

Lyle D. Burgoon, Ph.D., ATS
President and CEO, Raptor Pharm & Tox, Ltd

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Summary

Dr. Burgoon is an award-winning and Board Certified (Fellow, Academy of Toxicological Sciences) toxicologist and biostatistician. Dr. Burgoon has 10+ years of experience as a US Government toxicologist employed by the US Environmental Protection Agency (US EPA) and the US Army. In 2022, Dr. Burgoon was recognized for his expertise in children's environmental health when US EPA Administrator Regan appointed Dr. Burgoon to the Children's Health Protection Advisory Committee (CHPAC), with his term beginning in 2023.

During Dr. Burgoon's prior service at the US EPA, he served as a senior leader in various roles from leading teams of biostatisticians and bioinformaticians in designing and analyzing toxicology studies, to supervising toxicologists and public health scientists in the development of toxicological and dose-response assessments in support of the US EPA Integrated Risk Information System (IRIS). At the US Army, Dr. Burgoon led classified and unclassified programs and projects with a focus on the effects of chemical, biological, radiological, nuclear, and high yield explosives (CBRNE) weapons on human health, ecological and agriculture systems.

Dr. Burgoon's expertise is in pharmacology, toxicology, biostatistics, exposure modeling, causal analysis, risk assessment, especially in the area of establishing causal relationships of chemical and microbiological exposures to human effects and the development and application of mathematical modeling, machine learning solutions for computational pharmacology and toxicology. Dr. Burgoon has knowledge, training, and experience in the toxicological impacts of drugs and chemicals (including alcohol), biological agents, food safety, weapons of mass destruction, environmental stressors, and physiological responses to a variety of stressors. Dr. Burgoon also has knowledge, training, and experience in analytical chemistry associated with drug and alcohol testing. In addition, Dr. Burgoon's training, knowledge, and experience in biostatistics gives him the ability to assess scientific study designs, analyses, and overall study quality.

Dr. Burgoon is well-published with articles appearing in peer-reviewed publications and he has coauthored book chapters. Dr. Burgoon has extensive experience as a consultant, leading his own consulting practice, as well as serving as a toxicology and risk assessment consultant at the US EPA,

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and a toxicology, biostatistics, and risk assessment consultant to organizations across the US Department of Defense and the US Army, and serving as a study section/special emphasis panel reviewer for the US National Institutes of Health.

Education

2008	Business Management and Communication Skills Certificate, Broad School of Management and the College of Communication Arts and Sciences, Michigan State University, East Lansing, MI
2005	Ph.D. Pharmacology & Toxicology with Environmental Toxicology (dual major), Michigan State University, East Lansing, MI
1999	A.B. <i>Cum Laude</i> Pre-Medicine and Biology, Augustana College, Rock Island, IL

Employment History

2019-Present	President and CEO, Raptor Pharm & Tox, Ltd. New Hill, NC
2020-Present	Adjunct Associate Professor, Institute for Integrative Toxicology, Michigan State University, East Lansing, MI
2015-2022	Director of the Center for Existential Threat Analysis and Principal Investigator and Leader, Bioinformatics and Computational Toxicology Team, US Army Engineer Research and Development Center, Research Triangle Park, NC
2012-2015	Branch Chief, Hazardous Pollutant Assessment Group (HPAG) and Deputy Program Director of the Advancing the Next Generation of Risk Assessment Program, National Center for Environmental Assessment, Office of Research and Development, US Environmental Protection Agency
2011-2012	Senior Science and Policy Advisor, Deputy Program Director of the Advancing the Next Generation of Risk Assessment Program, Systems Biology and Leader, Bioinformatics, Immediate Office of the Center Director, National Center for Environmental Assessment, Office of Research and Development, US Environmental Protection Agency
2010-2012	Co-Founder and Principal Investment Manager, Meridian REI, LLC, Davenport, IA
2009-2011	Leader, Biostatistics and Bioinformatics Research Core, National Health and Environmental Effects Research Laboratory (NHEERL), Office of Research and Development, US Environmental Protection Agency

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- 2008-2009 Visiting Assistant Professor and Director of the Computational Biology and Bioinformatics Laboratory, Gene Expression in Development and Disease Initiative, Quantitative Biology Program, and the Department of Biochemistry & Molecular Biology, Michigan State University, East Lansing, MI
- 2008-2008 Visiting Assistant Professor, Department of Biochemistry & Molecular Biology, National Food Safety and Toxicology Center, Center for Integrative Toxicology, Michigan State University, East Lansing, MI
- 2006-2009 Chief Executive Officer and Managing Member, Toxicogenomic Informatics and Solutions, LLC, Lansing, MI
- 2005-2008 Visiting Research Associate, Department of Biochemistry & Molecular Biology, National Food Safety and Toxicology Center, Center for Integrative Toxicology, Michigan State University, East Lansing, MI

Litigation Support Experience (Testimony or Deposition)

- February 2024 – Present Arin Nazari, et al. v Eloy Ruiz Garcia, et al. Case No. 22STCV20881. Superior Court of the State of California for the County of Los Angeles. Retained as testifying expert for the Plaintiff. **Subject Matter:** methamphetamine drug testing, false positives, unreliability of hospital drug test for methamphetamine.
- February 2023 – February 2024 ITIO E. Fuller and C. Fuller. Case Number: 2300437, 2300438. Cherokee County, Georgia, Juvenile Court. Retained as testifying expert for the Mother. **Subject Matter:** methamphetamine drug testing, false positives, reliability/unreliability of certain methamphetamine tests, and difference between over the counter levomethamphetamine and street drug/prescription/controlled substance dextromethamphetamine.
- June 2023 – Present Garner vs GPS, Civil No. 1:21-cv-00665-SB. Retained as testifying expert for the Defendant. **Subject Matter:** product safety.
- April 2023 – Present Patrick Feindt, Jr. et al. vs. The United States of America, Civil No. 1:22-cv-397. United States District Court For the District of Hawai'i. Retained as testifying expert for the Defendant. **Subject Matter:** Exposure assessment for JP-5 (naval jet fuel) and constituents in air from water sources.
- February 2023 – April 2023 ITIO Owen Samuel Girouard, a Child, Case No. 21-3487-F395, 395th Judicial Court of Williamson County, Texas. Retained as testifying expert for father in this family law case. **Subject Matter:** Blood alcohol testing, science underlying the use of phosphatidylethanol (Peth) screening and testing.

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January 2023 – Present Sean Toliver, et al., vs Scott Semple, et al. Lead Consolidated Case No.: 3:16-cv-1899-SRU. US District Court for Connecticut. This is a Section 1983 class action. Retained as testifying expert for plaintiff. **Subject Matter:** Exposure assessment, toxicology, human health effects, causation. **Activities:** perform PCB exposure assessment, review laboratory air quality sampling reports, review laboratory reports on PCB levels, review authoritative safe exposure limits, review scientific literature.

Private Party Investigations

September 2023 – September 2023 Investigated the specific cause of death (fentanyl vs ethanol vs multidrug) of an approximately 30 year old male who tested positive for fentanyl, ethanol, and delta-9-tetrahydrocannabinol (THC).

July 2023 – July 2023 Investigated if a disaster recovery company misused Federally labeled pesticides and cleaning products. Investigated if there was a risk to human health due to exposure following the cleaning operations.

Media Appearances

November 21, 2023 Panelist on Crime Stories with Nancy Grace (FoxNation and podcast). Episode title: Poison Specialist's Wife Sudden Death, BY POISON. <https://podcasts.apple.com/be/podcast/poison-specialists-wife-sudden-death-by-poison/id1193068130?i=1000635583199>

November 20, 2023 Television interview with KTTC, Rochester MN regarding the toxicity of colchicine. <https://www.kttc.com/2023/11/21/toxicology-understanding-drug-that-killed-betty-bowman/>

August 25, 2023 Panelist on Crime Stories with Nancy Grace (FoxNation and podcast). Episode title: Young Mom Poisons Lover's Drink with RAID ANT KILLER. <https://podcasts.apple.com/us/podcast/young-mom-poisons-lovers-drink-with-raid-ant-killer-cops/id1193068130?i=1000625691717>

Awards and Honors

2023-Present Fellow, Academy of Toxicological Sciences. Board Certification in Toxicology.

2021 Department of the Army Civilian Service Achievement Medal for Leading and Developing a successful Anticipatory Intelligence Biotechnology Threat Horizon Scanning Program

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- 2021 Laboratory Innovation of the Year Award for the Water Infrastructure Threat Reduction Program that combines and applies mathematical models from biochemistry, pharmacology/toxicology, hydrology, plant pathology, geotechnical structures science, economics and nuclear weapons physics to build models that predict impacts of nuclear weapon detonations on humans, their communities, and economies. US Army Engineer Research and Development Center, Environmental Laboratory.
- 2019 Kenneth E. Moore Distinguished Alumnus Award, Department of Pharmacology & Toxicology, Michigan State University, East Lansing, MI
- 2016 US EPA Gold Medal for Exceptional Service. Recognized for leadership on the Hydraulic Fracturing Study Team and Scientific Excellence and Dedication in Addressing a Real-World Complex Environmental Issue
- 2015 US EPA Level III Scientific and Technological Achievement Awards (STAA): Development and Application of Innovative Species Extrapolation Methodology to Focus Toxicity Testing and Monitoring
- 2015 US EPA Level III Scientific and Technological Achievement Awards (STAA): Development of Novel Methodology to Screen Chemicals for Potential Neurotoxicity
- 2012 US EPA Bronze Medal for Commendable Service in Transforming the Office of Research and Development Chemical Safety for Sustainability Research Program
- 2009 Top 10 Published Papers Demonstrating an Application of Risk Assessment. Society of Toxicology Risk Assessment Specialty Section.
- 2009 Honorable Mention: Society of Toxicology Risk Assessment Specialty Section Best Overall Abstract. 48th Annual Meeting of the Society of Toxicology

Current Professional Memberships

- 2020-Present American Statistical Association
- 2013-2021 Society of Environmental Toxicology and Chemistry
- 2001-Present Society of Toxicology
- 1998-2011 Sigma Xi

Publications (Peer-reviewed Journal Articles and Book Chapters)

1. Burgoon, LD, Borgert, CJ, Fuentes, C, Klaunig, JE. (2024) Kinetically-derived maximal dose (KMD) indicates lack of human carcinogenicity of ethylbenzene. *Arch Toxicol*. 98(1): 327-334.
2. Burgoon, LD, Kluxen, FM, Frericks, M. (2023) Understanding and overcoming the technical challenges in using in silico predictions in regulatory decisions of complex toxicological endpoints – A pesticide perspective for regulatory toxicologists with a focus on machine learning models. *Reg Tox and Pharm* 137: 105311.
3. Burgoon, LD and Borgert, CJ. (2022) Comment on “Application of an in Vitro Assay to Identify Chemicals that Increase Estradiol and Progesterone Synthesis and Are Potential Breast Cancer Risk Factors”. *Environmental Health Perspectives* 130(5): 58002.
4. Burgoon, LD, Fuentes, C, Borgert, CJ. (2022) A novel approach to calculating the kinetically derived maximum dose. *Arch Toxicol* 96(3): 809-816.
5. Borgert, CJ, Fuentes, C, Burgoon, LD. (2021) Principles of dose-setting in toxicology studies: the importance of kinetics for ensuring human safety. *Arch Toxicol* 95(120): 3651-3664.
6. Harrill JA, Viant MR, Yauk CL, Sachana M, Gant TW, Auerbach SS, Beger RD, Bouhifd M, O'Brien J, Burgoon L, Caiment F, Carpi D, Chen T, Chorley BN, Colbourne J, Corvi R, Debrauwer L, O'Donovan C, Ebbels TMD, Ekman DR, Faulhammer F, Gribaldo L, Hilton GM, Jones SP, Kende A, Lawson TN, Leite SB, Leonards PEG, Luijten M, Martin A, Moussa L, Rudaz S, Schmitz O, Sobanski T, Strauss V, Vaccari M, Vijay V, Weber RJM, Williams AJ, Williams A, Thomas RS, Whelan M. (2021) Progress towards an OECD reporting framework for transcriptomics and metabolomics in regulatory toxicology. *Regul Toxicol Pharmacol* 125: 105020.
7. Thessen, AE, Grondin, CJ, Kulkarni, RD, Brander, S, Truong, L, Vasilevsky, NA, Callahan, TJ, Chan, LE, Westra, B, Willis, M, Rothenberg, SE, Jarabek, AM, Burgoon, L, Korrick, SA, Haendel, MA. (2020) Community approaches for integrating environmental exposures into human models of disease. *Environmental Health Perspectives* 128(12): 125002.
8. McCarty, LS, Borgert, CJ, Burgoon, LD. (2020) Evaluation of the Inherent Toxicity Concept in Environmental Toxicology and Risk Assessment. *Environmental Toxicology and Chemistry* 39(12): 2351-2360.
9. Coady, K.K., Burgoon, L, Doskey C., Davis, J.W. (2020) Assessment of transcriptomic and apical responses of daphnia magna exposed to a polyethylene microplastic in a 21-d chronic study. *Environmental Toxicology and Chemistry* 39(8): 1578-1589.
10. Price, PS, Jarabek, AM, Burgoon LD. (2020) Organizing mechanism-related information on chemical interactions using a framework based on aggregate exposure and adverse outcome pathways. *Environ Int*. 138: 105673.
11. Burgoon, LD, Angrish, M, Garcia-Reyero, N, Pollesch, N, Zupanic, A, Perkins, EJ. (2020) Predicting the Probability That a Chemical Causes Steatosis Using Adverse Outcome Pathway Bayesian Networks (AOPBNs). *Risk Analysis* 40(3): 512-523.

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12. Gust KA, Kennedy AJ, Laird JG, Wilbanks MS, Barker ND, Guan X, Melby NL, Burgoon LD, Kjelland ME, Swannack TM. (2019) Different as Night and Day: Behavioral and Life History Responses to Varied Photoperiods in *Daphnia magna*. *Mol Ecology* 28(19): 4422-4438.
13. Perkins EJ, Ashauer R, Burgoon L, Conolly R, Landesmann B, Mackay C, Murphy CA, Pollesch N, Wheeler JR, Zupanac A, Scholz S. (2019) Building and Applying Quantitative Adverse Outcome Pathway Models for Chemical Hazard and Risk Assessment. *Environ Toxicol Chem.* 2019 Sep;38(9):1850-1865. doi: 10.1002/etc.4505. Epub 2019 Aug 8.
14. Jeong J, Garcia-Reyero N, Burgoon L, Perkins E, Park T, Kim C, Roh JY, Choi J. (2019) Development of Adverse Outcome Pathway for PPAR γ Antagonism Leading to Pulmonary Fibrosis and Chemical Selection for Its Validation: ToxCast Database and a Deep Learning Artificial Neural Network Model-Based Approach. *Chem Res Toxicol.* 2019 Jun 17;32(6):1212-1222. doi: 10.1021/acs.chemrestox.9b00040. Epub 2019 Jun 7.
15. Martens M, Verbruggen T, Nymark P, Grafström R, Burgoon LD, Aladjov H, Torres Andón F, Evelo CT, Willighagen EL. (2018) Introducing WikiPathways as a Data-Source to Support Adverse Outcome Pathways for Regulatory Risk Assessment of Chemicals and Nanomaterials. *Front Genet* 9:661.
16. Perkins EJ, Gayen K, Shoemaker JE, Antczak P, Burgoon L, Falciani F, Gutsell S, Hodges G, Kienzler A, Knapen D, McBride M, Willett C, Doyle FJ, Garcia-Reyero N. (2019) Chemical hazard prediction and hypothesis testing using quantitative adverse outcome pathways. *ALTEX* 36(1): 91-102.
17. Baker, N, Boobis, A, Burgoon, L, Carney, E, Currie, R, Fritsche, E, Knudsen, T, Laffont, M, Piersma, AH, Poole, A, Schneider, S, Daston, G. (2018) Building a developmental toxicity ontology. *Birth Defects Research* 110(6): 502-518.
18. Burgoon, L.D. (2017) Autoencoder Predicting Estrogenic Chemical Substances (APECS): An Improved Approach for Screening Potentially Estrogenic Chemicals Using In Vitro Assays and Deep Learning. *Computational Toxicology* 2: 45-49.
19. Yost, EE, Stanek, J, Burgoon, L. (2017) A decision analysis framework for estimating the potential hazards for drinking water resources of chemicals used in hydraulic fracturing fluids. *Science of the Total Environment* 574: 1544-1558.
20. Druwe, IL, Burgoon, L. (2016) Response to Cohen et al (2016) regarding response to Druwe and Burgoon. *Arch Toxicol* 90(12): 3131-3132.
21. Druwe IL, Burgoon L. (2016) Revisiting Cohen et al. 2015, Cohen et al. 2014 and Waalkes et al. 2014: a Bayesian re-analysis of tumor incidences. *Arch Toxicol* 90(8): 2047-8.
22. Yost EE, Stanek J, DeWoskin RS, Burgoon LD. (2016) Estimating the Potential Toxicity of Chemicals Associated with Hydraulic Fracturing Operations Using Quantitative Structure-Activity Relationship Modeling. *Environ Sci Technol* 50(14): 7732-42.
23. Cote I, Andersen ME, Ankley GT, Barone S, Birnbaum LS, Boekelheide K, Bois FY, Burgoon LD, Chiu WA, Crawford-Brown D, Crofton KM, DeVito M, Devlin RB, Edwards SW, Guyton KZ, Hattis D, Judson RS, Knight D, Krewski D, Lambert J, Maull EA, Mendrick D, Paoli GM, Patel CJ, Perkins EJ, Poje G, Portier CJ, Rusyn I, Schulte PA, Simeonov A, Smith MT, Thayer KA, Thomas RS, Thomas R, Tice RR, Vandenberg JJ, Villeneuve DL, Wesselkamper S, Whelan M, Whittaker C, White R, Xia M, Yauk C, Zeise L, Zhao J, DeWoskin RS. (2016) The Next Generation of Risk Assessment Multiyear Study – Highlights of Findings, Applications to Risk Assessment and Future Directions. *Environmental Health Perspectives* 124(11): 1671-1682.

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24. Burgoon, L.D., Druwe, I.L., Painter, K., Yost, E.E. (2017) Using In Vitro High Throughput Screening Data for Predicting Benzo[k]Fluoranthene Human Health Hazards. *Risk Analysis* 37(2): 280-290. doi: 10.1111/risa.12613
25. Burgoon, L.D. (2016) A Market-Basket Approach to Predict the Acute Aquatic Toxicity of Munitions and Energetic Materials. *Bull Environ Contam Toxicol* 96(6): 778-83.
26. Yost EE, Stanek J, DeWoskin RS, Burgoon LD. (2016) Overview of Chronic Oral Toxicity Values for Chemicals Present in Hydraulic Fracturing Fluids, Flowback and Produced Waters. *Environmental Science & Technology* 50(9): 4788-97.
27. DeBord, D.G., Burgoon, L.D., Edwards, S., Haber, L.T., Kanitz, H., Kuempel, E., Thomas, R.S., Yucesoy, B. (2015) Systems Biology and Early Effects Dose-Response for OEL Setting. *Journal of Occupational and Environmental Hygiene*. 12 Suppl 1: S41-54.
28. Perkins, E.J., Antczak, P., Burgoon, L., Falciani, F., Garcia-Reyero, N., Gutsell, S., Hodges, G., Keinzler, A., Knapen, D., McBride, M., Willet, C. (2015) Adverse Outcome Pathways for regulatory applications: Examination of four case studies with different degrees of completeness and scientific confidence. *Tox Sci* 148(1): 14-25.
29. Saini, Y., Proper, S.P., Dornbos, P., Greenwood, K.K., Kopek, A.K., Lynn, S.G., Grier, E., Burgoon, L.D., Zacharewski, T.R., Thomas, R.S., Harkema, J.R., LaPres, J.J. (2015) Loss of Hif-2a rescues the Hif-1a deletion phenotype of neonatal respiratory distress in mice. *PLOS ONE* 10(9): e0139270.
30. Powers, C.M., Grieger, K., Meacham, C.A., Lassiter Gooding, M., Gift, J., Lehmann, G.M., Hendren, C.O., Davis, J.M., Burgoon, L. (2015) Applying comprehensive environmental assessment to research planning for multiwalled carbon nanotubes: Refinements to inform future stakeholder engagement. *Integr Environ Assess Manag*. doi: 10.1002/ieam.1663.
31. Davis, J.A., Burgoon, L.D. (2015) Can data science inform environmental justice and community risk screening for type 2 diabetes? *PLOS ONE* 10(4): e0121855.
32. McConnell, E.R., Bell, S.M., Cote, I., Wang, R., Perkins, E.J., Garcia-Reyero, N., Gong, P., Burgoon, L.D. (2014) Systematic Omics Analysis Review Tool (SOAR) to Support Risk Assessment. *PLOS ONE* 9(12): e110379.
33. Krewski, D., Westphal, M., Andersen, M.E., Paoli, G.M., Chiu, W.A., Al-Zoughool, M., Croteau, M.C., Burgoon, L.D., Cote, I. (2014) A Framework for the Next Generation of Risk Science. *Environmental Health Perspectives* 122(8): 796-805.
34. Painter, K., McConnell, E.R., Sahasrabudhe, S., Burgoon, L.D., Powers, C.M. (2014) What do the data show? Knowledge map development for comprehensive environmental assessment. *Integrated Environmental Assessment and Management* 10(1): 37-47.
35. Mack, C.M., Lin, B., Turner, J., Johnstone, A.F.M., Burgoon, L.D., Shafer, T.J. (2014) Burst and Principal Components Analyses of MEA Data for 16 Chemicals Describe At Least Three Effects Classes. *Neurotoxicology* 40: 75-85.
36. LaLone, C., Villeneuve, D., Burgoon, L.D., Russom, C., Helgen, H., Berninger, J., Tietge, J., Severson, M., Cavallin, J., Ankley, G. (2013) Molecular Target Homology as a Basis for Species Extrapolation to Assess the Ecological Risk of Chemicals with Known Modes of Action. *Aquatic Toxicology* 144-145: 141-54.

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37. Kim, S., Kiyosawa, N., Burgoon, L.D., Chang, C.C., Zacharewski, T.R. (2013) PPAR alpha-mediated Responses in Human Adult Liver Stem Cells: In Vivo/In Vitro and Cross-Species Comparisons. *J Steroid Biochemical Molecular Biology* 138: 236-47.
38. Ruckle, M.E., Burgoon, L.D., Lawrence, L.A., Sinkler, C.A., Larkin, R.M. (2012) Plastids are major regulators of light signaling in Arabidopsis. *Plant Physiol.* 159(1): 366-90.
39. Bell, S., Burgoon, L.D., Last, R.L. (2012) MIPHENO: Data normalization for high throughput metabolite analysis. *BMC Bioinformatics* 13:10.
40. Villeneuve, D.L., Garcia-Reyero, N., Martinovic-Weigelt, D., Li, Z., Watanabe, K.H., Orlando, E.F., Lalone, C.A., Edwards, S.W., Burgoon, L.D., Denslow, N.D., Perkins, E.J., Ankley, G.T. (2012) A graphical systems model and tissue-specific functional gene sets to aid transcriptomic analysis of chemical impacts on the female teleost reproductive axis. *Mutat Res* 746(2): 151-62.
41. Forgacs, A.L., Kent, M.N., Makley, M.K., Mets, B., DelRaso, N., Jahns, G.L., Burgoon, L.D., Zacharewski, T.R., Reo, N.V. (2012) Comparative metabolomics and genomic analyses of TCDD-elicited metabolic disruption in mouse and rat liver. *Tox Sci* 125(1): 41-55.
42. Kopec, A.K., D'Souza, M.L., Mets, B.D., Burgoon, L.D., Reese, S.E., Archer, K.J., Potter, D., Tashiro, C., Sharratt, B., Harkema, J.R., Zacharewski, T.R. (2011) Non-additive hepatic gene expression elicited by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and 2,2',4,4',5,5'-hexachlorobiphenyl (PCB-153) co-treatment in C57BL/6 mice. *Toxicol Appl Pharmacol* 256(2): 154-67.
43. Padilla-Carlin, D.J., Schladweiler, M.C., Shannahan, J.H., Kodavanti, U.P., Nyska, A., Burgoon, L.D., Gavett, S.H. (2011) *J Toxicol Environ Health A* 74(17): 1111-32.
44. Dere, E., Lee, A.W., Burgoon, L.D., Zacharewski, T.R. (2011) Differences in TCDD-elicited gene expression profiles in human HepG2, mouse Hepa1c1c7 and rat H4IIE hepatoma cells. *BMC Genomics* 12(1): 193.
45. Dere, E., Forgacs, A.L., Zacharewski, T.R., Burgoon, L.D. (2011) Genome-wide computational analysis of dioxin response element location and distribution in the human, mouse, and rat genomes. *Chem Res Toxicol* 24(4): 494-504.
46. Copple, B.L., Bai, S., Burgoon, L.D., Moon, J.O. (2010) Hypoxia-inducible factor-1a regulates the expression of genes in hypoxic hepatic stellate cells important for collagen deposition and angiogenesis. *Liver Int*, 31(2): 230-44.
47. Kopec, A.K., Burgoon, L.D., Ibrahim-Aibo, D., Burg, A.R., Lee, A.W., Tashiro, C., Potter, D., Sharratt, B., Harkema, J.R., Rowlands, J.C., Budinsky, R.A., Zacharewski, T.R. (2010) Automated dose-response analysis of comparative toxicogenomics evaluation of the hepatic effects elicited by TCDD, TCDF, and PCB126 in C57BL/6 mice. *Tox Sci* 118(1): 286-97.
48. Fong, C.J., Burgoon, L.D., Williams, K.J., Jones, A.D., Forgacs, A.L., Zacharewski, T.R. (2010) Effects of tamoxifen and ethynylestradiol cotreatment on uterine gene expression in immature, ovariectomized mice. *J. Mol Endocrinol* 45(3): 161-73.
49. Forgacs, A.L., Burgoon, L.D., Lynn, S.G., LaPres, J.J., Zacharewski, T.R. (2010) Effects of TCDD on the expression of nuclear encoded mitochondrial genes. *Toxicol Appl Pharmacol* 246(1-2): 58-65.

