

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

MANAGING PRINCIPAL SCIENTIST

CONTACT INFORMATION

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PROFESSIONAL PROFILE

Dr. Laurie Haws is a cofounder and Managing Principal Scientist with ToxStrategies and is 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 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 (<i>magna cum laude</i>), Long Island University (Southampton, NY)

CERTIFICATIONS

1994—present Diplomat, 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

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.crttox.2021.01.003>.

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: 10.1177/0192623317y4324.
- 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.
- Rager JE, Ring CL, Fry RC, Suh M, Proctor DM, **Haws LC**, Harris MA, Thompson CM. 2017. High-throughput screening data interpretation in the context of *in vivo* transcriptomic responses to oral Cr(VI) exposure. *Toxicol Sci* kfx085. doi: 10.1093/toxsci/kfx085.
- 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
- Wikoff DS, Rager JE, **Haws LC**, Borghoff SJ. 2016. A high dose mode of action for tetrabromobisphenol A-induced uterine adenocarcinomas in Wistar Han rats: A critical evaluation of key events in an adverse outcome pathway framework. *Regul Toxicol Pharmacol*. doi: 10.1016/j.yrtph.2016.01.018.
- 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, 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 and 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.
- Urban JD, Tachovsky JA, **Haws LC**, Staskal DF, Harris MA. 2010. Response to Buchanan 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(8):2004–2007.
- 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.
- Scott LLF, Staskal DF, Williams ES, Luksemburg WJ, Urban JD, Nguyen LM, **Haws LC**, Birnbaum LS, Paustenbach DJ, Harris MA. 2009. Levels of polychlorinated dibenzo-p-dioxins, dibenzofurans, and biphenyls in southern Mississippi catfish and estimation of potential health risks. *Chemosphere* 74(7):1002–10.
- Urban JD, Tachovsky JA, Staskal DF, **Haws LC**, Harris MA. 2009. Assessment of human health risks posed by consumption of fish from the Lower Passaic River, New Jersey. *Sci Tot Environ* 408(2):20924.
- Donovan EP, Staskal DF, Unice KM, Roberts JD, **Haws LC**, Finley BL, Harris MA. 2008. Risk of gastrointestinal disease associated with exposure to pathogens in the sediments of the Lower Passaic River. *Appl Environ Microbiol* 74:1004–1018.
- Haws LC**, Tachovsky JA, Williams ES, Scott LF, Paustenbach D, Harris M. 2008. Assessment of potential human health risks posed by benzene in beverages. *J Food Sci* 73(4):33–T41
- Scott LLF, Harris M, Unice KM, Scott P, Nguyen LM, **Haws LC**, Paustenbach D. 2008. Addendum to: Evaluation of PCDD/F and dioxin-like PCB serum concentration data from the 2001–2002 National Health and Nutrition Examination Survey of the United States population. *J Exp Sci Env Epidemiol* 1–9.

- Staskal DF, Scott LLF, **Haws LC**, Luksemburg WJ, Birnbaum LS, Nguyen LM, Urban JU, Williams ES, Paustenbach DJ, Harris MA. 2008. Assessment of polybrominated diphenyl ether exposures and health risks associated with consumption of southern Mississippi catfish. *Environ Sci Technol* 42(17):6755–6761.
- Ferriby LL, Knutsen JS, Harris M, Unice KM, Scott P, Nony P, **Haws LC**, Paustenbach D. 2007. Evaluation of PCDD/F and dioxin-like PCB serum concentration data from the 2001–v2002 National Health and Nutrition Examination Survey of the United States Population. *J Exp Sci Env Epidemiol* 17:358–371.
- Haws L**, Su M, Harris MA, DeVito MJ, Walker NJ, Farland WH, Finley B, Birnbaum LS. 2006. Development of a refined database of mammalian relative potency estimates for dioxin-like compounds. *Toxicol Sci* 89(1): 4–30.
- Van den Berg M, Birnbaum L, Denison M, DeVito M, Farland W, Feeley M, Fiedler H, Hakansson H, Hanberg A, **Haws L**, Rose M, Safe S, Schrenk D, Tohyama C, Tritscher A, Tuomisto J, Tysklind M, Walker N, Peterson RE. 2006. The 2005 World Health Organization reevaluation of human and mammalian toxic equivalency factors for dioxins and dioxin-like compounds. *Toxicol Sci* 93(2): 223–241.
- Grant RL, Rodriguez R, Hofelt CS, **Haws LC**. 2002. Shortcomings in USEPA's approach for predicting risk due to consumption of animal food products impacted by air emissions from hazardous waste combustion facilities: a case study involving phthalates. *Hum Ecol Risk Assess* 8(5):1137–1154.
- Hofelt CS, Honeycutt M, McCoy JT, **Haws LC**. 2001. Development of a metabolism factor for polycyclic aromatic hydrocarbons for use in multipathway risk assessments for hazardous waste combustion facilities. *Reg Toxicol Pharmacol* 33:60–65.
- Haws LC**, Jackson BA, Turnbull D, Dressler WE. 1994. A comparison of two approaches for assessing human cancer risk from disperse blue 1. *Reg Toxicol Pharmacol* 19:80–96.
- Couture LA**, Abbott BD, Birnbaum LS. 1991. A critical review of the developmental toxicity and teratogenicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin: recent advances in understanding the mechanism. *Teratology* 42:619–627.
- Couture-Haws L**, Harris MW, Lockhart AC, Birnbaum LS. 1991. Evaluation of the persistence of hydronephrosis induced in mice following in uteri and/or lactational exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). *Toxicol Appl Pharmacol* 107:402–412.
- Couture-Haws L**, Harris MW, McDonald MM, Lockhart AC, Birnbaum LS. 1991. Hydronephrosis in mice exposed to TCDD-contaminated breast milk: identification of the peak period of sensitivity and assessment of potential recovery. *Toxicol Appl Pharmacol* 107: 413–428.
- Frankos VH, Schmitt DF, **Haws LC**, McEvily AJ, Iyengar R, Miller SA, Munro IC, Clydsdale FM, Forbes AL, Sauer RM. 1991. Generally recognized as safe (GRAS) evaluation of 4-hexylresorcinol for use as a processing aid for the prevention of melanosis in shrimp. *Reg Toxicol Pharmacol* 14: 202–212.
- Couture LA**, Harris MW, Birnbaum LS. 1990. Characterization of the peak period of sensitivity for the induction of hydronephrosis in C57BL/6N mice following exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin. *Fundam Appl Toxicol* 15: 142–150.
- Couture LA**, Harris MW, Birnbaum LS. 1989. Developmental toxicity of 2,3,4,7,8-pentachlorodibenzofuran (4-PeCDF) in the Fischer 344 rat. *Fundam Appl Toxicol* 12: 358–366.
- Birnbaum LS, **Couture LA**, Elwell MR. 1989. Subchronic effects of exposure to octachlorodibenzo-p-dioxin (OCDD). *Chemosphere* 18(1–6): 389–390.
- Couture LA**, Elwell MR, Birnbaum LS. 1988. Dioxin-like effects observed in male rats following exposure to Octachlorodibenzo-p-dioxin (OCDD) during a 13-week study. *Toxicol Appl Pharmacol* 93:31–46.

Birnbaum LS, **Couture LA**. 1988. Disposition of octachlorodibenzo-p-dioxin (OCDD) in male rats. *Toxicol Appl Pharmacol* 93: 22–30.

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

Heintz MM, Chappell GA, Thompson CM, Wolf JC, Rogers JM, **Haws LC**. HFPO-DA (GenX) transcriptomic responses in pregnant and non-pregnant rat livers: Analyses to inform the role of maternal effects on neonatal toxicity. Poster presented at Society of Toxicology Annual Meeting, San Diego, CA, March 2022.

Thompson CM, Chappell GA, Mittal L, Gorman B, Proctor DM, **Haws LC**, Harris MA. Use of targeted mode-of-action research to inform human health risk assessment of hexavalent chromium. Poster presented at Society of Toxicology Annual Meeting, San Diego, CA, March 2022.

Rogers JM, Heintz MM, Thompson CM, **Haws LC**. Development of a putative adverse outcome pathway for neonatal mortality in rodents: Implications for human health risk assessments of PFAS. Poster presented at Society of Toxicology Annual Meeting, San Diego, CA, March 2022.

Haws, LC. Invited Speaker. Risk Characterization of PFAS – Challenges and Opportunities. *The Science of PFAS: Chemistry, Health, and Multimedia Measurements*. Air & Waste Management Association Virtual Conference. September 2020.

Ring C, Fitch S, **Haws L**, Harris M, Wikoff D. Quantitative integration of dose-response data for relative potency estimates of dioxin-like chemicals. Poster for Society of Toxicology, Virtual Annual Meeting, 2020, <https://eventpilotadmin.com/web/page.php?page=Session&project=SOT20&id=P3385>.

Thompson CM, Ring C, Pham L, Chappell GA, **Haws LC**. Assessment of the relevance of toxicological findings in the development of an oral reference dose for GenX. Poster for Society of Toxicology, Virtual Annual Meeting, 2020, <https://eventpilotadmin.com/web/page.php?page=Session&project=SOT20&id=P2764>.

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>).

Thompson C, Chappell G, Cullen J, Wolf JC, **Haws L**. Development of an oral reference dose for GenX using the latest toxicological and risk assessment methodologies: Environmental risk assessment of per- and polyfluoroalkyl substances (PFAS). SETAC North America Focused Topic Meeting, Durham, NC, August 2019.

Urban J, **Wikoff D**, **Haws L**. Three-tiered approach to integrating evidence streams assessing gestational trichloroethylene exposure and congenital heart defects (TCE-CHD). Poster at Evidence Integration in Chemical Assessments: Challenges Faced in Developing and Communicating Human Health Effect Conclusions. National Academies of Sciences, Engineering, and Medicine. Washington, DC, June 2019.

Urban J, Wikoff D, Suh M, Britt J, Harvey S, Chappell G, **Haws L**. Comparison of NTP OHAT and US EPA TSCA study quality criteria: Trichloroethylene (TCE) and congenital heart defects (CHDs) as a case study. Poster at Society of Toxicology Annual Meeting, Baltimore, MD, March 2019.

Ring CL, Urban J, Wikoff D, Thompson C, Budinsky RA, **Haws LC**. Application of systematic review and quantitative evidence integration methods to support risk assessment: Characterization of the dose-response relationship between exposure to dioxin-like compounds (DLC) and sperm count. Poster at Society of Toxicology Annual Meeting, Baltimore, MD, March 2019.

Haws LC. Building a firm from the ground up. Society of Toxicology Career Resources and Development Committee webinar: So, You Want to Be a Consultant. February 12, 2019.

Thompson CM, Wolf JC, Suh M, Proctor DM, **Haws LC**, Harris MA. Toxicity and recovery in the duodenum of B6C3F1 mice following treatment with intestinal carcinogens; captan, folpet, and hexavalent chromium: Evidence for an adverse outcome pathway. Society of Toxicology Annual Meeting, San Antonio, TX, March 11–15, 2018.

Thompson CM, Suh M, Proctor DM, **Haws LC**, Harris MA. Ten factors for considering the mode-of-action of Cr(VI)-induced intestinal tumors in rodents. Society of Toxicology Annual Meeting. March 11–15, 2018. San Antonio, TX.

Wikoff D, Goodrum P, **Haws L**, Budinsky R. Application of quantitative approaches to assess uncertainties in the development of toxicity values: A case study involving the reference dose (RfD) for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Society of Toxicology Annual Meeting. March 11–15, 2018. San Antonio, TX.

