



## **Thomas J. McDonald**

**Associate Professor, Health Science Center, School of Rural Public Health, Texas A&M System Senior Project Manager, TDI-Brooks International Inc**  
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### **PROFESSIONAL HIGHLIGHTS**

- 25 years of management experience in industry and 15 years of graduate academia experience.
- Highly experienced in the identification and quantitation of volatile and semi-volatile organic contaminants by Low Resolution Mass Spectrometry (LRMS) and Gas Chromatography-Flame Ionization Detection (GC/FID).
- Specialize in petroleum biological marker identification and quantitation for use in bioremediation studies.
- Vast experience with all aspects of environmental and geochemical sample handling for trace organic analyses, including sample receipt, sample processing and extraction, extract analysis and final data reporting.
- Involved in numerous federal projects for NOAA, EPA, USFWS, and other agencies.
- Experience in field-oriented sampling projects, including coordination of sampling activities, sample collection and preservation, and data archiving.

### **EDUCATION**

*Texas A&M University at Galveston*, Department of Marine Science, Galveston, TX  
B.S. Marine Science, May 1980

*Texas A&M University*, Department of Oceanography, College Station, TX  
M.S. Chemical Oceanography, May 1982  
Thesis title: The Effects of Dispersants on Incorporation of Volatile Liquid Hydrocarbons into the Water Column.

*Texas A&M University*, Department of Oceanography, College Station, TX  
Ph.D. Chemical Oceanography, May 1988  
Dissertation title: Volatile Organic Compounds in Gulf of Mexico Sediments.

### **PROFESSIONAL EXPERIENCE**

Regents Professor, Health Science Center, School of Public Health, Texas A&M System,  
September 2012 – present.

Assistant Dean for Academic Affairs, Health Science Center, School of Public Health, Texas A&M System, June 2014 – December 2017.

Interim Associate Dean for Academic Affairs, Health Science Center, School of Public Health,



Texas A&M System, November 2015 – October 2016.

Department Head, Environmental and Occupational Health, Health Science Center, School of Rural Public Health, Texas A&M System, September 2010 – May 2014.

Interim Department Head, Environmental and Occupational Health, Health Science Center, School of Rural Public Health, Texas A&M System, July 2009 – August 2010.

Associate Professor, Health Science Center, School of Rural Public Health, Texas A&M System, September 2006 – August 2012.

Assistant Professor, Health Science Center, School of Rural Public Health, Texas A&M System, September 2005 – August-2006.

Lecturer, Health Science Center, School of Rural Public Health, Texas A&M University System, September 2001 – August 2005.

TEES Associate Research Scientist, Department of Civil Engineering, Texas A&M University, August 1998 – August 2002.

Senior Project Manager, TDI-BI. July 1996 -present.

TEES Assistant Research Scientist, Department of Civil Engineering, Texas A&M University, January 1996 – August 1998.

Manager, Mass Spectrometry Group, Geochemical and Environmental Research Group, Texas A&M University, September 1993 - January 1996.

Assistant Research Scientist, Geochemical and Environmental Research Group, Texas A&M University, September 1989 - January 1996.

Post-Doctoral Research Associate, Geochemical and Environmental Research Group, Texas A&M University, June 1988 - August 1989.

Research Assistant, Department of Oceanography, Texas A&M University, November 1984 - May 1988.

## **PROFESSIONAL TRAINING & CERTIFICATIONS**

Certified CEPH Site Visitor, July 2011. Recertified March 2017 (new criteria)

ThermoQuest Corporation, Techniques of GC-LC/MS-MS, 1999

Hewlett Packard Company, Fundamentals and Operation of LC/MS, 1990



Perkin Elmer Company, Fundamentals of Gas Chromatography, 1981

## **PUBLICATIONS**

Kovalakova P, Cizmas L, McDonald TJ, Marsalek B, Feng M, Sharma, VK. 2020. Occurance and toxicity of antibiotics in the aquatic environment: A Review. *Chemosphere*.  
<https://doi.org/10.1016/j.chemosphere.2020.126351>.

Nickodem CA, Menon R, McDonald TJ, Taylor BD. 2020. Circulating Short-Chain Fatty Acids in Preterm Birth: A Pilot Case-Control Study. *Repo Sciences*. [doi.org/10.1007/s43032-019-00126-0](https://doi.org/10.1007/s43032-019-00126-0).