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52. Kopec, A.K., Burgoon, L.D., Ibrahim-Aibo, D., Mets, B.D., Tashiro, C., Potter, D., Sharratt, B., Harkema, J.R., Zacharewski, T.R. (2010) PCB153-elicited hepatic responses in the immature, ovariectomized C57BL/6 mice: comparative toxicogenomic effects of dioxin and non-dioxin-like ligands. *Toxicol Appl Pharmacol* 243(3): 359-71.
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63. Burgoon, L.D., Zacharewski, T.R. (2008) Automated Quantitative Dose Response Modeling and Point of Departure Determination for Large Toxicogenomic and High Throughput Screening Datasets. *Toxicological Sciences* 104(2): 412-8.
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US Government Interagency Reports

Federal Multiagency Collaboration on Unconventional Oil and Gas Research. A Strategy for Research and Development. July 18, 2014. US Department of Energy, US Department of the Interior, and the US Environmental Protection Agency.

US Government Reports (UNCLASSIFIED)

1. Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources (External Review Draft). EPA/600/R-15/047. Released June 2015.
2. Next Generation Risk Assessment: Incorporation of Recent Advances in Molecular, Computational, and Systems Biology (Final Report). EPA/600/R-14/004. Released September 2014.
3. Toxicological Review of 1,4-Dioxane (with inhalation update) (CAS No. 123-91-1) in support of summary information on the Integrated Risk Information System (IRIS). EPA Report EPA/635/R-11/003-F.
4. Toxicological Review of Methanol (Noncancer) (CAS No. 67-56-1) in support of summary information on the Integrated Risk Information System (IRIS). EPA Report EPA/635/R-11/001-Fa.
5. Toxicological Review of Trimethylbenzenes. In Support of Summary Information on the Integrated Risk Information System (IRIS). External Review Draft. EPA Report EPA/635/R-11/012Aa.
6. Advances in Inhalation Gas Dosimetry for Derivation of a Reference Concentration (RfC) and Use in Risk Assessment. EPA Report EPA/600/R-12/044.
7. Nanomaterial Case Study: Nanoscale Silver in Disinfectant Spray. EPA Report EPA/600/R-10/081F.
8. Nanomaterial Case Study: A Comparison of Multiwalled Carbon Nanotube and Decabromodiphenyl Ether Flame-Retardant Coatings Applied to Upholstery Textiles (External Review Draft). EPA Report EPA/600/R-12/043A.
9. Chemical Safety for Sustainability: Strategic Research Action Plan 2012-2016. EPA Report EPA 601/R-12/006.
10. Human Health Risk Assessment: Strategic Research Action Plan 2012-2016. EPA Report EPA 601/R-12/007.
11. Policy Assessment for the Review of the Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Oxides of Sulfur (2010).

Invited Lectures

2021	“What Every Biologist Needs to Know About Artificial Intelligence”, 2021 Society for In Vitro Biology Annual Meeting.
2018	“New CompTox Approaches for Prioritization and Hazard Assessment”, Health Canada
2018	“Safe Environmental Exposure Levels for RDX and TNT Using Toxicogenomic Data”, Society of Environmental Toxicology and Chemistry North America 38 th Annual Meeting
2018	Integrating Toxicological Data with BISCT and GRAVEE for Better Chemical Assessments. Society of Environmental Toxicology and Chemistry North America 38 th Annual Meeting.
2018	“In Silico Approaches for Predicting Hazards from Chemical Structure and Existing Data”, Society of Environmental Toxicology and Chemistry North America Focused Topic Meeting on High-Throughput Screening and Environmental Risk Assessment
2011	“Potential of Genomic Data on PAHs to Inform Cumulative Assessment”, Mixtures and Cumulative Risk Assessment: New Approaches Using the Latest Science and Thinking About Pathways, The National Academy of Science.
2003	“Essentials of Database Principles and Use”, Society of Toxicology 2003 Meeting

Abstracts

- **L.D. Burgoon**, and CJ Borgert. (2024) Critical Analysis of the Consensus Key Characteristics Approach: Case Study on Carcinogens and Endocrine Disruptors. Society of Toxicology 2024 Annual Meeting.
- **L. Burgoon**. (2022) Rapid identification of health outcomes and risk estimations using in silico tools. Society of Toxicology 2020 Annual Meeting.
- **L.D. Burgoon**. (2021) Bayesian analysis and data availability to improve animal welfare ethics. Society of Toxicology 2021 Annual Meeting.
- E. A. Woolard, and **L. D. Burgoon**. (2020) Gaming All-Hazards Routing Theory (GARTH) Determines Probabilistic Risk of Toxic Industrial Chemicals and Materials in Urban Environments. Society of Toxicology 2020 Annual Meeting.

- **L. Burgoon.** (2020) Approaches for Probabilistic Health Risk Estimates during Emergency and Battlefield Situations. Society of Toxicology 2020 Annual Meeting.
- D. E. Hines, E. J. Perkins, N. Garcia-Reyero, M. S. Wilbanks, J. E. Mylroie, and **L. D. Burgoon.** (2020) Assessing Additivity of Chemical Effects at the Gene Expression Level in Complex Mixtures of Environmentally Relevant Chemical Concentrations. Society of Toxicology 2020 Annual Meeting.
- **L. Burgoon.** (2019) Virtual cell simulations to probe the effects of complex mixtures from low to higher concentrations. 2019 Society of Environmental Toxicology and Chemistry Europe Annual Meeting.
- **L. Burgoon.** (2019) Using AOP Bayesian networks and conventional Bayesian networks to improve scenario-based risk assessment and management. 2019 Society of Environmental Toxicology and Chemistry Europe Annual Meeting.
- **L. Burgoon.** (2019) Affinity explains estrogen receptor potency impacts and toxicity prediction in chemical mixtures. 2019 Society of Environmental Toxicology and Chemistry Annual Meeting.
- **L. Burgoon.** (2019) A logical and applied ethics analysis of scientific integrity and perceived conflicts of interest in environmental toxicology. 2019 Society of Environmental Toxicology and Chemistry Annual Meeting.
- **L. Burgoon.** (2019) Predicting Chemical Affinity and Extrapolating to Safe Acute Exposure Levels (SAELs). Society of Toxicology 2019 Annual Meeting.
- A. Piersma, N. Baker, **L. Burgoon,** G. Daston, T. Knudsen, and Y. Staal. (2019) An AOP-Based Ontology for Spina Bifida Caused by Disturbance in Retinoic Acid Signaling. Society of Toxicology 2019 Annual Meeting.
- E. Perkins, **L. Burgoon,** N. Garcia-Reyero, J. M. Gearhart, M. McAtee, D. Ott, H. Pangburn, E. Reinke, and L. Stolle. (2019) Development of a Joint DOD Roadmap to Promote the Use of New Approach Methodologies in Rapid Chemical Hazard Assessment. Society of Toxicology 2019 Annual Meeting.
- **L. D. Burgoon.** (2019) Virtual Cell Simulations to Probe the Effects of Complex Mixtures from Low to Higher Concentrations. Society of Toxicology 2019 Annual Meeting.
- **L. Burgoon.** (2018) In silico approaches for predicting hazards from chemical structure and existing data. Society of Environmental Toxicology and Chemistry North America Focused Topic Meeting on High-Throughput Screening and Environmental Risk Assessment.
- **L. Burgoon,** K.B. Donohue, A.M. Mayo, M.S. Wilbanks, N. Vinas, E.J. Perkins. (2018) Safe Environmental Exposure Levels for RDX and TNT Using Toxicogenomic Data. Society of Environmental Toxicology and Chemistry North America 38th Annual Meeting.

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- E.J. Perkins, R. Ashauer, **L. Burgoon**, R. Conolly, B. Landesmann, C. Mackay, C.A. Murphy, N.L. Pollesch, J. Wheeler, A. Zupanic, S. Scholz. (2018) How to Build and Apply Quantitative Models from Adverse Outcome Pathways. Society of Environmental Toxicology and Chemistry North America 38th Annual Meeting.
- N. Vinas, **L. Burgoon**, E.J. Perkins. (2018) AOPXplorer: From networks to adverse outcomes. Society of Environmental Toxicology and Chemistry North America 38th Annual Meeting.
- M.L. Mayo, **L. Burgoon**, K.H. Watanabe, M. Rowland, E.J. Perkins. (2018) Forecasting Population-Level Impacts of Diverse Chemicals with a Quantitative Adverse Outcome Pathway Model for Aromatase Inhibition in Small Fish. Society of Environmental Toxicology and Chemistry North America 38th Annual Meeting.
- **L. Burgoon**. (2018) Integrating Toxicological Data with BISCT and GRAVEE for Better Chemical Assessments. Society of Environmental Toxicology and Chemistry North America 38th Annual Meeting.
- S. M. Bell, **L. D. Burgoon**, J. Phillips, P. Ceger, A. Karmaus, D. Allen, W. Casey, and N. Kleinstreuer. (2018) ICE Tools for Aligning Assay Endpoints to Adverse Outcome Pathways. Society of Toxicology 2018 Annual Meeting.
- **L. Burgoon**. (2018) Challenges Facing Publication and Transparency for Big Data in Toxicology. Society of Toxicology 2018 Annual Meeting.
- **L. Burgoon**, K.B. Donohue, A.M. Mayo, M.S. Wilbanks. (2018) Safe Environmental Exposure Levels for RDX and TNT Using Toxicogenomic Data. 2018 Society of Environmental Toxicology and Chemistry North America Annual Meeting.
- Y. C. Staal, N. Baker, **L. D. Burgoon**, G. Daston, T. Knudsen, and A. H. Piersma. (2017) Towards Building an AOP-Based Prenatal Developmental Toxicity Ontology. Society of Toxicology 2017 Annual Meeting.
- E. Perkins, **L. Burgoon**, K. Donohue, N. Garcia-Reyero, and M. Wilbanks. (2017) Comparison of Toxicological and Transcriptional Pathway Point of Departure Responses for Five Chemicals across Multiple Alternative Animal Model Species. Society of Toxicology 2017 Annual Meeting.
- I. L. Druwe, J. S. Lee, I. Cote, and **L. D. Burgoon**. (2017) Using Data Science to Identify At-Risk Subpopulations Exposed to Ground Water Contaminants: A Case Study of AS3MT in US-Mexican Mestizos and Arsenic Exposure. Society of Toxicology 2017 Annual Meeting.
- K. A. Gust, M. S. Wilbanks, D. R. Johnson, Y. Deng, C. Y. Ang, **L. D. Burgoon**, K. B. Donohue and E. J. Perkins. (2017) From Zero to Validated Adverse Outcome Pathway with Genomics Guiding the Way. Society of Toxicology 2017 Annual Meeting.

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- I. L. Druwe, L. Burgoon. (2016) Bayesian re-analysis of lung tumor incidences in CD1 mice resulting from ‘whole life’ exposure to inorganic arsenic. 2016 Society for Risk Analysis Annual Meeting.
- **L. Burgoon.** (2016) Chemical Risk Analysis with Bayesian Support (CRABS) in the IVIVE Context. Society of Toxicology 2016 Annual Meeting.
- I. L. Druwe, K. L. Painter, E. E. Yost and **L. D. Burgoon** (2015) Bayesian Evidence Integration of Quantitative High Throughput Screening Data. 2015 Society for Risk Analysis Annual Meeting.
- Druwe IL, Bell SM, **Burgoon LD.** (2015) Building disease-based AOPs for risk assessment: from molecular pathways to human hazard identification. 2015 Society for Risk Analysis Annual Meeting.
- I. L. Druwe, K. L. Painter, E. E. Yost and **L. D. Burgoon** (2015) Bayesian Evidence Integration of Quantitative High Throughput Screening Data. Society of Toxicology 2015 Annual Meeting.
- K. L. Painter, I. L. Druwe, E. E. Yost and **L. D. Burgoon** (2015) A Rules Engine Approach to Supporting Adverse Outcome Pathway-Based Rapid Toxicological Assessment. Society of Toxicology 2015 Annual Meeting.
- J. E. Whalan, A. M. Jarabek, J. J. Stanek, G. M. Woodall, P. G. Reinhart, A. Galizia, E. D. McLanahan, B. S. Glenn, A. Davis, A. D. Kraft, S. L. Makris and **L. D. Burgoon.** (2014) Systematic Evaluation of Inhalation Studies for Exposure Quality: A Case Study with Formaldehyde. Society of Toxicology 2014 Annual Meeting.
- K. L. Painter, S. J. Dutton, E. O. Owens and **L. D. Burgoon.** (2014) Automatic Topic Classification for Environmental Human Health Assessment. Society of Toxicology 2014 Annual Meeting.
- R. S. DeWoskin, **L. D. Burgoon** and G. M. Woodall. (2013) Interpreting QSAR Toxicity Predictions in Hazard Assessments: An Acrylamide Case Study. Society of Toxicology 2013 Annual Meeting.
- C. LaLone, D. L. Villeneuve, **L. D. Burgoon,** C. Russom, H. Helgen, J. Berninger, J. Tietge, M. Severson, J. Cavallin and G. T. Ankley. (2013) Using a Sequence Homology-Based Predictive Strategy to Address Current Demands for Focused Toxicity Testing in Ecological Risk Assessment. Society of Toxicology 2013 Annual Meeting.
- K. L. Painter¹ and **L. D. Burgoon.** (2013) Mode-of-Action Ontology: An Application Ontology for Risk Assessment Data Mining. Society of Toxicology 2013 Annual Meeting.
- E. McConnell, S. Bell, I. Cote, R. Wang, E. J. Perkins, N. Garcia-Reyero, P. Gong and **L. D. Burgoon.** (2013) Systematic ‘Omics Analysis Review Tool to Support Risk Assessment. Society of Toxicology 2013 Annual Meeting.

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- C. LaLone, D. Villeneuve, **L. Burgoon**, C. Russom, J. Tietge, J. Berninger and G. Ankley. (2012) cross-species extrapolation using protein sequence homology to predict susceptibility of nontarget organisms to chemicals with known modes of action. Society of Toxicology 2012 Annual Meeting.
- **L. D. Burgoon**. (2012) Systems biology to inform cross-species extrapolation. Society of Toxicology 2012 Annual Meeting.
- B. Lin, J. Turner, C. M. Mack, A. Johnstone, **L. Burgoon** and T. J. Shafer. (2012) Burst and principal components analyses of MEA data separates chemicals by class. Society of Toxicology 2012 Annual Meeting.
- T. R. Zacharewski, A. K. Kopec, A. L. Forgacs and **L. D. Burgoon**. (2012) Characterization of in vitro and in vivo hepatic functional responses using automated dose-response modeling. Society of Toxicology 2012 Annual Meeting.
- C. Corton and **L. Burgoon**. (2012). REALIZING THE VISION OF 21ST CENTURY TOXICITY TESTING: GENETIC APPROACHES TO PATHWAY ANALYSIS. Society of Toxicology 2012 Annual Meeting.
- **L. Burgoon**. (2012) Mashing the diseaseome, toxicogenomics, and frozen pizzas: network systems biology and its impacts on nexgen risk assessments. Society of Toxicology 2012 Annual Meeting.
- **L. D. Burgoon**. (2011) An update on advancing the next generation of risk assessment (NexGen). 2011 Society for Risk Analysis Annual Meeting.
- **L. Burgoon**, S. Bhatia, P. Wexler and M. Price. (2011) Social media and informatics essentials for toxicologists. Society of Toxicology 2011 Annual Meeting.
- A. M. Johnstone, J. Turner, C. Mack, **L. Burgoon** and T. J. Shafer. (2011) GABA_A receptor antagonists increase firing, bursting, and synchrony of spontaneous activity in neuronal networks grown on microelectrode arrays (MEAs): a step towards chemical “fingerprinting”. Society of Toxicology 2011 Annual Meeting.
- **L. Burgoon** and W. Mattes. (2011) The spectrum of systems biology. Society of Toxicology 2011 Annual Meeting.
- A. K. Kopec, M. L. D’Souza, B. D. Mets, **L. D. Burgoon**, J. R. Harkema, C. Tashiro, D. Potter, B. Sharratt, S. E. Reese, K. J. Archer and T. R. Zacharewski. (2011) Dose-response evaluation of non-additive hepatic effects of PCB153 and TCDD in mice. Society of Toxicology 2011 Annual Meeting.
- C. Carr, C. Gennings, B. D. Abbott, J. E. Schmid, W. Wan, **L. Burgoon**, C. J. Wolf and C. Lau. (2011) Determining a robust d-optimal design for testing for departure from additivity in a mixture of four PFAAs. Society of Toxicology 2011 Annual Meeting.

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- L. D. Burgoon, S. Edwards. (2010) Comparison of de novo network reverse engineering methods with application to ecotoxicology. 2010 Intelligent Systems for Molecular Biology (ISMB) Meeting.
- A. Forgacs, **L. D. Burgoon**, S. G. Lynn, J. J. LaPres and T. R. Zacharewski. (2010) TCDD-mediated gene expression profiling of nuclear encoded mitochondrial genes involved in oxidative phosphorylation. Society of Toxicology 2010 Annual Meeting.
- A. K. Kopec, **L. D. Burgoon**, B. D. Mets, J. R. Harkema, C. Tashiro, D. Potter, B. Chittim and T. Zacharewski. (2010) Non-additive effects of PCB153 and TCDD on hepatotoxicity in c57bl/6 mice. Society of Toxicology 2010 Annual Meeting.
- M. Kent, M. K. Makley, N. DelRaso, G. L. Jahns, B. Metz, **L. D. Burgoon** and T. Zacharewski. (2010) Synergism between ‘omics: what transcriptomics and metabolomics reveal about TCDD effects in rat and mouse liver. Society of Toxicology 2010 Annual Meeting.
- S. Kim, N. Kiyosawa, **L. D. Burgoon**, C. C. Chang and T. Zacharewski. (2010) Comparative toxicogenomic examination of PPAR α -regulated hepatic responses in vivo and in vitro. Society of Toxicology 2010 Annual Meeting.
- B. L. Copple, **L. D. Burgoon** and S. Bai. Hypoxia-inducible factor-1alpha regulates expression of genes in hypoxic hepatic stellate cells important for collagen deposition and angiogenesis. Society of Toxicology 2010 Annual Meeting.
- E. Dere, A. Forgacs, **L. Burgoon**, J. Matthews and T. Zacharewski. (2010) Global chip-chip analysis of AhR enrichment in c57bl/6 mouse livers. Society of Toxicology 2010 Annual Meeting.
- W. Zou, R. A. Roth, H. S. Younis, **L. D. Burgoon** and P. E. Ganey. (2010) Oxidative stress is a potential player in the pathogenesis of liver injury induced by sulindac and lipopolysaccharide. Society of Toxicology 2010 Annual Meeting.
- **L. D. Burgoon**, Q. Ding, A. N’jai, E. Dere, J. Rowlands, R. A. Budinsky, K. E. Stebbins and T. R. Zacharewski. (2009) Automated dose-response analysis of the relative hepatic gene expression potency of TCDF in c57bl/6 mice. Society of Toxicology 2009 Annual Meeting.
- M. M. Angrish, **L. D. Burgoon**, B. D. Mets and T. R. Zacharewski. (2009) AhR-mediated regulation of stearyl-coa desaturase 1. Society of Toxicology 2009 Annual Meeting.
- M. N. Kent, M. K. Makley, G. L. Jahns, N. DelRaso, **L. Burgoon**, T. R. Zacharewski and N. V. Reo. TCDD effects on hepatic metabolites –mouse versus rat. Society of Toxicology 2009 Annual Meeting.
- E. Dere, **L. D. Burgoon** and T. R. Zacharewski. (2009) Transcriptomic comparison of TCDD-elicited global gene expression responses in human primary hepatocytes. Society of Toxicology 2009 Annual Meeting.

- A. K. Kopec, **L. D. Burgoon**, D. Ibrahim-Aibo, J. R. Harkema, C. Tashiro, B. Chittim and T. R. Zacharewski. (2009) Toxicogenomic evaluation of pcb153- elicited hepatic effects in c57bl/6 mice. Society of Toxicology 2009 Annual Meeting.
- B. D. Mets, **L. D. Burgoon**, M. M. Angrish, D. R. Boverhof, A. Jones and T. R. Zacharewski. (2009) Cross-species GC-MS-based metabolomic analysis of hepatic lipid composition in TCDD-treated c57bl/6 mice and Sprague-Dawley rats. Society of Toxicology 2009 Annual Meeting.
- **L. D. Burgoon** and T. R. Zacharewski. (2008) Automated quantitative dose response modeling. 2008 Society for Risk Analysis Annual Meeting.
- W. B. Mattes and **L. D. Burgoon** (2008) Essential informatics for toxicologists: knowledge management end to end. Society of Toxicology 2008 Annual Meeting.
- **L. D. Burgoon** and T. R. Zacharewski (2008) OpenREP: a community-based deliberation platform for debating dioxin and dioxin-like chemical toxic equivalency data and assigned factors. Society of Toxicology 2008 Annual Meeting.
- A. Cabunoc, **L. D. Burgoon** and T. R. Zacharewski. (2008) Identification of positionally conserved dioxin response elements in orthologous human, mouse, and rat genes. Society of Toxicology 2008 Annual Meeting.
- G. L. Jahns, N. V. Reo, M. N. Kent, M. K. Makley, A. Kopec, D. R. Boverhof, **L. Burgoon**, T. R. Zacharewski and N. DelRaso (2008) Comparative metabolomic analysis of hepatotoxicity experiments in rats and mice. Society of Toxicology 2008 Annual Meeting.
- M. K. Makley, M. N. Kent, N. V. Reo, G. L. Jahns, N. J. DelRaso, D. Boverhof, **L. Burgoon**, D. Jump and T. Zacharewski. (2008) Effects of T on liver lipid metabolism – mouse versus rat. Society of Toxicology 2008 Annual Meeting.
- S. Kim, E. Dere, **L. D. Burgoon**, C. C. Chang and T. R. Zacharewski (2008). Temporal and dose-dependent AhR-mediated gene expression analysis in human liver adult stem cells. Society of Toxicology 2008 Annual Meeting.
- E. Dere, A. W. Lee, M. S. Kiewitt, **L. D. Burgoon** and T. R. Zacharewski. (2008) Characterization of gene expression responses elicited by toxic and non-toxic AhR ligands in murine hepa1c1c7 cells. Society of Toxicology 2008 Annual Meeting.
- T. R. Zacharewski, J. C. Kwekel, **L. D. Burgoon** and N. Kiyosaw. (2008) Comparative hepatic gene expression elicited by o, p'-DDT in the rat and mouse. Society of Toxicology 2008 Annual Meeting.
- S. Kim, E. Dere, **L. D. Burgoon**, C. C. Chang and T. R. Zacharewski. (2007) Assessing AhR-mediated gene expression effects in a novel human liver adult stem cell line. Society of Toxicology 2007 Annual Meeting.

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- M. Kent, N. V. Reo, J. L. Gary, N. DelRaso, D. Boverhof, **L. Burgoon**, D. Jump and T. Zacharewski. (2007) Metabolomic analyses of lipid and aqueous liver extracts in TCDD-treated mice. Society of Toxicology 2007 Annual Meeting.
- A. N'jai, D. Boverhof, **L. Burgoon**, E. Dere, Y. Tan, J. C. Rowlands, R. Budinsky, K. Stebbins and T. Zacharewski. (2007) Comparative toxicogenomics of ah receptor mediated hepatotoxicity in c57bl/6 mice. Society of Toxicology 2007 Annual Meeting.
- C. Tashiro, D. Boverhof, **L. D. Burgoon**, B. Sharratt, B. Chittim, J. Harkema, D. Mendrick and T. R. Zacharewski. (2007) Comparative toxicogenomic analysis of the hepatotoxic effects of TCDD in Sprague-Dawley rats and c57bl/6 mice. Society of Toxicology 2007 Annual Meeting.
- A. K. Kopec, D. R. Boverhof, **L. D. Burgoon**, C. Tashiro, B. Chittim and T. R. Zacharewski. (2007) Comparative toxicogenomic examination of the hepatotoxic effects of 3, 3', 4, 4', 5-pentachlorobiphenyl (PCB126) and 2, 3, 7, 8- tetrachlorodibenzo-p-dioxin (TCDD) in c57bl/6 mice. Society of Toxicology 2007 Annual Meeting.
- M. S. Kiewitt, E. Dere, S. S. Lundback, **L. D. Burgoon** and T. R. Zacharewski. (2007) Comparative microarray analysis of toxic and non-toxic aryl hydrocarbon receptor ligands in murine hepa1c1c7 hepatoma cells. Society of Toxicology 2007 Annual Meeting.
- E. Dere, A. S. Harney, S. S. Proper, **L. D. Burgoon** and T. R. Zacharewski. (2007) Comparative analysis of global gene expression responses elicited by TCDD in human HEPG2, mouse Hepa1c1c7 and rat H4IIE cell lines. Society of Toxicology 2007 Annual Meeting.
- J. C. Kwekel, C. J. Fong, **L. D. Burgoon** and T. R. Zacharewski. (2007) Cross-species comparison of tamoxifen & estrogen induced uterotrophy in rodents. Society of Toxicology 2007 Annual Meeting.
- A. L. Forgacs, J. C. Kwekel, **L. D. Burgoon** and T. R. Zacharewski. (2007) Comparative analysis of temporal gene expression, morphometry and uterotrophy in o, p'-DDT and ethynylestradiol treated rats. Society of Toxicology 2007 Annual Meeting.
- **L. D. Burgoon**, D. R. Boverhof and T. R. Zacharewski. (2007) Automated quantitative toxicogenomic dose-response modeling. Society of Toxicology 2007 Annual Meeting.
- G. L. Jahns, N. V. Reo, M. Kent, D. R. Boverhof, **L. D. Burgoon**, N. DelRaso and T. R. Zacharewski. (2007) Development of an NMR-based metabolomic analysis methodology for toxicology. Society of Toxicology 2007 Annual Meeting.
- D. R. Boverhof, J. C. Kwekel, **L. D. Burgoon**, K. J. Williams and T. R. Zacharewski. (2007) Inhibition of estrogen-mediated gene expression responses by dioxin in the uteri of c57bl/6 mice. Society of Toxicology 2007 Annual Meeting.
- B. Gollapudi, R. Budinsky, A. Dombkowski, R. Novak, M. A. Abdelmegeed, T. Zacharewski, **L. Burgoon** and C. Rowlands. (2007) Divergent transcriptional profiles

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induced by the AhR agonists 2, 3, 7, 8-TCDD, 2, 3, 7, 8-TCDF and 2, 3, 4, 7, 8-PECDF in primary rat hepatocytes. Society of Toxicology 2007 Annual Meeting.

- C. J. Fong, **L. D. Burgoon**, K. J. Williams, A. L. Forgacs and T. R. Zacharewski. (2007) Tamoxifen and ethynylestradiol cotreatment in c57bl/6 mouse uterus: gross, morphometric and cDNA microarray gene expression analysis. Society of Toxicology 2007 Annual Meeting.
- A. S. Harney, D. R. Boverhof, **L. D. Burgoon**, S. S. Lundback, D. L. Mendrick and T. R. Zacharewski. (2006) Comparative toxicogenomic analysis of the hepatotoxic effects of TCDD in rats and mice. Society of Toxicology 2006 Annual Meeting.
- E. Dere, D. R. Boverhof, **L. D. Burgoon** and T. R. Zacharewski. (2006) Comparison of in vitro and in vivo gene expression responses mediated by TCDD. Society of Toxicology 2006 Annual Meeting.
- D. R. Boverhof, J. C. Kwekel, D. G. Humes, **L. D. Burgoon** and T. R. Zacharewski. (2006) Dioxin induces an estrogen receptor dependent estrogen-like gene expression response in the murine uterus. Society of Toxicology 2006 Annual Meeting.
- J. C. Kwekel, **L. D. Burgoon**, J. W. Burt, J. R. Harkema and T. R. Zacharewski. (2006) Comparative transcriptional, morphometric and uterotrophic assessment of estrogen signaling in the rodent uterus. Society of Toxicology 2006 Annual Meeting.
- H. A. Dalglish, J. C. Kwekel, **L. D. Burgoon** and T. R. Zacharewski. (2006) Comparative analysis of temporal gene expression, morphometry and uterotrophy in tamoxifen and ethynylestradiol treated rats. Society of Toxicology 2006 Annual Meeting.
- J. Burt, E. Dere, **L. Burgoon** and T. Zacharewski. (2006) Genome-wide analysis of TCDD-mediated promoter binding of the aryl hydrocarbon receptor. Society of Toxicology 2006 Annual Meeting.
- S. Hung, **L. D. Burgoon**, J. Kwekel, D. R. Boverhof, E. Dere, C. J. Fong, W. Lang and T. Zacharewski. (2006). Data visualization methods for comparative toxicogenomics. Society of Toxicology 2006 Annual Meeting.
- **L. D. Burgoon** and T. Zacharewski. (2006) Genome reanalysis of aryl hydrocarbon receptor battery genes: reconciliation of current and past regulatory region annotations. Society of Toxicology 2006 Annual Meeting.
- W. Lang, **L. D. Burgoon**, E. Dere and T. Zacharewski. (2006) Computational identification of regulatory response elements in the genomic sequence of TCDD-induced coregulated hepalc1c7 primary response genes. Society of Toxicology 2006 Annual Meeting.
- D. Humes, J. Burt, **L. Burgoon** and T. Zacharewski. (2006) Promoter analysis of estrogen responsive genes. Society of Toxicology 2006 Annual Meeting.

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- Y. Tan, C. J. Fong, **L. D. Burgoon** and T. R. Zacharewski. (2006) Time dependent microarray analysis of 17 β estradiol elicited changes in mouse hepa1c1c7 gene expression. Society of Toxicology 2006 Annual Meeting.
- C. J. Fong, **L. D. Burgoon** and T. R. Zacharewski. (2006) Temporal and dose response uterine gene expression analysis of tamoxifen treated c57bl/6 mice by cDNA microarray. Society of Toxicology 2006 Annual Meeting.
- **Lyle Burgoon**, Jeanette Eckel-Passow, Chris Gennings, Darrell Boverhof, Jeremy Burt, Cora Fong, Tim Zacharewski. (2005) Protocols for the Assurance of Microarray Data Quality and Process Control. 2005 Intelligent Systems for Molecular Biology (ISMB) Meeting.
- E. Dere, D. R. Boverhof, **L. D. Burgoon** and T. R. Zacharewski. (2005) Microarray examination of TCDD-mediated changes in gene expression in hepa1c1c7 murine hepatoma cells. Society of Toxicology 2005 Annual Meeting.
- D. R. Boverhof, **L. D. Burgoon**, C. Tashiro, B. Chittim, J. R. Harkema and T. R. Zacharewski. (2005) Temporal and dose-dependent hepatic gene expression patterns in mice provide new insights into TCDD-mediated hepatotoxicity. Society of Toxicology 2005 Annual Meeting.
- **L. D. Burgoon**, J. E. Eckel-Passow, C. Gennings, D. R. Boverhof, J. W. Burt, C. J. Fong, and T. R. Zacharewski. (2005) Protocols for the assurance of microarray data quality and process control. Society of Toxicology 2005 Annual Meeting.
- R. Aiyar, **L. D. Burgoon**, P. C. Boutros, E. Dere, S. Doran, S. S. Pai, J. Vakharia, R. Rotman, A. Adams, B. Lau, R. Patel and T. R. Zacharewski. (2005) dbZach: a comprehensive toxicogenomic information management and knowledge discovery system. Society of Toxicology 2005 Annual Meeting.
- R. Gupta, **L. D. Burgoon**, A. Harney, D. R. Boverhof, J. Kwekel, C. Gennings and T. R. Zacharewski. (2005) Non-additive dose dependent gene expression patterns exhibited by a mixture of 17-alpha ethynylestradiol and genistein in vivo. Society of Toxicology 2005 Annual Meeting.
- C. J. Fong, **L. D. Burgoon**, R. Gupta, D. G. Humes and T. R. Zacharewski. (2005) Temporal gene expression analysis of mouse hepa-1c1c7 cells treated with 17 β -estradiol by cDNA microarray. Society of Toxicology 2005 Annual Meeting.
- J. C. Kwekel, H. A. Dalgleish, **L. D. Burgoon**, J. R. Harkema and T. R. Zacharewski. Analysis of gene expression during uterine induction and regression in immature, ovariectomized rats following treatment with ethynyl estradiol. Society of Toxicology 2005 Annual Meeting.
- J. W. Burt, **L. D. Burgoon**, D. G. Humes, J. C. Kwekel, A. S. Harney, J. R. Harkema and T. R. Zacharewski. (2005) Effects of estrogen on immature, ovariectomized mice: a multi-approach, tissue-by-tissue comparison. Society of Toxicology 2005 Annual Meeting.

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- K. C. Fertuck, **L. D. Burgoon**, J. E. Eckel, C. Gennings and T. R. Zacharewski. (2004) Ethynyl estradiol elicited temporal and dose-dependent hepatic gene expression patterns in immature, ovariectomized mice. Society of Toxicology 2004 Annual Meeting.
- C. J. Fong, **L. D. Burgoon**, M. D. Ramer and T. R. Zacharewski. (2004) Comparative microarray analysis of basal gene expression in mouse hepa1c1c7 wild-type and mutant cell lines. Society of Toxicology 2004 Annual Meeting.
- J. Burt, **L. D. Burgoon**, D. R. Boverhof, Y. Sun and T. R. Zacharewski. (2004) Dose response analysis of femoral changes in gene expression elicited by ethynyl estradiol using cDNA microarrays. Society of Toxicology 2004 Annual Meeting.
- E. Dere, **L. D. Burgoon**, P. C. Boutros, S. Doran, S. S. Pai, R. Aiyar, J. Vakharia, R. Rotman, A. Adams, B. Lau and T. R. Zacharewski. (2004) dbZach: a comprehensive toxicogenomic information management and knowledge discovery system. Society of Toxicology 2004 Annual Meeting.
- **L. D. Burgoon**, D. R. Boverhof, J. E. Eckel, C. Gennings and T. R. Zacharewski. (2004) Comparison of the modified loop and independent reference designs for microarray studies. Society of Toxicology 2004 Annual Meeting.
- M. Ramer, **L. D. Burgoon**, D. R. Boverhof, B. Jeremy, C. Fong and T. Zacharewski. (2004) Assessing toxicogenomic data: analysis of microarray quality control measures. Society of Toxicology 2004 Annual Meeting.
- **Lyle D Burgoon**, Paul C Boutros, Edward Dere, Shane Doran, Shraddha Pai, Raeka Aiyar, Jigger Vakharia, Rebecca Rotman, Tim Zacharewski. dbZach: An Integrative Toxicogenomic Supportive Relational Database. 2003 Intelligent Systems for Molecular Biology (ISMB) Meeting.
- **Lyle D Burgoon**, Ken Y Kwan, Tim Zacharewski. (2003) Statistical Promoter Regulatory Element Analysis of cDNA Microarray Data for the Prediction of cAMP Responsive Genes. 2003 Intelligent Systems for Molecular Biology (ISMB) Meeting.
- S. S. Pai, **L. D. Burgoon**, P. C. Boutros, E. Dere, Y. Sun, R. Aiyar, J. Vakharia, and T. Zacharewski. (2003) dbZach: An integrative toxicogenomic supportive relational database system. Society of Toxicology 2003 Annual Meeting.
- D. R. Boverhof, K. C. Fertuck, **L. D. Burgoon**, R. S. Aiyar and T. R. Zacharewski. (2003) Temporal expression patterns of genes in the livers of immature, ovariectomized mice treated with ethynyl estradiol. Society of Toxicology 2003 Annual Meeting.
- T. Yamada, **L. D. Burgoon**, K. Y. Kwan, M. R. Fielden, J. E. Trosko and T. R. Zacharewski. (2003) Temporal gene expression profiles of human fetal astrocyte SVG cells treated with a neurotoxicant 6-aminonicotinamide. Society of Toxicology 2003 Annual Meeting.
- Fertuck, **L. D. Burgoon**, R. S. Aiyar and T. R. Zacharewski. (2003) Temporal expression patterns of genes in the livers of immature, ovariectomized mice treated with ethynyl estradiol. Society of Toxicology 2003 Annual Meeting.

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- **L. D. Burgoon**, K. Y. Kwan, J. E. Trosko and T. Zacharewski. (2003) cAMP and retinoic acid induced differentiation of human SVG cells: morphologic and transcriptional effects. Society of Toxicology 2003 Annual Meeting.
- J. Fostel, R. Thomas, **L. Burgoon** and W. B. Mattes. (2003) Essential informatics for toxicologists. Society of Toxicology 2003 Annual Meeting.
- **L D Burgoon**, P C Boutros, E Dere, and T R Zacharewski. (2002) Development of a Relational Toxicogenomics Database for the Prediction of Chemical Toxicity. 2002 Intelligent Systems for Molecular Biology (ISMB) Meeting.

Professional Activities

2024-2025	President. Ethical, Legal, Forensic, and Societal Implications Specialty Section, Society of Toxicology.
2023-2024	Vice President. Ethical, Legal, Forensic, and Societal Implications Specialty Section, Society of Toxicology.
2022-2023	Vice President-Elect. Ethical, Legal, Forensic, and Societal Implications Specialty Section, Society of Toxicology.
2020-2022	Councilor. Ethical, Legal, Forensic, and Societal Implications Specialty Section, Society of Toxicology.
2023-Present	Small Business Representative Member, Children's Health Protection Advisory Committee (CHPAC), US Environmental Protection Agency
2020-Present	Review Editor, Computational Toxicology and Informatics, Frontiers in Toxicology
2014-Present	Review Editor, Toxicogenomics, Frontiers in Toxicology
2014-Present	Review Editor, Toxicogenomics, Frontiers in Genetics
2017-2022	US Representative, Working Party on Hazard Assessment, Organisation for Economic Cooperation and Development (OECD)
2013-2022	US Representative, Extended Advisory Group on Molecular Screening and Toxicogenomics, Organisation for Economic Cooperation and Development (OECD)

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2019-2020	Journal Associate/Section Editor, Drug and Chemical Toxicology
2016-2020	US Department of Defense Representative, Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM)
2018-2019	Co-Chair, Ecotoxicology Working Group, Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM)
2017-2019	Standing Member, Small Business Computational, Modeling and Biodata Management Special Emphasis Panel (ZRG1 IMST-K (14)), Center for Scientific Review (CSR), National Institutes of Health
2017	Member, National Toxicology Program Expert Panel, Peer Review of Draft NTP Approach to Genomic Dose-response Modeling, NTP/National Institute for Environmental Health Sciences, National Institutes of Health
2012-2015	Technical Lead, Effects on Humans and Their Communities, Multiagency Technical Subcommittee on Unconventional Oil and Gas Development
2014	Member, National Center for Advancing Translational Science (NCATS) Special Emphasis Panel reviewing Data Management and Coordinating Center Proposals on Rare Disease Research
2012	Member, National Center for Research Resources (NCRR) Special Emphasis reviewing Recovery Act Small Business Innovation Research Phase II Contracts
2011	Member, National Center for Research Resources (NCRR) Special Emphasis Panel reviewing U13 Meeting Proposals

In addition, I am a regular peer-reviewer for the following journals:

- Environmental Science and Technology
- Environmental Health Perspectives
- Food and Chemical Toxicology
- Applied In Vitro Toxicology
- Bioinformatics
- Toxicological Sciences
- Regulatory Toxicology and Pharmacology
- Drug Discovery Today
- BMC Medical Genomics
- BMC Bioinformatics
- Dose Response
- PLoS One