Urban JD, Harvey S, **Haws LC**, Wikoff, D. Assessment of study quality (risk of bias) in understanding the relationship between congenital heart defects (CHDs) and exposures to trichloroethylene (TCE). Society of Toxicology Annual Meeting. March 11–15, 2018. San Antonio, TX.

Wikoff DS, Rager JE, Harvey S, **Haws L**, Chappell G, Borghoff S. Development and refinement of a framework for quantitative consideration of study quality and relevance in the evaluation of mechanistic data based on Key Characteristics of Carcinogens. Society of Risk Analysis Annual Meeting. December 10–14, 2017. Arlington, VA.

Thompson C, Rager J, Suh M, Proctor D, **Haws L**, Harris M. Mechanistic support for nonlinear risk assessment of rat oral cavity tumors induced by exposure to Cr(VI) in drinking water. Poster presented at Society of Toxicology Annual Meeting. March 15, 2017. Baltimore, MD.

Kirman CR, Proctor D, Suh M, **Haws L**, Harris M, Thompson C, Hays S. Using physiologically-based pharmacokinetic modeling to address potentially sensitive subpopulations exposure to hexavalent chromium. Poster presented at Society of Toxicology Annual Meeting. March 15, 2017. Baltimore, MD.

Wikoff DS, Rager J, Harvey S, **Haws L**, Chappell G, Borghoff S. Framework for quantitative consideration of study quality and relevance in the systematic evaluation of mechanistic data per the Ten Key Characteristics of Carcinogens. Poster presented at Society of Toxicology Annual Meeting. March 15, 2017. Baltimore, MD.

Thompson C, Kirman C, Suh M, Proctor D, **Haws L**, Harris M, Hays S. Risk assessment of oral exposure to Cr(VI): Integration of mode of action, pharmacokinetics, and dose-response modeling. Poster presented at Society of Toxicology Annual Meeting. March 14, 2017. Baltimore, MD.

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.

Haws LC. Vapor intrusion – Technical issues. Invited Speaker. Presented at the Semi-Annual South Central Regional Meeting of the Auditing Roundtable. August 3, 2016. Austin, TX.

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.

D Wikoff, SJ Borghoff, JE Rager and **LC Haws.** Human relevance assessment of tetrabromobisphenol-A (TBBPA) induced uterine adenocarcinomas: Mode of action dependent on high dose molecular initiating event (MIE). Presented in the “Flame Retardants” Session of the Society of Toxicology's 55th Annual Meeting, March 13–17, 2016. New Orleans, LA.

SJ Borghoff, D Wikoff, JE Rager, and **LC Haws.** Tetrabromobisphenol A (TBBPA): Dose- and time-dependent changes in plasma TBBPA and its conjugates over 28 days of administration. Presented at the Society of Toxicology's 55th Annual Meeting, March 13–17, 2016. New Orleans, LA.

CM Thompson, M Suh, DM Proctor, JE Rager, **LC Haws,** and MA Harris. Assessment of the in vivo genotoxicity of CrVI in target organs identified in a two-year cancer bioassay. Presented at the Society of Toxicology's 55th Annual Meeting, March 13–17, 2016. New Orleans, LA.

Urban JD, Thompson CM, Plunkett LM, Perry CS, **Haws LC.** A state of the science copper reference dose for soil remediation. Presented at the Society of Toxicology's 54th Annual Meeting. San Diego, CA, March 22-26, 2015.

Harris MA, Thompson CM, Proctor DM, Suh M, Wolf JC, Seiter JM, Chappell MA, **Haws LC.** Analysis of duodenal crypt health following exposure to Cr(VI) in drinking water. Presented at the Society of Toxicology's 54th Annual Meeting. San Diego, CA, March 22-26, 2015.

Borghoff SJ, Wikoff D, White MC, Thompson C, and **Haws LC.** Identification of the molecular initiating event (MIE) for TBBPA induced uterine tumors in the framework of an adverse outcome pathway (AOP). Presented at the Society of Toxicology's 54th Annual Meeting. San Diego, CA, March 22-26, 2015.

Thompson C, Suh M, Proctor D, **Haws L,** Hixon J, Wolf J, Young R, Elbekai R, O'Brien T, Parsons B, Seiter J, Chappell G, Harris M. 2015. Follow-up assessment of in vivo genotoxicity in target organs of relevant species identified from a two-year cancer bioassay: Case study with hexavalent chromium. *Environ Molec Mutagen* 56:S52–S52.

Wikoff D, White MC, Borghoff SJ, **Haws LC.** Evaluation of tetrabromobisphenol A (TBBPA)-induced endocrine-related target gene activity using high-throughput screening data from ToxCast. Presented at the Society of Toxicology's 54th Annual Meeting, March 22-26, 2015. San Diego, CA.

Haws LC, Thompson C, Perry C, White M, Fitzgerald L, Borghoff S, Wikoff D. Development of non-cancer based toxicity factors and daily dose estimates for TBBPA. Presented at the Society of Toxicology's 53rd Annual Meeting. Phoenix, AZ, March 23-27, 2014.

Thompson CM, Proctor DM, Suh M, Wolf JC, **Haws LC,** Seiter JM, Chappell MA, Harris MA. X-ray fluorescence microspectroscopic analysis of duodenal mucosae following Cr(VI) exposure in drinking water. Presented at the Society of Toxicology's 53rd Annual Meeting. Phoenix, AZ, March 23-27, 2014.

Wikoff D, Thompson C, Perry C, White M, Fitzgerald L, Borghoff S, **Haws LC.** Development of an oral cancer slope factor and lifetime average daily dose estimates for TBBPA. Presented at the Society of Toxicology's 53rd Annual Meeting. Phoenix, AZ, March 23-27, 2014.

Wikoff D, Fitzgerald L, **Haws L,** Harris M. Health-based framework for evaluating the safety of hydraulic fracturing products. Presented at the Society of Toxicology's 52nd Annual Meeting, March 10-14, 2013. San Antonio, TX.

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.

Urban JD, Thompson CM, Deskin R, Waite M, **Haws LC**. Development of an oral cancer slope factor for acrylamide based on tumors relevant to humans. Presented at the Society of Toxicology's 52nd Annual Meeting, March 10-14, 2013. San Antonio, TX.

Kirman CR, Thompson CM, Proctor DM, Suh M, **Haws LC**, Harris MA, Hays SM. Using PBPK modeling to address diurnal variation and age differences in hexavalent chromium toxicokinetics in humans. Presented at the Society of Toxicology's 52nd Annual Meeting, March 10-14, 2013. San Antonio, TX.

Harris MA, Thompson CM, Wolf JC, Fedorov Y, Hixon JG, Proctor DM, Suh M, **Haws LC**. Assessment of genotoxic potential of Cr(VI) in the intestine via in vivo intestinal micronucleus assay and in vitro high content analysis in differentiated and undifferentiated Caco-2. Presented at the Society of Toxicology's 51st Annual Meeting. San Francisco, CA, March 11-15, 2012.

Haws L, Fitzgerald L, Burkhalter K, Wikoff D. US EPA's proposed toxicity values for TCDD: Implications for decision-making regarding the safety of foods in the United States. Presented at the Society of Toxicology's 51st Annual Meeting. San Francisco, CA, March 11-15, 2012.

Perry C, Tachovsky JA, Ke M, Urban J, **Haws L**. Natural gas exploration and production in the Barnett Shale: Assessment of exposures to volatile organic compounds (VOCs). Presented at the Society of Toxicology's 51st Annual Meeting. San Francisco, CA, March 11-15, 2012.

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.

Thompson CM, Hixon JG, Kopec AK, Harris MA, Proctor DM, **Haws LC**. Assessment of genotoxic potential of Cr(VI) in the mouse duodenum via toxicogenomic profiling. Presented at the Society of Toxicology's 51st Annual Meeting. San Francisco, CA, March 11-15, 2012.

Wikoff D, DeVito M, Walker N, Hixon G, Harris M, Tachovsky A, Birnbaum L, **Haws L**. Application of machine learning in the development of a weighting framework for evaluating estimates of relative potency for dioxin-like compounds. Presented at the Society of Toxicology's 51st Annual Meeting. San Francisco, CA. March 11-15, 2012.

Haws L, Thompson C, Proctor D, Suh M, Harris M. Overview of the Hexavalent Chromium Mode of Action Research Project. Presented at the 37th Annual Winter Meeting of The Toxicology Forum. Washington, D.C., January 31-February 2, 2012.

Proctor D, Thompson C, Suh M, **Haws L**, Hays S, Kirman C, Aylward L, Harris M. Using MOA Information and pharmacokinetics to improve quantitative estimates of human cancer risk associated with oral exposures to hexavalent chromium. Presented at the 37th Annual Winter Meeting of The Toxicology Forum. Washington, D.C., January 31-February 2, 2012.

Zacharewski T, Kopec A, Thompson C, Proctor D, Suh M, **Haws L**, Harris M. Using toxicogenomics to identify key events in the MOA for oral carcinogenicity of Cr(VI). Presented at the 37th Annual Winter Meeting of The Toxicology Forum. Washington, D.C., January 31-February 2, 2012.

Hays S, Kirman C, Aylward L, Proctor D, Suh M, Thompson C, **Haws L**, Harris M. Using pharmacokinetics to improve extrapolation of high dose findings in rodents exposed to hexavalent chromium in drinking water to low dose exposures in humans. Presented at the 37th Annual Winter Meeting of The Toxicology Forum. Washington, D.C., January 31-February 2, 2012.

Diliberto JJ, Sirinek L, Burkhalter B, Wikoff D.S, Hixon G, Becker J, Patterson DG, Turner W, Tachovsky JA, Birnbaum LS, **Haws LC**. Endometriosis in a cohort of women living in the Kanawha River Valley in West Virginia: Blood levels of non-dioxin-like PCBs and relationship with BMI and age. Presented at Dioxin 2011. Brussels, Belgium, August 21-25, 2011.

Haws LC, DeVito MJ, Walker NJ, Harris MA, Tachovsky JA, Birnbaum LS, Farland WH, Wikoff DS. Development of a consensus-based weighting framework for evaluating estimates of relative potency for dioxin-like compounds that includes consideration of data from human cells. Presented at Dioxin 2011. Brussels, Belgium, August 21-25, 2011.

Haws LC, Fitzgerald L, Burkhalter B, Harris M, Wikoff DS. Assessment of the US EPA's proposed toxicological values for TCDD for regulation of dioxin-like compounds in foods: Bridging the science divide in a global market. Presented at Dioxin 2011. Brussels, Belgium, August 21-25, 2011.

Wikoff DS, Thompson C, Walker N, DeVito M, Harris M, Birnbaum L, **Haws L**. Derivation of relative potency estimates using benchmark dose modeling: a case study with TCDF. Presented at Dioxin 2011. Brussels, Belgium, August 21-25, 2011.

Haws L, Tachovsky A, Aylward L, Urban J, Fitzgerald L, Harris M, Wikoff D. Using toxicokinetics to improve soil exposure and risk assessments. Presented at the 37th Annual Summer Meeting of The Toxicology Forum. Aspen, CO, July 10-14, 2011.

Harris M, Proctor D, **Haws L**, Suh M, Thompson C. Hexavalent Chromium Mode of Action Research Program: Current findings. Presented at the USEPA Science Advisory Panel Meeting on the Draft EPA Toxicological Review of Hexavalent Chromium. Washington, D.C., May 12, 2011.

Haws L, Thompson C, Proctor D, Suh, M, Harris M. Hexavalent Chromium Mode of Action Research Program: Overview. Presented at the USEPA Science Advisory Panel Meeting on the Draft EPA Toxicological Review of Hexavalent Chromium. Washington, D.C., May 12, 2011.

Proctor D, Thompson C, Suh M, **Haws L**, Harris, M. Hexavalent Chromium Mode of Action Research Project to advance risk assessment. Presented at the USEPA Science Advisory Panel Meeting on the Draft EPA Toxicological Review of Hexavalent Chromium, May 12, 2011. Washington, D.C.

Fitzgerald L, Burkhalter B, Urban J, Staskal D, Harris M, **Haws L**. VOC serum levels in the general U.S. population: An analysis of the 2003-2004 NHANES dataset. Presented at the Society of Toxicology's 50th Annual Meeting. Washington, D.C., March 6-10, 2011.

Haws L, Proctor D, Thompson C, Harris M. Research plan to fill data gaps in the mode of action for cancer risk assessment of hexavalent chromium in drinking water. Presented at the Society of Toxicology's 50th Annual Meeting. Washington, D.C., March 6-10, 2011.

Proctor D, Thompson C, **Haws L**, Harris M. Use of mode of action and pharmacokinetic findings to inform the cancer risk assessment of ingested Cr(VI): A Case Study. Presented at the Society of Toxicology's 50th Annual Meeting. Washington, D.C., March 6-10, 2011.

Thompson C, Perry C, Gaylor D, Tachovsky A, Burkhalter B, **Haws L**. Derivation of an oral reference dose and drinking water screening level for sulfolane using benchmark dose modeling. Presented at the Society of Toxicology's 50th Annual Meeting. Washington, D.C., March 6-10, 2011.

Urban J, Fitzgerald L, Burkhalter B, Staskal D, Harris M, **Haws L**. BTEX serum levels in the general U.S. population: An analysis of 2003-2004 NHANES dataset. Presented at the Society of Toxicology's 50th Annual Meeting. Washington, D.C., March 6-10, 2011.

Haws L, Harris M, Urban J, Wikoff D. Hexavalent Chromium Mode of Action Research Project to advance risk assessment. Presented at USEPA Science Advisory Board Dioxin Review Panel Meeting. Washington, D.C., October 27, 2010.

Harris M, Wikoff D, Urban J, **Haws L**. EPA's draft dioxin reanalysis: Comments to the EPA Science Advisory Board Dioxin Panel. Presented at USEPA Science Advisory Board Dioxin Review Panel Meeting. Washington, D.C., October 27, 2010.

Harris M, Tachovsky JA, Staskal-Wikoff D, Aylward L, Burkhalter B, Simon T, **Haws L**. Serum concentrations of dioxin-like compounds in a population in midland michigan: An evaluation of the impact of soil exposures. Presented at Dioxin 2010. San Antonio, TX, September 12-17, 2010.

Harris M, Tachovsky JA, Staskal-Wikoff D, Simon T, Burkhalter B, Urban J, **Haws L**. Assessment of the impact of various soil cleanup levels on serum concentrations of dioxin-like compounds in humans. Presented at the 49th Annual Meeting of Society of Toxicology. Salt Lake City, Utah, March 7-11, 2010.

Haws L. Biomonitoring — A tool for assessing community exposures to air toxics. Presented at the Air Quality 2010 conference, hosted by the University of Texas School of Law. Austin, TX, November 19, 2010.

Haws L, Tachovsky JA, Staskal-Wikoff D, Aylward L, Burkhalter B, Urban J, Simon T, Harris M. An evaluation of the influence of different soil cleanup levels on the concentration of dioxin-like compounds in human serum. Presented at Dioxin 2010. San Antonio, TX, September 12-17, 2010.

Haws L. Biomonitoring: The circle of life. Presented in the Oil and Gas special session, at the 22nd Annual Texas Environmental Superconference. Austin, TX, August 5-6, 2010.

Tachovsky JA, **Haws L**. Application of principal components analysis and sequential gaussian simulation to a comprehensive soil sampling dataset to predict PCDD/F concentrations in Midland, MI. Presented at Dioxin 2010. San Antonio, TX, September 12-17, 2010.

Tachovsky A, Staskal D, Urban J, Harris MA, **Haws L**. Assessment of environmental data collected in a community with numerous petroleum refining and petrochemical facilities. Presented at the 49th Annual Meeting of Society of Toxicology. Salt Lake City, Utah, March 7-11, 2010.

Tachovsky JA, **Haws L**. Geostatistical estimation of soil PCDD/F TEQ using sequential Gaussian simulation and the aggregation of results in Midland, MI. Presented at the Society for Risk Analysis annual meeting. Salt Lake City, UT, December 5-8, 2010.

Urban J, Burkhalter B, Tachovsky JA, **Haws L**, Harris M. Evaluation of polychlorinated naphthalenes (PCNs) in Newark Bay sediment. Presented at Dioxin 2010. San Antonio, TX, September 12-17, 2010.

Haws LC, DeVito MJ, Walker NJ, Birnbaum LS, Farland WH, Harris MA, Tachovsky JA, Unice KM, Scott PK, Staskal-Wikoff DF. Development of distributions of relative potency estimates to quantitatively assess uncertainty inherent in the TEFs for dioxin-like compounds: A proposed consensus-based weighting. Presented at Dioxin 2009. Beijing, China, 2009.

Staskal-Wikoff DF, Harris MA, **Haws LC**, Birnbaum LS, Tachovsky JA. Probabilistic evaluation of cancer and non-cancer risk associated with exposure to BDE 209 in automobiles. Presented at Dioxin 2009. Beijing, China, 2009.

Urban JD, Tachovsky JA, Staskal DF, **Haws LC**, Harris MA. Human health risk assessment of consumption of fish from the Lower Passaic River. Presented at the 48th Annual Meeting of the Society for Toxicology. Baltimore, MD, March 15-19, 2009.

Haws LC, DeVito MJ, Walker NJ, Birnbaum LS, Unice KM, Scott PK, Harris MA, Tachovsky A, Farland WH, Finley BF, Staskal DF. 2008. Development of weighted distributions of REPs for dioxin-like compounds: Implications for risk assessment. Presented at the Society of Toxicology Annual Meeting. Seattle, WA, March 16-20, 2008.

Harris MA, Tachovsky JA, Williams ES, Paustenbach DP, **Haws LC**. 2008. Assessment of the Health Risks Posed by Benzene in Soft Drinks. Society of Toxicology Annual Meeting. Seattle, WA, March 16–20, 2008.

Scott LLF, Staskal DF, Harris MA, Finley BL, **Haws LC**. 2008. Evaluation of dioxin-like compounds in workers from a primary magnesium production facility relative to levels observed in the general US population. Presented at the Society of Toxicology Annual Meeting. Seattle, WA, March 16-20, 2008.

Staskal DF, Donovan EP, **Haws LC**, Roberts JD, Unice KM, Finley BL, Harris MA. 2008. Human Health risks associated with exposure to pathogens in waters and sediments of the Lower Passaic River. Presented at the Society of Toxicology Annual Meeting. Seattle, WA, March 16-20, 2008.

Urban JD, **Haws LC**, Scott LF, Scott PS, Staskal DF, Tachovsky AT, Unice KM, Harris MA. 2008. A framework for evaluating serum dioxin data derived from biomonitoring studies. Presented at the Society of Toxicology Annual Meeting. Seattle, WA, March 16-20, 2008.

DeSesso J, Watson RE, Keen CL, Hazleden KP, **Haws LC**, Li AA. 2007. Integration of developmental toxicity data into risk assessment: A case study of dimethoate. Society of Toxicology. Charlotte, NC, March 25-29, 2007.

Ferriby LL, Harris MA, Unice KM, Scott PK, **Haws LC**, Paustenbach DJ. 2007. Development of PCDD/F and dioxin-like PCB serum concentration reference values for the general U.S. population using the 2006 WHO TEFs and the 2001-2002 NHANES data. Society of Toxicology. Charlotte, NC, March 25-29, 2007.

Harris M, Tachovsky JA, Williams ES, Scott LLF, Nguyen L, **Haws LC**. 2007. Risks posed by air pollutants in the Houston metropolitan area. Society for Risk Analysis Annual Meeting. San Antonio, TX, December 9–12, 2007.

Harris M, Scott LLF, Nguyen LM, **Haws LC**. Trends in elevated blood lead levels of U.S. children and associated demographic characteristics. *Ann Epidemiol* 17: 748.

Harris M, **Haws LC**, Tachovsky A, Williams ES, Nguyen LM, Scott LF. Interactive processes in toxicity assessments. Air toxics research: Implications of research on policies to protect public health. Houston, TX, June 12-13, 2007.

Haws LC, Scott LLF, Staskal DF, Harris M, Finley B. Evaluation of biomonitoring data for dioxin-like compounds in workers at a primary magnesium production facility. Society for Risk Analysis Annual Meeting. San Antonio, TX, December 9–12, 2007.

Haws LC, Scott LLF, Staskal DF, Harris MA, Finley BL. 2007. Dioxin-like compounds in workers at a primary magnesium production facility. *Dioxin 2007*. Tokyo, Japan, September 2-7, 2007.

Haws LC, Walker NJ, DeVito MJ, Birnbaum LS, Unice KM, Scott PK, Harris MA, Farland WH, Finley BL, Staskal DF. Development of weighted distributions of REPs for dioxin-like compounds (DLCs). Society of Toxicology Annual Meeting. Charlotte, NC, March 25–29, 2007.

Nguyen LM, Scott LLF, Harris M, **Haws LC**. 2007. Factors contributing to blood lead levels in U.S. children based on NHANES data. *Ann Epidemiol* 17:734–735.