Stone KW, Felkner M, Perez-Patron M, Schmit C, McDonald TJ, Horney JA. 2019. How Do Infectious Disease Epidemiologist Positions Increase Public Health Capacity? Results from a Qualitative Study of Local Health Departments. *Health Security*. 17(6) 454-461. (PubMed PMID: 31770039).

Onel M, Beykal B, Ferguson K, Chiu WA, McDonald TJ, Zhou L, House JS, Wright FA, Sheen DA, Rusyn I, Pistikopoulos EN. 2019. Grouping of complex substances using analytical chemistry data: A framework for quantitative evaluation and visualization. *PLoS One*. 14(10): e0223517. (PMID: 31600275, PMCID 6786635)

Stone, KW, Casillas, GA, Karaye, I, Camargo, K, McDonald TJ, Horney JA. 2019. Using Spatial Analysis to Examine Potential Sources of Polycyclic Aromatic Hydrocarbons in an Environmental Justice Community. After Hurricane Harvey. *Environ. Justice*. 12(4) 194-203. (PMID 31770039).

Sharma, VK, Yu, Z, McDonald, TJ, Jinadatha, C, Dionysiou, DD, Feng, M. 2019. Elimination of antibiotic resistance genes and control of horizontal transfer risk by UV-based treatment of drinking water: A mini review. *Front Environ Sci. Eng.* 13(3) 37-45.

Sansom, GT, Berke, P, McDonald, TJ, Shipp E, Horney, J. 2019. Evaluating the Impact of Race and Gender on Environmental Risk Perceptions in the Houston Neighborhood of Manchester. *Environ. Justice* 12(3) 92-98. PMID 31871531, PMCID 6927678).

Trueblood AB, Ross JA, Shipp EM, McDonald TJ. (2019). Feasibility of Portable Finger Stick Cholinesterase Testing in Adolescents in South Texas. *J Prim Care Community Health* 10 1-6. (PMID: 30929548, PMCID 6444767).



Sansom, GT, Kirsch, KR, Stone, KW, McDonald, TJ, and Horney JA. (2018). Domestic Exposures to Polycyclic Aromatic Hydrocarbons in a Houston, Texas, Environmental Justice Neighborhood. *Environ. Justice* 11(5) 183-191. (PMID 30464781; PMID6241524)

Feng, M, Jinadatha, C. McDonald, TJ, and Sharma, VK. (2018). Accelerated oxidation of organic contaminants by ferrate (VI): The overlooked role of reducing additives. *Env. Sci. & Tech.* 52(19) 11319-11327. (PMID 30187746; PMID6300057)

Tölgyesi, À, Giri, A, Barta, E., McDonald, TJ, and Sharma VK. 2018. Determination of Thyreostats in Urine using supported liquid extraction and mixed-mode cation-exchange solid-phase extraction: Screening and confirmatory methods. *J Chromatogr Sci.* (PMID 29878072).

Mendoza-Sanchez I, Autenrieth RL, McDonald TJ, Cunningham JA. 2018. Biological Limitations of Dechlorination of cis-Dichloroethene during Transport in Porous Media. *Environ Sci Technol.* 2018 Jan 16; 52 (2):684-691. (PMID: 29236483)

Horney JA, Casillas GA, Baker E, Stone KW, Kirsch KR, Camargo K, Wade TL, McDonald TJ. (2018). Comparing residential contamination in a Houston environmental justice neighborhood before and after Hurricane Harvey. *PLoS One.* Feb; 13(2). (PMID: 29420658).

Brewster CS, Sharma VK, Cizmas L, and McDonald TJ. (2018). Occurrence, distribution and composition of aliphatic and polycyclic aromatic hydrocarbons in sediment cores from the Lower Fox River, Wisconsin, US. *Environ Science Pollution Res Int.* Feb 13; 25 (5) 4974-4988. (PMID 29204943).

Tölgyesi, À, Barta E, Simon, A, McDonald, TJ, and Sharma VK. 2017. Screening and confirmation of steroids and nitroimidazoles in urine, blood, and food matrices: Sample preparation methods and liquid chromatography tandem mass spectrometric separations. *J Pharm Biomed Anal.* 145: 805-813. (PMID 28822347).

Sansom G., Parras, J., Parras, A., Nieto, Y., Arellano, Y., Berke, P., McDonald T.J, Shipp, E, and Horney, J.A. 2017. The Impacts of Exposure to Environmental Risk on Physical and Mental Health in a Small Geographic Community in Houston, TX. *Journal of Community Health.* 42(4). (PMID: 28289913).

Sharma V.K., McDonald T.J., Sohn M., Anquandah G.A.K., Pettine M., and Zboril R., 2017 Assessment of toxicity of selenium and cadmium selenium quantum dots: A Review. *Chemosphere.* (188) 403-413. (PMID 28892773).

Luo, Y.S., Cichocki, J.A., McDonald, T.J., and Rusyn, I. 2017. Simultaneous detection of the tetrachloroethylene metabolites S-(1,2,2-trichlorovinyl) glutathione, S-(1,2,2-trichlorovinyl)-L-cysteine, and N-acetyl-S-(1,2,2-trichlorovinyl)-L-cysteine in multiple mouse tissues via ultra-



high performance liquid chromatography electrospray ionization tandem mass spectrometry. *J Toxicol Environ Health A*. 80(9): 513-524. (PMID 28696834).

Sharma, V.K., Yang, X., Cizmas, L., McDonald, T.J., Luque, R., Sayes, C.M., Yuan, B., and Dionysiou, D., 2017. Impact of metal ions, metal oxides, and nanoparticles on the formation of disinfection byproducts during chlorination. *Chem. Eng. Journal*. (317) 777-792. (PMID 28892773).

Cichocki, J.A., Furuya, S., Venkatratnam, A., McDonald, T.J., Knap, A.H., Wade, T.L., Sweet, S., Chiu, W.A., Threadgill, D.W., and Rusyn, I. 2017. Characterization of Variability in Toxicokinetics and Toxodynamics of Tetrachloroethylene Using the Collaborative Cross Mouse Populations. *Environ. Health Perspect*. 125(5) 057006-1 057006-12. (PMID 28572074).

Telesford-Checkley, J.M., Mora, M.A., Gentry, T.J., McDonald, T.J., Boellstorff, D.E., 2017 Impacts of Hormones on Water Quality as Evaluated through *Escherichia coli* and Fecal Sterol Analyses. *Water Environ. Res*. 89(6): 508-518. (PMID 28545602).

Cichocki, J.A., Furuya, S., Konganti, K., Luo, Y.S., McDonald, T.J., Iwata, Y., Chiu, W.A., Threadgill, D.W., Pogribny, I.P., and Rusyn, I. 2017. Impact of nonalcoholic fatty liver disease on toxicokinetics of tetrachloroethylene. *J. Pharmacol Exp. Ther*. 361: 17-28. (PMID 2814637).

Sansom G., Berke P., McDonald T.J., Shipp E., and Horney J. 2016. Confirming the Environmental Concerns of Community Members Utilizing Participatory-Based Research in the Houston Neighborhood of Manchester. *Int. Journal Environ Research Public Health*. 13(9). (PMID: 27563915).

Trueblood, A.B., Rincon, R., Perales, R., Hollingsworth, R., Miller, C., McDonald, T.J. and Cizmas, L.H. 2016. A Pilot Study of Changes in Environmental Knowledge and Behaviors among Head Start Employees and Parents Following Environmental Health Training in Webb County, TX. *Journal of Immig and Min Hlth*. 18(1) 135-142. (PMID 25538003).

Sharma, V.K., Johnson N, Cizmas L.H., McDonald T.J., and Kim H. 2016. A review of the influence of treatment strategies on antibiotic resistant bacteria and antibiotic resistance genes. *Chemosphere Vol. 150*; 702-714. (PMID 26775188).

Vuong A.M., Shinde M.U., Brender J.D., Shipp E.M., Huber J.C. Jr, Zheng Q., Sharkey, J.R. McDonald T.J., Werler M.M., Kelley K.E., Griesnebeck, J.S., Langlois P.H., and Canfield M.A. 2016. Prenatal Exposure to Nitrosatable Drugs, Dietary Intake of Nitrates, and Preterm Birth. *Am. Journal of Epidemiology*. 183 (5); 634-642. <https://doi.org/10.1093/aje/kwv250>

Pettine, M., McDonald, T.J., Sohn, M., Anquandah, G.A.K., Zboril, R., and Sharma, V.K. 2015. A critical review of selenium analysis in natural water samples. *Trends in Environmental Analytical Chemistry*. 5: 1-7. <https://doi.org/10.1016/j.teac.2015.01.001>



Cizmas L., Sharma V.K., Gray C.M., and McDonald T.J. (2015). Pharmaceuticals and personal care products in waters: occurrence, toxicity, and risk. *Environ. Chem. Lett.* Dec. 13(4): 381-394. (PMID 28592954).

Sharma V.K., McDonald T.J., Kim H., and Garg V.K. (2015). Magnetic graphene-carbon nanotube iron nanocomposites as adsorbents and antibacterial agents for water purification. *Adv. Colloid Interface Sci.* Nov: 225:229-240. (PMID: 26498500).

Cizmas L, Ackerman L, Donnelly DA, Donnelly K.C., and McDonald T.J. (2015). Measurement of Organophosphate Pesticides, Organochlorine Pesticides, and Polycyclic Aromatic Hydrocarbons in Household Dust from Two Rural Villages in Nepal. *Journal of Environmental & Analytical Toxicological.* 5:261. (<http://dx.doi.org/10.4172/2161-0525.1000261>).

Sharma, V.K., McDonald, T.J., Sohn, M. Anquandah, G.A.K., Pettine, M., and Zboril, R. 2015. Biogeochemistry of Selenium. A Review. *Environmental Chemistry Letters.* Vol 13(1). 49-58. (<https://doi.org/10.1007/s10311-014-0487-x>).

Vuong A.M., Shinde M.U., Brender J.D., Shipp E.M., Huber J.C. Jr, Zheng Q., McDonald T.J., Sharkey J.R., Hoyt A.T., Werler M.M., Kelley K.E., Langlois P.H., Canfield M.A. 2015. Nitrosatable Drug Exposure during Pregnancy and Preterm and Small-for-Gestational-Age Births. *Paediatr Perinat Epidemiol.* January 29(1): 60-71, (PMID 25492517).

Phillips T.D., Richardson M., Cheng Y-S.L., He L., McDonald T.J, Cizmas L.H., Safe S.H., Donnelly K.C., Wang .F, Moorthy B., Zhou G-D. 2014. Mechanistic relationships between hepatic genotoxicity and carcinogenicity in male B6C3F1 mice treated with polycyclic aromatic hydrocarbon mixtures. *Arch. Toxicol.*, published online June 3, 2014, (PMID 24888377).

Sharma, V.K., Zboril, R., and McDonald. T.J. (2014). Formation and toxicity of brominated disinfection byproducts during chlorination and chloramination of water: A review. *Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants, and Agricultural Wastes.* January (49): 212-228. (PMID: 24380621).

Sexton, K., Salinas, J.J., McDonald, T.J. Thomas, Gowen, R.M.Z., Miller, R.P, McCormick J.B. and Fisher-Hoch, S.P. (2013). Biomarker Measurements of Prenatal Exposure to Polychlorinated Biphenyls (PCB) in Umbilical Cord Blood from Postpartum Hispanic Women in Brownsville, Texas. *Journal of Toxicology and Environmental Health, Part A: Current Issues,* 76(22): 1225-1235. (PMID: 24283394).

Trefry, J.H., Dunton, K.H., Trocine, R.P., Schonberg, S.V., McTigue, N.D., Hersh, E.S., and McDonald, T.J. (2013). Chemical and Biological Characterization of Two Historic Offshore Drill Sites in the Alaskan Arctic. *Mar Environ. Res.* May (86): 35-45. (PMID: 23535013).

Sexton, K., Salinas, J.J., McDonald, T.J. Thomas, Gowen, R.M.Z., Miller, R.P, McCormick J.B. and Fisher-Hoch, S.P. (2013). Biomarkers of Maternal and Fetal Exposures to Organochlorine



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Kim, Myung Hee, Wang, N., McDonald, T.J., and Chu, K.H. 2012. Biodegradation and biotransformation of fluorotelomer alcohols by two alkane-degrading *Pseudomonas* strains. *Biotechnology and Bioengineering* 109(12) 3041-3048. (PMID 22614340).

Theodorakis, C.W., Bickham, J., Donnelly, K.C., McDonald, T.J., and Wilink, P. 2012. DNA Damage and Fin Erosion in Cichlids from an Oil Production Facility in Guatemala. *Ecotoxicology* 21(2) 496-511. (PMID 22080433).

Kelley, M.A., Gillespie, A., Zhou, G.D., Zhang, S., Meador, J.P., Duncan, B., Donnelly, K.C., and McDonald, T.J. 2011. *In situ* biomonitoring of caged, juvenile Chinook salmon (*Oncorhynchus tshawytscha*) in the Lower Duwamish Waterway. *Mar. Poll. Bull.* 62(11): 2520-2532. (PMID 21906759).

Sexton, K., Salinas, J.J., McDonald, T.J. Thomas, Gowen, R., M.Z., Miller, R.P, McCormick J.B. and Fisher-Hoch, S.P. (2011). Polycyclic Aromatic Hydrocarbons in Maternal and Umbilical Cord Blood from Pregnant Hispanic Women Living in Brownsville, Texas. *Int. J. Environ. Res. Public Health*, 8(8): 3365-3379. (PMID: 21909312).

Rinner, B.P., Matson, C.W., Islamzadeh, A., McDonald, T.J., Donnelly, K.C., and Bickham, J.W. 2011. Evolutionary toxicology: contaminant-induced genetic mutations in mosquito fish from Sumgayit, Azerbaijan. *Ecotoxicology*. 20(2): 365-376. (PMID: 21312027).

Browne E, Kelley M, Zhou GD, He LY, McDonald TJ, Wang S, Duncan B, Meador J, Donnelly K, and Gallagher E. 2010. *In situ* biomonitoring of juvenile Chinook salmon (*Oncorhynchus tshawytscha*) using biomarkers of chemical exposures and effects in a partially remediated urbanized waterway of the Puget Sound, WA. *Environ Res.* 2010 Oct; 110 (7): 675-683. (PMID: 20619832).

Naufal, Z. Zhiwen, L., Zhu, L., Zhou, GD, McDonald, TJ, He, LY, Mitchell, L., Ren, A., Zhu, H., Finnell, R., and Donnelly, KC. 2010. Biomarkers of exposure to combustion by-products in a human population in Shanxi, China. *J. Exposure Science and Environmental Epidemiology*, 20: 310-319. (PMID: 19277067).

Griesenbeck, G.S., J.D. Brender, J.R. Sharkey, J.C. Huber, A.A. Rene, T.J. McDonald, P.A. Romitti, M.A Canfield, P.H. Langlois, and L. Suarez. 2010. Maternal Characteristics associated with the dietary intake of nitrates, nitrites, and nitrosamines in women of child-bearing age: a cross-sectional study. *Environ. Health Perspectives*. 119:10 (PMID 2848640).

Mendoza, I., R.L. Autenrieth, T.J. McDonald, and J.A. Cunningham. 2010. Effect of pore velocity on biodegradation of *cis*-dichloroethene (DCE) in column experiments. *Biodegradation*. 21(3): 365-377 (PMID 19894128).



Matson C.W., Gillespie A.M., McCarthy C, McDonald T.J., Bickham J.W., Sullivan R., and Donnelly K.C. 2009. Wildlife toxicology: biomarkers of genotoxic exposures at a hazardous waste site. *Ecotoxicology*. 18(7):886-98 (PMID: 19533345).

Bruce, E.D., Autenrieth, R.L., McDonald, T.J., Donnelly, K.C., and Burghardt, R.C. 2009. Modeling Toxic Endpoints for Improving Human Health Risk Assessment of Polycyclic Aromatic Hydrocarbons – Parent Compounds and Simple Mixtures. *Toxicological and Environmental Chemistry*, 91(1), pp.137-156. (PMID: 18569619).

Naspinski, C, R. Lingenfelter, L. Cizmas, Z. Naufal, L.Y. He, A. Islamzadeh, Z. Li, Z. Li, T.J. McDonald, and K.C. Donnelly. 2008. A comparison of concentration of polycyclic aromatic compounds detected in dust samples from various regions of the world. *Env. Inter.* (34) 988-993. (PMID: 18452990).

Bruce, E.D., R.L. Autenrieth, R. Burghardt, K.C. Donnelly, and T.J. McDonald. 2008. Using quantitative structure-activity relationships (QSAR) to predict toxic endpoints for polycyclic aromatic hydrocarbons (PAH). *J Toxicol Environ Health A*. 2008; 71(16):1073-84. (PMID: 18569619).

Barbee, G.C., J. Barich, J.W. Bickham, C.W. Matson, C.J. Hintze, R.L. Autenrieth, G.D. Zhou, T.J. McDonald, L. Cizmas, and K.C. Donnelly. 2008. In Situ biomonitoring of PAH-contaminated sediments using juvenile coho salmon (*Occorhynchus kisutch*). *Ecotoxicology and Environmental Safety*, Oct; 71(2): 454-464. (PMID: 18304636).

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Bruce, E.D., A.A. Abusalih, T.J. McDonald, and R.L. Autenrieth. 2007. Comparing deterministic and probabilistic risk assessments for sites contaminated by polycyclic aromatic hydrocarbons (PAHs). *Journal of Environmental Science and Health A*. 42(6): 697-706. (PMID: 17473995).

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Hokanson, R, W. Hanneman, M. Hennessey, K. C. Donnelly, T. J. McDonald, R. Chowdhary, and D.L. Busbee. 2006. DEHP, bis(2)-ethylhexyl phthalate, alters gene expression in human cells: possible correlation with initiation of fetal developmental abnormalities. *Human and Experimental Toxicology.* 25 (12) 687-695. (PMID: 17286146).

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Ottinger, S. Barhoumi, R., McKenzie, K.S., McDonald, T., Burghardt, R, Huebner, H.J., and Phillips, T.D. 2005. FIA/MS analysis of temporally ozonated benzo(a)pyrene and pyrene and their reaction products: Inhibition of gap junction-mediated intercellular communication. *Chemosphere Vol. 60,* 1025-1033.

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## **BOOK CHAPTERS**

Sharma, V.K., Sohn, M., and McDonald, T.J. (2019). Remediation of Selenium in Water: A Review. In: Satinder Ahuja ed. *Advances in Water Purification Techniques – Meeting the Needs of Developed and Developing Countries*. Elsevier Inc., Cambridge MA pp 203-218.

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## POSTERS AND PRESENTATIONS

“Temporal and Spatial Analysis of Poly/perfluoroalkyl Substances in Houston Ship Channel Following Firefighting Foam Deployment at the Intercontinental Terminal Company Fire”. Aly, N., Luo, Y.S., Liu, Y., Casillas, G., McDonald, T., Kaihatu, J., Jun, M., Ellis, N., Gossett, S., Dodds, J., Baker, E.S., Chiu, W.A. and Rusyn, I. SRP Annual Meeting, Seattle, WA. Nov 2019.

“Passive dosing methods for in vitro testing of UVCB substances”. Roman-Hubers, A. Chen, Z., Liu, Y., McDonald, T., Wade, T., Lyon, D., Chiu, W., and Rusyn, I. SRP Annual Meeting, Seattle, WA. Nov 2019.

“A multi-tissue organotypic human in vitro model for rapid identification of environmental chemicals and mixtures”. Chen Z, Yanagisawa L, Liu Y, Camargo K, Casillas G, McDonald TJ, Horney JA, Chiu WA, Rusyn 58th Annual Meeting of the Society of Toxicology; 2019 Baltimore Maryland, March

“Enhanced Oxidation of Organic Pollutants in water by activated Ferrate ((VI): Electron-transfer versus oxygen-atom transfer reductants. Mingbao Feng, C Jinadatha, T.J. McDonald, V.K. Sharma. 2019. American Chemical Society National Meeting, Orlando, Florida, March 3-9,

“Assessing Environmental Justice Neighborhood Soils for Contamination after Hurricane Harvey Flooding”. Jennifer Horney, Gaston A Casillas, Kahler W. Stone, Thomas J. McDonald. 2019. Soil Science Society of America International Meeting. January, San Diego, California.

“A longitudinal assessment of PAHs in Houston parks after Hurricane Harvey”. Gaston Casillas, Kahler Stone, Thomas McDonald, Jennifer A. Horney. 2018. NIEHS Superfund Annual Meeting, Sacramento CA, November.

“Post-Hurricane Harvey Sediments: PAH Distributions and Relative Sources”. Krisa M Camargo, Anthony H Knap, Timothy M Dellapenna, Thomas J McDonald, Weihsueh A Chiu. 2018. NIEHS Superfund Annual Meeting, Sacramento CA, November.

“Grouping Complex Substances and Mixtures using Untargeted Exposomics Data”. Melis Onel, Burcu Beykall, Kyle Ferguson, John House, Thomas J. McDonald, Rajib Mukherjee, Lan Zhou, Fred A. Wright, Ivan Rusyn, Efstratios N. Pistikopoulo. 2018. NIEHS Superfund Annual Meeting, Sacramento CA, November.

“Environmental Sampling Strategies for Disasters: Lessons Learned from Hurricane Harvey Response”. Krisa Camargo, Mikyoung Jun, Jennifer Horney, Ivan Rusyn, Weihsueh Chiu, Thomas J. McDonald, and Anthony Knap. 2017. NIEHS Superfund Annual Meeting, Philadelphia PA December.



“Titanium Dioxide and Zinc Nano-particles: Disinfection byproduct formation in synthetic freshwater.” Leslie Cizmas, Cole Gray, Virender K. Sharma, and Thomas J. McDonald. 2017. American Chemical Society, San Francisco, April 2017.

“Validation of novel biomarkers of traffic-related ambient air pollution exposure in a susceptible south Texas population.” Jairus Pulczynski, Krystal Rychlik., Tara Ramani, Thomas McDonald, Genny Carrillo-Zuniga, Kirsten Koehler, Josias Zietsman, and Natalie Johnson. American Chemical Society, Philadelphia, PA, 2016. (Invited Talk)

“Inter-individual variability in the relationship between toxicokinetics and toxicodynamics of tetrachloroethylene.” Joseph A. Cichocki, Shinji Furuya, Grace Chappell, Abhishek Venkatratnam, Stephen Sweet, Terry Wade, Anthony Knap, Thomas McDonald, Weihsueh Chiu, David Threadgill, Ivan Rusyn. 2016 Society of Toxicology National Meeting in New Orleans, LA.

“Public Health and the Environment” T.J. McDonald. 2013. Chemistry Department –University of California – Chemistry Career Seminar Series.

“Neuromotor Function and Work Injury Risk among Hispanic Adolescent Farmworkers: Pilot test Findings.” E.M. Shipp, A. Bhattacharya, C. Cox, S. Maindale, L. Jiang, Y. Morado, and T.J. McDonald.” 2013 ASHCA National Conference, Minneapolis MN.

“DNA Damage in Cichlid fish and Environmental Forensic Analysis of the Origin of PAHs at a Guatemalan oil Field.” C.W. Theodorakis, J.W. Bickham, K.C. Donnelly, T.J. McDonald, and P. Wilinik. 2013 SETAC National Meeting, Nashville, TN

“Distribution of Oil Seepage in the Northern Gulf of Mexico.” T.J. McDonald, J. M. Brooks, M.C. Kennicutt, II, and B.B. Bernard. 2012 ACS Spring National Meeting, San Diego California.

“Selected Topics in Environmental Health Applied to Family Medicine.” T.J. McDonald, L. Cizmas, and J. Ross. 2011 Society of Toxicology National Meeting in Washington DC.

“Border Environmental Health Toxicology and Education Research Program” T.J. McDonald, L. Cizmas. 2011 UTHSC-San Antonio CME Conference in Laredo Texas.

“MC 252 Riser Fluid: Change in Chemical Composition after Deep Water Release in the Gulf of Mexico”. R. Barrick, A. Jeffrey, and T. J. McDonald 2010 SETAC Annual Meeting, Portland Oregon.

“Integrating Health Promotion into Biomarker Studies”. K.C. Donnelly, S. Safe, R.L. Autenrieth, L. Cizmas, and T.J. McDonald. 2009 SOT Annual Meeting, Salt Lake City, UT

“A SPME-based passive sampler for sediment quality assessment of regulated organic contaminants: lab and field studies. K. Maryu, D. Tskuda, W. