

Dr. Leah Thornton Hampton

Senior Scientist

Toxicology Department

Southern California Coastal Water Research Project

Education

Ph.D., biology, University of North Texas, 2020

M.S., biology, Texas Christian University, 2015

B.S., zoology, Miami University, Honors with Distinction, 2013

Professional Experience

Senior Scientist, Southern California Coastal Water Research Project, 2023-Present

Scientist, Southern California Coastal Water Research Project, 2020-2023

Teaching Assistant, University of North Texas, Department of Biology, 2015-2020

Teaching Assistant, Texas Christian University, 2015-2016

Professional Appointments

Society of Environmental Toxicology and Chemistry North America, Chair of North American, Student Advisory Committee, 2018-2019

Society of Environmental Toxicology and Chemistry North America, Vice Chair of North American, Student Advisory Committee, 2017-2018

Society of Environmental Toxicology and Chemistry North America 39th Annual Meeting, Sacramento, CA, Session Chair, 2018

Society of Environmental Toxicology and Chemistry North America 38th Annual Meeting, Minneapolis, MN, Session Chair, 2017

South Central Region Society of Environmental Toxicology and Chemistry, Student Representative, 2017-2018

Society of Environmental Toxicology and Chemistry South Central Chapter Meeting, Fort Worth, TX, Platform Presentation Moderator, 2016

Honors and Awards

University of Southern California Sea Grant. 2022-2024

Presidential Citation for Outstanding Service, Society for Environmental Toxicology and Chemistry. 2019

University of North Texas Graduate Student Research Award. 2018

University of North Texas Graduate Student Travel Grant. 2017, 2018

Society of Environmental Toxicology and Chemistry Student Travel Grant. 2015, 2019

Texas Christian University Graduate Student Travel Grant. 2015

Pollutant Responses in Marine Organisms Travel Grant. 2015

Adkins Fellowship from Texas Christian University. 2014. Summer Salary

Grant-In-Aid of Research from Sigma Xi, The Scientific Research Society. 2014

Journal Articles

Mayer, P.M., K.D. Moran, E.L. Miller, S.M. Brander, S. Harper, M. Garcia-Jaramillo, V. Carrasco-Navarro, K.T. Ho, R.M. Burgess, L.M. Thornton Hampton, E.F. Granek, M. McCauley, J.K. McIntyre, E.P. Kolodziej, X. Hu, A.J. Williams, B.A. Beckingham, M.E. Jackson, R.D. Sanders-Smith, C.L. Fender, G.A. King, M. Bollman, S.S. Kaushal, B.E. Cunningham, S.J. Hutton, J. Lang, H.V. Goss, S. Siddiqui, R. Sutton, D. Lin, M. Mendez. 2024. Where the rubber meets the road: Emerging environmental impacts of tire wear particles and their chemical cocktails. *Science of the Total Environment* 927:171153.

Thornton Hampton, L.M., H. De Frond, K. Gesulga, S. Kotar, W. Lao, C. Matuch, S.B. Weisberg, C.S. Wong, S. Brander, S. Christansen, C.R. Cook, F. Du, S. Ghosal, A.B. Gray, J. Hankett, P.A. Helm, K.T. Ho, T. Kefela, G. Lattin, A. Lusher, L. Mai, R.E. McNeish, O. Mina, E.C. Minor, S. Primpke, K. Rickabaugh, V.C. Renick, S. Singh, B.V. Bavel, F. Vollnhals, C.M. Rochman. 2023. The influence of complex matrices on method performance in extracting and monitoring for microplastics. *Chemosphere* 334:138875.

Thornton Hampton, L.M., S.M. Brander, S. Coffin, M. Cole, L. Hermabessiere, A.A. Koelmans, C.M. Rochman. 2022. Characterizing microplastic hazards: which concentration metrics and particle characteristics are most informative for understanding toxicity in aquatic organisms?. *Microplastics and Nanoplastics* 2:20.

Kotar, S., R. McNeish, C. Murphy-Hagan, V. Renick, C.T. Lee, C. Steele, A. Lusher, C. Moore, E. Minor, J. Schroeder, P. Helm, K. Rickabaugh, H.D. Frond, K. Gesulga, W. Lao, K. Munno, L.M. Thornton Hampton, S.B. Weisberg, C.S. Wong, G. Amarpuri, R.C. Andrews, S.M. Barnett, S. Christiansen W Cowgeri, K. Crampond, F. Du, A.B. Gray, J. Hankett, K. Ho, J. Jaeger, C. Lilley, L. Mai, O. Mina, E. Lee, S. Primpke, S. Singh, J. Skovly, T. Slifko, S. Sukumaran, B. Bavel, J.V. Brocklin, F. Vollnhals, C. Wu, C.M. Rochman . 2022. Quantitative assessment of visual microscopy as a tool for microplastic research: Recommendations for improving methods and reporting. *Chemosphere* 308:1-9.

Thornton Hampton, L.M., H. Bouwmeester, S.M. Brander, S. Coffin, M. Cole, L. Hermabessiere, A.C. Mehinto, E. Miller, C.M. Rochman, S.B. Weisberg. 2022. Research recommendations to better understand the potential health impacts of microplastics to humans and aquatic ecosystems. *Microplastics and Nanoplastics* 2:18.

Jenkins, T., B.D. Persaud, W. Cowger, K. Szigeti, D.G. Roche, E. Clary, S. Slowinski, B. Lei, A. Abeynayaka, E.S. Nyadjro, T. Maes, L.M. Thornton Hampton, M. Bergmann, J. Aherne, A.S. Mason, J.F. Honek, F. Rezanezhad, A.L. Lusher, A.M. Booth, R.D.L. Smith, P. Van Cappellan. 2022. Current State of Microplastic Pollution Research Data: Trends in Availability and Sources of Open Data. *Frontiers in Environmental Science* 10:912107.

Mehinto, A.C., S. Coffin, A.A. Koelmans, S.M. Brander, M. Wagner, L.M. Thornton Hampton, A.G. Burton, E. Miller, T. Gouin, S.B. Weisberg, C.M. Rochman. 2022. Risk-based management framework for microplastics in aquatic ecosystems. *Microplastics and Nanoplastics* 2:17.

Thornton Hampton, L.M., H. Lowman, S. Coffin, E. Darin, H. De Frond, L. Hermabessiere, E. Miller, V.N. de Ruijter, A. Faltynkova, S. Kotar, L. Monclus, S. Siddiqui, J. Volker, S. Brander, A.A. Koelmans, C.M. Rochman, M. Wagner, A.C. Mehinto. 2022. A living tool for the continued exploration of microplastic toxicity. *Microplastics and Nanoplastics* 2:13.

De Frond, H., L.M. Thornton Hampton, S. Kotar, K. Gesulga, C. Matuch, W. Lao, S.B. Weisberg, C.S. Wong, C.M. Rochman . 2022. Monitoring microplastics in drinking water: An interlaboratory study to inform effective methods for quantifying and characterizing microplastics. *Chemosphere* 298:134282.

Gouin, T., R. Ellis-Hutchings, L.M. Thornton Hampton, C.L. Lemieux, S.L. Wright. 2022. Screening and prioritization of nano- and microplastic particle toxicity studies for evaluating human health risks – development and application of a toxicity study assessment tool. *Microplastics and Nanoplastics* 2:2.

Thornton Hampton, L.M., M.G. Finch, C.J. Martyniuk, B.J. Venables, M.K. Sellin-Jeffries. 2021. Developmental thyroid disruption causes long-term impacts on immune cell function and transcriptional responses to pathogen in a small fish model. *Scientific Reports*

DOI:10.1038/s41598-021-93929-8.

Mehinto, A.C., L.M. Thornton Hampton, D.E. Vidal-Dorsch, N. Garcia-Reyero, M.A. Arick, K.A. Maruya, W. Lao, C.D. Vulpe, M. Brown-Augustine, A. Loguinov, S.M. Bay. 2021. *Transcriptomic response patterns of hornyhead turbot (Pleuronichthys verticalis) dosed with polychlorinated biphenyls and polybrominated diphenyl ethers. Comparative Biochemistry and Physiology - Part D: Genomics and Proteomics* DOI:10.1016/j.cbd.2021.100822.