- Paustenbach DJ, Scott LLF, Nguyen LM, Unice KM, Scott P, **Haws LC**, Harris M. 2007. Referent concentrations of PCDD/Fs and dioxin-like PCBs in sera of persons in the U.S. Based on the New WHO 2006 TEFs and 2001-2002 NHANES Data. *Ann Epidemiol* 17:734.
- Scott LLF, Harris M, Unice KM, Scott P, Nguyen LM, **Haws LC**, Paustenbach D. 2007. Effects of excluding serum PCDD/F and dioxin-like PCB data of individuals with incomplete congener profiles on estimates of total TEQ. *Ann Epidemiol* 17:732.
- Scott P, **Haws L**, Scott L, Harris M. Evaluation of background 2,3,7,8-PCDD/F congener profiles in human serum collected during NHANES 2001–2002 using principal components analysis. *Dioxin 2007*. Tokyo, Japan, September 2-7, 2007.
- Scott P, **Haws L**, Scott L, Harris M. Evaluation of background dioxin-like PCB congener profiles in human serum collected during NHANES 2001–2002 using principal components analysis. *Dioxin 2007*. Tokyo, Japan, September 2-7, 2007.
- Scott L, Nguyen L, Harris M, Craft E, **Haws L**. 2007. Comparison of all cancer rates among urban areas and counties within Texas. *Am J Epidemiol* 165(11):S6–S6.
- Staskal DF, Donovan EP, **Haws LC**, Roberts JD, K.M. Unice, B.L. Finley, and M.A. Harris. A quantitative microbial risk assessment for exposure to pathogens in waters and sediments of the Lower Passaic River. Society for Risk Analysis annual meeting, December 9-12, 2007. San Antonio, TX.
- Staskal DF, Scott LLF, Williams ES, Luksemburg WJ, **Haws LC**, Birnbaum LS, Nguyen LM, Paustenbach DJ, Harris MA. Daily intake estimates of PBDEs associated with consumption of catfish in the U.S. Presented at the Fourth International Workshop on Brominated Flame Retardants. Amsterdam, the Netherlands, April 24-27, 2007.
- Tachovsky JA, **Haws LC**, Scott LF, Williams ES, Harris M. Benzene in soft drinks and other beverages: Do measured levels pose a human health risk? Society for Risk Analysis' Annual Meeting. San Antonio, TX, December 9-12, 2007.
- Williams ES, Ferriby LL, **Haws LC**, Paustenbach DJ, Harris MA. Assessment of potential human health risks posed by benzene in a commercial beverage. Society of Toxicology. Charlotte, NC, March 25-29, 2007.
- Ferriby LL, Williams ES, Luksemburg WJ, Paustenbach DJ, **Haws LC**, Birnbaum LS, Harris MA. Comparing polychlorinated biphenyls in farm-raised and wild-caught catfish from southern Mississippi. *Dioxin 2006*. Oslo, Norway, August 21-25.
- Ferriby LL, Williams ES, Luksemburg WJ, Paustenbach DJ, **Haws LC**, Birnbaum LS, Harris MA. 2006. Comparing PCDDs, PCDFs, and dioxin-like PCBs in farm-raised and wild-caught catfish from southern Mississippi. *Dioxin 2006*. Oslo, Norway, August 21-25, 2006.
- Ferriby LL, Franke K, Unice KM, Scott P, **Haws LC**, Harris M, Paustenbach DJ. Serum reference levels of PCDD/Fs and dioxin-like PCBs stratified by race/ethnicity, gender and age for the general U.S. population. American Public Health Association Annual Meeting and Exposition. Boston, MA, November 4-8, 2006.
- Haws L**. The use of toxic equivalency factors to assess potential human health risks posed by dioxin-like compounds: Keeping up with the science. Presented at Michigan State University, Toxicology Program Seminar Series. East Lansing, MI, September 26, 2006.
- Haws LC**, Scott PK, Unice KM, Gough M, Harris M, Staskal DF, Paustenbach DJ, Pavuk M. Are dioxin body burdens surrogates for other risk factors in associations between dioxin and diabetes? *Dioxin 2006*. Oslo, Norway, August 21-25, 2006.

Haws LC, DeVito MJ, Birnbaum LS, Walker NJ, Scott PK, Unice KM, Harris MA, Farland WH, Finley BL, Staskal DF. An alternative method for establishing TEFs for dioxin-like compounds. Part 2. Development of an approach to quantitatively weight the underlying potency data. Dioxin 2006. Oslo, Norway, August 21-25.

Paustenbach DJ, Harris M, Ferriby LL, Williams ES, **Haws LC**, Unice KM, Scott PK. 2006. Development of PCDD/F TEQ serum reference values for the U.S. population for use in evaluating biomonitoring results. Dioxin 2006. Oslo, Norway, August 21-25, 2006.

Scott PK, **Haws LC**, Staskal DF, Birnbaum LS, Walker NJ, DeVito MJ, Harris MA, Farland WH, Finley BL, Unice KM. An alternative method for establishing TEFs for Dioxin-like compounds. Part 1. Evaluation of decision analysis methods for use in weighting relative potency data. Dioxin 2006, August 21-25. Oslo, Norway.

Staskal DF, Unice KM, Walker NJ, DeVito MJ, Birnbaum LS, Scott PK, Harris MA, Farland WH, Finley BL, and **Haws LC**. An alternative method for establishing TEFs for dioxin-like compounds. Part 3. Development of weighted distributions of REPs for PCB126 and 2,3,4,7,8-PeCDF. Dioxin 2006. Oslo, Norway, August 21-25.

Staskal DF, Ferriby LL, Williams ES, Luksemburg WJ, **Haws LC**, Birnbaum LS, Paustenbach DJ, Harris M. 2006. Polybrominated diphenyl ethers in southern Mississippi catfish. Dioxin 2006. Oslo, Norway, August 21-25.

Haws L. Evaluating Potential Health Risks Posed By PCDDs, PCDFs, and Dioxin-like PCBs: An approach for improving the toxicity equivalency factor (TEF) methodology. 30th Annual Winter Meeting of the Toxicology Forum. Washington, DC, February 2, 2005.

Haws L. Roundtable: Is it time to reevaluate the toxic equivalency factors for PCDDs, PCDFs, and dioxin-like PCBs? The use of toxicity equivalence factors (TEFs) for PCDDs, PCDFs, and dioxin-like PCBs in risk assessment: Improving the process. Dioxin 2004. Berlin, Germany, September 6-10, 2004.

Haws L, Harris M, Su S, Birnbaum L, DeVito M, Farland W, Walker N, Connor K, Santamaria A, Finley B. Development of a refined database of relative potency estimates to facilitate better characterization of variability and uncertainty in the current mammalian TEFs for PCDDs, PCDFs, and dioxin-like PCBs. Dioxin 2004. Berlin, Germany, September 6-10, 2004.

Haws L, Harris M, Su S, Walker N, Birnbaum L, DeVito M, Farland W, Connor K, Santamaria A, Finley B. A preliminary approach to characterizing variability and uncertainty in the mammalian PCDD/F and PCB TEFs. Dioxin 2004. Berlin, Germany, September 6-10, 2004.

Haws L. Combustion risk modeling and assessment. Presented at the Texas Commission on Environmental Quality Workshop on Hazardous Waste Combustion. Austin, TX, May 7, 2003.

Haws L. Permitting of hazardous waste combustion facilities in the state of Texas: Human health risks associated with fugitive emissions sources. Presented at the Texas Chemical Council Quarterly Meeting. Houston, TX, August 1, 2002.

Haws L. Texas Risk Reduction Program rule—The basics. Question and Answer Forum Panelist. Presented at the Texas Natural Resource Conservation Commission Environmental Trade Fair. Waste Remediation Track. Austin, TX, May 7, 2002.

Haws L. Toxicology and risk assessment resources and practices in the state of Texas. Presented at the USEPA Region 6 States Risk Assessment Roundtable. Dallas, TX, April 5, 2002.

Haws L. Risk Assessment Coordination Between EPA and States Panelist. Presented at the USEPA Regional Risk Assessors Annual Conference. Bandera, TX, May 25, 2001.

Haws L. Texas Risk Reduction Program Rule—Practical Applications. Question and Answer Forum Panelist. Presented at the Texas Natural Resource Conservation Commission Environmental Trade Fair. Waste Remediation Track. April 30, 2001. Austin, TX.

Tachovsky JA, McCoy JT, **Haws LC.** Development and implementation of probabilistic risk assessment protocol in Texas. Presented at the 94th Conference of the AWMA. June 24-28, 2001. Orlando, FL.

Grant, R.L., Morrill D, Manis D, Tachovsky A, **Haws LC.** 2000. The Texas combustion project: Review of trial burn/risk burn plans and reports. Proceedings, International Conference on Incineration and Thermal Treatment Technologies. Portland, OR, May 8–12, 2000.

Tachovsky JA, **Haws LC,** Hofelt CS, McCoy JT. 2000. Risk assessment implementation in Texas. Proceedings, International Conference on Incineration and Thermal Treatment Technologies. Portland, OR, May 8–12, 2000.

Haws L. Permitting of hazardous waste combustion facilities in the state of Texas: Risk assessment procedures and status update. Presented at the Texas Chemical Council Quarterly Meeting. Houston, TX, September 15, 1999.

Fraiser LH, Tachovsky JA, King ME, McCoy JT, **Haws LC.** Hazardous waste combustion risk assessment experience in the state of Texas. Proceedings, International Conference on Incineration and Thermal Treatment Technologies Conference. Salt Lake City, UT, May 11–15, 1998.

Fraiser LH, Lund LG, Tyndall KH, King ME, Schultz DA, **Haws LC.** Case Studies in risk assessment for hazardous waste burning cement kilns. Air and Waste Management Association Specialty Conference. Waste Combustion in Boilers and Industrial Furnaces. Kansas City, MO, March 25-26, 1996.

Lund LG, **Haws LC,** McCoy JT, Carlisle LC, Brymer D, Thompson D, Wiersema JM. Addressing community concerns about industrial emissions and burning of hazardous waste in cement kilns: a summary of environmental data. Air and Waste Management Association Specialty Conference. Waste Combustion in Boilers and Industrial Furnaces. Kansas City, MO, March 25–26, 1996.

McCoy JT, **Haws LC,** Carlisle LC, Wiersema JM, Carmichael D, Thompson D, Mgebroff S. 1996. Soil sampling and analysis for PCDDs/PCDFs Downwind of combustion sources in six Texas communities. Society of Environmental Toxicology and Chemistry Annual Meeting Abstract Book.

Fraiser LH, Lund LG, Hueske KL, **Haws LC.** 1995. Indirect risk assessment: case studies of hazardous waste combustors. Society of Toxicology Annual Meeting. Baltimore, MD, March 5-9, 1995.

Haws L. How are we implementing the combustion strategy and indirect risk assessment? Presented at the Texas Natural Resource Conservation Commission Hazardous Waste Seminar. Houston, TX, October 26–27, 1994.

Haws L. Indirect risk assessment. Presented at the Sixth Annual Texas Environmental Superconference. Austin, TX, August 4–5, 1994.

Haws L. Overview of TNRCC/EPA concerns, strategies, and schedules concerning indirect risk assessment requirements. Presented at the Workshop on Risk Assessment and Waste Incineration Facilities. Houston, TX, June 28-29 1994.

Haws L. Indirect risk workshop. Panel Discussant. Presented at the RCRA Policy Forum. Washington, DC, January 31, 1994.

Haws L. Keynote address. Presented at the DRE Environmental Services Workshop on EPA’s New Policy of Hazardous Waste Combustion. Austin, TX, January 21, 1994.

Haws L. Principles of toxicology and risk assessment. Presented at the University of Texas at Austin. LBJ School of Public Affairs. Austin, TX, September 10, 1993.

Haws L. Developmental toxicity of TCDD and related compounds. Presented at the Texas A&M University Faculty of Toxicology Seminar Series. College Station, TX, October 12, 1992.

Jackson,BA, **Haws LC**, Wixtrom RJ, Starr TB. 1991. Secondary mechanisms in carcinogenesis: Breaking out of the no-threshold paradigm. American College of Toxicology Annual Meeting. Savannah, Georgia, 1991.

Couture LA, Harris MW, Clark AM, Birnbaum LS. Persistence of hydronephrosis in mice following in utero and/or lactational exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Presented at the Society of Toxicology Annual Meeting. Miami Beach, FL, February 12–16, 1990.

Couture,LA, Harris MW, Birnbaum LS. Characterization of TCDD-induced hydronephrosis relative to cleft palate in C57BL/6N Mice. Presented at the Society of Toxicology Annual Meeting. Atlanta, GA, February 27–March 3, 1989.

Couture LA, Harris MW, Birnbaum LS. Teratogenicity of 2,3,4,7,8-pentachlorodibenzofuran (4-PeCDF) in F344 rats. Presented at the Society of Toxicology Annual Meeting. Dallas, TX, February 15–19, 1988.

Couture LA, Birnbaum LC. Evaluation of subchronic exposure to octachlorodibenzodioxin (OCDD). Society of Toxicology Annual Meeting. Washington, DC, February 23–27, 1987.

Birnbaum LS, **Couture LA**. Disposition of octachlorodibenzo-p-dioxin (OCDD) in rats. Society of Toxicology Annual Meeting. New Orleans, LA, March 3–7, 1986.