaluation of mechanistic data in assessing in utero exposures to trichloroethylene and development of congenital heart defects. Toxicology 436:152427; doi: 10.1016/j.tox.2020.152427. PMID: 32145346.

Chappell GA, Thompson CM, Wolf JC, Cullen JM, Klaunig JE, **Haws LC**. 2020. Assessment of the mode of action underlying the effects of GenX in mouse liver and implications for assessing human health risks. Toxicol Pathol 48(3):494–508; doi: 10.1177/0192623320905803. PMID: 32138627.

Wikoff D, **Haws L**, Ring C, Budinsky R. 2019. Application of qualitative and quantitative uncertainty assessment tools in developing ranges of plausible toxicity values for 2,3,7,8-tetrachlorodibenzo-p-dioxin. J Appl Toxicol; doi: 10.1002/jat.3814. Open access, https://onlinelibrary.wiley.com/doi/full/10.1002/jat.3814.

Thompson CM, Fitch SE, Ring C, Rish W, Cullen JM, **Haws LC**. 2019. Development of an oral reference dose for the perfluorinated compound GenX. J Appl Toxicol, open access: https://onlinelibrary.wiley.com/doi/full/10.1002/jat.3812.

Urban J, Wikoff D, **Haws L**, Fitch S, Ring C, Thompson C, Suh M. 2018. Systematic review protocol: Systematic review and meta-regression to characterize the dose-response relationship between exposure to dioxin-like compounds during sensitive windows of development and reduced sperm count. Zenodo. http://doi.org/10.5281/zenodo.1636357.

Wikoff DS, Rager JE, Chappell GA, Fitch S, **Haws L**, Borghoff SJ. 2018. A framework for systematic evaluation and quantitative integration of mechanistic data in assessments of potential human carcinogens. Toxicol Sci 167(2):322–335; https://doi.org/10.1093/toxsci/kfy279.

Thompson CM, Kirman CR, Hays SM, Suh M, Harvey SE, Proctor DM, Rager JE, **Haws LC**, Harris MA. 2018. Integration of mechanistic and pharmacokinetic information to derive oral reference dose and margin-of-exposure values for hexavalent chromium. J Appl Toxicol 38:351–365; doi: 10.1002/jat.3545.

Wikoff D, Urban JD, Harvey S, **Haws LC**. 2018. Role of risk of bias in systematic review for chemical risk assessment: A case study in understanding the relationship between congenital heart defects and exposures to trichloroethylene. Int J Toxicol; doi: 0.1177/1091581818754330.

Thompson CM, Wolf, JC, McCoy A, Suh M, Proctor DM, Kirman CR, **Haws LC**, Harris MA. 2017. Comparison of toxicity and recovery in the duodenum of B6C3F1 mice following treatment with intestinal carcinogens captan, folpet, and hexavalent chromium. Toxicol Pathol 45(8):1091–1101; doi: 10.1177/019262331yy4324.

Thompson CM, Suh M, Proctor DM, **Haws LC**, Harris MA. 2017. Ten factors for considering the mode of action of Cr(VI)-induced gastrointestinal tumors in rodents. Mut Res/Genetic Toxicol Environ Mutagen 823:45–57.

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Wikoff D, Borghoff S, Rager J, Harvey S, **Haws L**. 2016. A systematic review of the mechanistic evidence of tetrabromobisphenol TBBPA as a human carcinogen according to the ten key characteristics of carcinogens (TKCC) identified by Smith et al. (2016). PROSPERO 2016:CRD42016046429 Available from: http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42016046429

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Borghoff SJ, Wikoff D, Harvey S, **Haws L**. 2016. Dose- and time-dependent changes in tissue levels of tetrabromobisphenol A (TBBPA) and its sulfate and glucuronide conjugates following repeated administration to female Wistar Han rats. Toxicol Rep; doi:10.1016/j.toxrep.2016.01.007.

Thompson CM, Rager JE, Suh M, Ring CL, Proctor DM, **Haws LC**, Fry RC, Harris MA. 2016. Transcriptomic responses in the oral cavity of F344 rats and B6C3F1 mice following exposure to Cr(VI): Implications for risk assessment. Environ Mol Mutagen 57(9):706–716; doi: 10.1002/em.22064.

Kirman CR, Suh M, Hays SM, Gürleyük H, Gerads R, De Flora S, Parker W, Lin S, **Haws LC**, Harris MA, Proctor DM. 2016. Reduction of hexavalent chromium by fasted and fed human gastric fluid. II. Ex vivo gastric reduction modeling. Toxicol Appl Pharmacol 306:120–133; doi: 10.1016/j.taap.2016.07.002.

Thompson CM, Bichteler A, Rager JE, Suh M, Proctor DM, **Haws LC**, Harris MA. 2016. Comparison of in vivo genotoxic and carcinogenic potency to augment mode of action analysis: Case study with hexavalent chromium. 2016. Mutat Res Genet Toxicol Environ Mutagen 800–801:28–34; doi: 10.1016/j.mrgentox.2016.01.008.

Thompson CM, Wolf JC, Elbekai RH, Paranjpe MG, Seiter JM, Chappell MA, Tappero RV, Suh M, Proctor DM, Bichteler A, **Haws LC**, Harris MA. 2015. Duodenal crypt health following exposure to Cr(VI): Micronucleus scoring, crypt immunostaining, and synchrotron x-ray fluorescence microscopy. Mut Res 789-790:61–66.

Thompson, CM, Seiter J, Chappell MA, Tappero RV, Proctor DM, Suh M, Wolf JC, **Haws LC**, Vitale R, Mittal L, Kirman CR, Hays SM, Harris MA. 2015. Synchrotron-based imaging of chromium and γ-H2AX immunostaining in the duodenum following repeated exposure to Cr(VI) in drinking water. Toxicol Sci 143(1):16–25.

Wikoff D, Thompson C, Perry C, White M, Borghoff S, Fitzgerald L, **Haws LC**. 2014. Development of toxicity values and exposure estimates for tetrabromobisphenol A (TBBPA): Application in a margin of exposure assessment. J Appl Toxicol 35(11):1292–308.

Suh M, Thompson C, Kirman C, Carakostas M, **Haws LC**, Harris M, Proctor D, Abraham L, Hixon JG. 2014. High concentrations of hexavalent chromium in drinking water alter iron homeostasis in F344 rats and B6C3F1 mice. Food Chem Toxicol 65:381–388.

Bunch AG, Perry CS, Abraham L, Wikoff DS, Tachovsky JA, Hixon JG, Urban JD, Harris MA, **Haws LC**. 2014. Evaluation of impact of shale gas operations in the Barnett Shale region on volatile organic compounds in air and potential human health risks. Sci Tot Environ 468–469(2014): 832–842.

Urban JD, Wikoff DS, Bunch ATG, Harris MA, **Haws LC**. 2014. A review of background dioxin concentrations in urban/suburban and rural soils across the United States: Implications for site assessments and the establishment of soil cleanup levels. Sci Tot Environ 466–467:586–597.

Kirman CR, Aylward LL, Suh M, Harris MA, Thompson CM, **Haws LC**, Proctor DM, Lin SS, Parker W, Hays SM. 2013. Physiologically based pharmacokinetic model for humans orally exposed to chromium. Chem Biol Interact 204(1):13–27.

O'Brien T, Ding H, Suh M, Thompson C, Parsons BL, Harris MA, Winkelman WA, Wolf JC, Hixon JG, Schwartz AM, Myers MB, **Haws LC**, Proctor DM. 2013. Assessment of K-Ras mutant frequency adn micronucleus incidence in the mouse duodenum following 90-days of exposure to Cr(VI) in drinking water. Mutat Res 754(1–2):15–21.

Thompson CM, Proctor DM, Suh M, **Haws LC**, Kirman CR, Harris MA. 2013. Assessment of the mode of action underlying development of rodent small intestinal tumors following oral exposure to hexavalent chromium and relevance to humans. Crit Rev Toxicol 43(3):244–274.

Dourson ML, Gadagbui B, Griffin S, Garabrant DH, **Haws LC,** Kirman C, Tohyama C. 2013. The importance of problem formulations in risk assessment: A case study involving dioxin-contaminated soil. Regul Toxicol Pharmacol 66(2):208–216.

Thompson CM, Gaylor DW, Tachovsky JA, Perry C, Carakostas MC, **Haws LC**. 2013. Development of a chronic noncancer oral reference dose and drinking water screening level for sulfolane using benchmark dose modeling. J Appl Toxicol 33(12):1395–1406.

Thompson CM, Kirman CR, Proctor DM, **Haws LC**, Suh M, Hays S, Hixon JG, Harris MA. 2013. A chronic oral reference dose for hexavalent chromium-induced intestinal cancer. J Appl Toxicol 34:525–536.

Kirman CR, Hays SM, Aylward LL, Suh M, Harris MA, Thompson CM, **Haws LC**, Proctor DM. 2012. Physiologically based pharmacokinetic model for rats and mice orally exposed to chromium. Chem Biol Interact 200(1):45–64

Kopec AK, Kim S, Forgacs AL, Zacharewski TR, Proctor DM, Harris MA, **Haws LC**, Thompson CM. 2012. Genome-wide gene expression effects in B6C3F1 mouse intestinal epithelia following 7 and 90 days of exposure to hexavalent chromium in drinking water. Toxicol Appl Pharmacol 259(1): 1326.

Proctor DM, Suh M, Aylward LL, Kirman CR, Harris MA, Thompson CM, Gürleyük H, Gerads R, **Haws LC**, Hays SM. 2012. Hexavalent chromium reduction kinetics in rodent stomach contents. Chemosphere 89(5):487–93.

Thompson CM, Fedorov Y, Brown DD, Suh M, Proctor D, Kuriakose L, **Haws LC**, Harris MA. 2012. Assessment of Cr(VI)-induced cytotoxicity and genotoxicity using high content analysis. PLoS ONE 7(8):e42720.

Thompson CM, Hixon JG, Proctor DM, **Haws LC**, Suh M, Urban JD, Harris MA. 2012. Assessment of genotoxic potential of Cr(VI) in the mouse duodenum: An in silico comparison with mutagenic and nonmutagenic carcinogens across tissues. Regul Toxicol Pharmacol 64(1):68–76.

Thompson CM, Proctor DM, Suh M, **Haws LC**, Hebert CD, Mann JF, Shertzer HG, Hixon JG, Harris MA. 2012. Comparison of the effects of hexavalent chromium in the alimentary canal of F344 rats and B6C3F1 mice following exposure in drinking water: Implications for carcinogenic modes of action. Toxicol Sci 125(1):79–90.

Thompson CM, Proctor DM, **Haws LC**, Hebert CD, Grimes SD, Shertzer HG, Kopec AK, Hixon JG, Zacharewski TR, Harris MA. 2011. Investigation of the mode of action underlying the tumorigenic response induced in B6C3F1 mice exposed orally to hexavalent chromium. Toxicol Sci 123(1):58–70.

Thompson CM, **Haws LC**, Harris MA, Gatto NM, Proctor DM. 2011. Application of the U.S. EPA mode of action framework for purposes of guiding future research: A case study involving the oral carcinogenicity of hexavalent chromium. Toxicol Sci 119(1):20–40.

Tachovsky JA, Urban JD, Wikoff DS, **Haws LC,** Harris MA. 2010. Reduction of a large fish tissue analyte database: Identifying and assessing data specific to a remediation site for risk assessment application. Chemosphere 80(5):481–488.

Urban J, Tachovsky JA, **Haws L**, Wikoff Staskal D, Harris M. 2010. Response to Mugdan et al.'s comment on Urban et al. "Assessment of human health risks posed by consumption of fish from the Lower Passaic River, New Jersey." Sci Tot Environ 408(6):1468–1470.

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DeSesso JM, Watson RE, Keen CL, Hazelden KP, **Haws LC**, Li AA. 2009. Analysis and integration of developmental neurotoxicity and ancillary data into risk assessment: a case study of dimethoate. J Toxicol Environ Health A 72(2):94–109.

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BOOK CHAPTER

Staskal DF, Birnbaum LS, **Haws LC**. 2011. Application of a relative potency factor approach in the assessment of health risks associated with exposures to mixtures of dioxin-like compounds. In: Mumtaz M (Ed), The Principles and Practice of Mixtures Toxicology. Wiley, ISBN 978-3-527-63211-4.

ABSTRACTS AND PRESENTATIONS

DeVito, Bokkers B, van Duursen M, van Ede K, Feeley M,… **Haws L**,… Wikoff D, et al. The 2022 WHO reevaluation of human and mammalian toxic equivalency factors for polychlorinated dioxins, dibenzofurans and biphenyls. Abstract 3626, Society of Toxicology Annual Meeting, Salt Lake City, UT, March 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 Annual Meeting, Salt Lake City, UT, March 2024.

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Haws L (Session Co-Chair). Introduction — Use of New Approach Methods in Risk Characterization of PFAS: Challenges and Opportunities. 44th Annual Winter Meeting, the Toxicology Forum, Tysons, VA, January 27–29, 2020 (see: https://dialogue.toxforum.org/d/do/894).

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Haws LC. Is there a need for short-term response actions for trichloroethylene? A toxicologist's view. Invited Speaker. Presented at the Air and Waste Management Association's Vapor Intrusion, Remediation, and Site Closure Conference – Balancing Technical Defensibility, Risk, Sustainability, and Costs. December 7–8, 2016. San Diego, CA.

Haws LC. Vapor intrusion – Solid ground or quick sand? Invited Speaker. Presented at the 28th Annual Texas Environmental Superconference. August 5, 2016. Austin, TX.

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Haws LC. Trichlorethylene exposure and development of fetal cardiac malformations: What do the data tell us about inhalation exposures resulting from vapor intrusion and potential health risks to pregnant women? – Introduction. Presented at the Society of Toxicology's 55th Annual Meeting, March 13–17, 2016. New Orleans, LA.

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Suh M, Thompson CM, Hixon JG, Harris MA, Kirman CR, Hays S, **Haws LC**, Proctor DM**.** Potential involvement of oxidative stress and iron disturbance in the development of oral cavity tumors in rats exposed to hexavalent chromium. Presented at the Society of Toxicology's 52nd Annual Meeting, March 10-14, 2013. San Antonio, TX.

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Proctor DM, Thompson CM, Suh M, **Haws LC**, Harris MA. Mode of action for intestinal carcinogenesis of ingested hexavalent chromium in mice. Presented at the Society of Toxicology's 51st Annual Meeting. San Francisco, CA, March 11-15, 2012.

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