Thornton Hampton LM, Finch MG, Martyniuk CJ, Venables BJ, Sellin Jeffries MK. Developmental thyroid disruption causes long-term impacts on immune cell function and transcriptional responses to pathogen in a small fish model. *Scientific Reports* 2021, 11, 14496, DOI: 10.1038/s41598-021-93929-8.

Mehinto AC, Thornton Hampton LM, Vidal-Dorsch DE, Garcia-Reyero N, Arick II MA, Maruya KA, Lao W, Vulpe CD, Brown-Augustine M, Loguinov A, Bay SM. Transcriptomic response patterns of hornyhead turbot (*Pleuronichthys verticalis*) dosed with polychlorinated biphenyls and polybrominated diphenyl ethers. *Comparative Biochemistry and Physiology Part D: Genomics and Proteomics* 2021, 38, 100822, DOI: 10.1016/j.cbd.2021.100822.

Snow DD, Chakraborty P, Uralbekov B, Satybaldiev B, Sallach JB, Thornton Hampton LM, Sellin Jeffries MK, Kolok AS, Bartlett-Hunt SB. Legacy and current pesticide residues in Syr Darya, Kazakhstan: Contamination status, seasonal variation and preliminary ecological risk assessment. *Water Research* 2020, 184, 116141, DOI: 10.1016/j.watres.2020.116141.

Thornton Hampton LM, Martyniuk CJ, Sellin Jeffries MK, Venables BJ. Advancing the fathead minnow (*Pimephales promelas*) as a model for immunotoxicity testing: Characterizing the renal transcriptome following *Yersinia ruckeri* infection. *Fish and Shellfish Immunology* 2020, 103, 472-480, DOI: 10.1016/j.fsi.2020.05.008.

Thornton Hampton LM, Sellin Jeffries MK, Venables BJ. A practical guide for assessing respiratory burst and phagocytic cells activity in the fathead minnow, an emerging model for immunotoxicity. *MethodsX* 2020, 7, 100992. DOI: 10.1016/j.mex.2020.100992.

Thornton LM, Path EM, Nystrom GS, Venables BJ, Sellin Jeffries MK. Embryo-larval BDE-47 exposure causes decreased pathogen resistance in fathead minnows (*Pimephales promelas*). *Fish and Shellfish Immunology* 2018, 80, 80-87. DOI: 10.1016/j.fsi.2018.05.059.

Thornton LM, LeSueur MC, Yost AT, Stephens DA, Oris JT, Sellin Jeffries MK. Characterization of basic immune function parameters in the fathead minnow (*Pimephales promelas*), a common model in environmental toxicity testing. *Fish and Shellfish Immunology* 2017, 61, 163-172. DOI: 10.1016/j.fsi.2016.12.033.

Yost AT, Thornton LM, Venables BJ, Sellin Jeffries MK. Dietary exposure to polybrominated diphenyl ether 47 (BDE-47) inhibits development and alters thyroid hormone-related gene expression in the brain of *Xenopus laevis* tadpoles. *Environmental Toxicology and Pharmacology* 2016, 48, 237-244. DOI: 10.1016/j.etap.2016.11.002.

Thornton LM, Path EM, Nystrom GS, Venables BJ, Sellin Jeffries MK. Early life stage exposure to BDE-47 causes adverse effects on reproductive success and sexual differentiation in fathead minnows (*Pimephales promelas*). *Environmental Science and Technology* 2016, 50, 7834-7841. DOI: 10.1021/acs.est.6b02147.

Thornton LM, Path EM, Venables BJ, Sellin Jeffries MK. The endocrine effects of dietary BDE-47 exposure, measured across multiple levels of biological organization, in breeding fathead minnows. *Environmental Toxicology and Chemistry* 2016, 35, 2048-2057, DOI: 10.1002/etc.3351.

Kotar S, McNeish R, Murphy-Hagen C, Renick V, [...], Thornton Hampton LM, et al. Quantitative assessment of visual microscopy as a tool for microplastic research: recommendations for improving methods and reporting. *Chemosphere* 2022, DOI: 10.1016/j.chemosphere.2022.136449.

Thornton Hampton LM, Bouwmeester H, Brander SM, Coffin S, Cole M, et al. Research recommendations to better understand the potential health impacts of microplastics to humans and aquatic ecosystems. *Microplastics and Nanoplastics* 2022, DOI: 10.1186/s43591-022-00038-y.

Thornton Hampton LM, Brander SM, Cole M, Coffin S, Hermabessiere L, et al. Characterizing microplastic hazards: Which concentration metrics and particle characteristics are most informative for understanding toxicity in aquatic organisms? *Microplastics and Nanoplastics* 2022, DOI: 10.1186/s43591-022-00040-4.

Mehinto AC, Coffin S, Koelmans AA, Brander SM, [...], Thornton Hampton LM, et al. Risk-based management framework for microplastics in aquatic ecosystems. *Microplastics and Nanoplastics* 2022, DOI: 10.1186/s43591-022-00033-3.

Jenkins T, Persaud B, Cowger W, Szigeti K, [...], Thornton Hampton LM, et al. Current state of microplastic pollution research data: Trends in availability and sources of open data. *Frontiers in Environmental Science* 2022, DOI: 10.3389/fenvs.2022.912107.

Thornton Hampton LM, Lowman H, Coffin S, Darin E, De Frond H, et al. A living tool for the continued exploration of microplastic toxicity. *Microplastics and Nanoplastics* 2022, DOI: 10.1186/s43591-022-00032-4.

Gouin T, Ellis-Hutchings R, Thornton Hampton LM, Lemieux CL, Wright SL. Screening and prioritization of nano- and microplastic particle toxicity studies for evaluating human health risks—development and application of a toxicity assessment tool. *Microplastics and Nanoplastics*

2022, DOI: 10.1186/s43591-021-00023-x.

De Frond H, Thornton Hampton LM, Kotar S, Gesulga K, Matuch C, et al. Monitoring microplastics in drinking water: an interlaboratory study to inform effective methods for quantifying and characterizing microplastics. *Chemosphere* 2022, DOI: 10.1016/j.chemosphere.2022.134282.

Thornton LM, Path EM, Nystrom GS, Venables BJ, Sellin Jeffries MK. Embryo-larval BDE-47 exposure causes decreased pathogen resistance in fathead minnows (*Pimephales promelas*). *Fish and Shellfish Immunology* 2018, 80, 80-87. DOI: 10.1016/j.fsi.2018.05.059.

Thornton LM, Lesueur MC, Yost AT, Stephens DA, Oris JT, Sellin Jeffries MK. Characterization of basic immune function parameters in the fathead minnow (*Pimephales promelas*), a common model in environmental toxicity testing. *Fish and Shellfish Immunology* 2017, 61,163-172. DOI: 10.1016/j.fsi.2016.12.033.

Yost AT, Thornton LM, Venables BJ, Sellin Jeffries MK. Dietary exposure to polybrominated diphenyl ether 47 (BDE-47) inhibits development and alters thyroid hormone-related gene expression in the brain of *Xenopus laevis* tadpoles. *Environmental Toxicology and Pharmacology* 2016, 48, 237-244. DOI: 10.1016/j.etap.2016.11.002.

Thornton LM, Path EM, Nystrom GS, Venables BJ, Sellin Jeffries MK. Early life stage exposure to BDE-47 causes adverse effects on reproductive success and sexual differentiation in fathead minnows (*Pimephales promelas*). *Environmental Science and Technology* 2016, 50, 7834-7841. DOI: 10.1021/acs.est.6b02147.

Thornton LM, Path EM, Venables BJ, Sellin Jeffries MK. The endocrine effects of dietary BDE-47 exposure, measured across multiple levels of biological organization, in breeding fathead minnows. *Environmental Toxicology and Chemistry* 2016, 35, 2048-2057, DOI: 10.1002/etc.3351.

Book Chapters

Brander, S.M., A. Konig, B.C. Almroth, L.M. Thornton Hampton. 2024. The Potential for Toxicity to Fishes from Micro- and Nanoplastics, and Their Additives. in: K.L. Willett, N. Aluru (eds.), *Toxicology of Fishes (2nd ed.)* pp. 362-391. CRC Press. Boca Raton, FL.

Technical Reports

McLaughlin, K., R.D. Mazor, K.C. Schiff, L.M. Thornton Hampton. 2022. Southern California Bight 2018 Regional Monitoring Program: Volume IX. Trash and Marine Debris. Technical Report 1263. Southern California Coastal Water Research Project. Costa Mesa, CA.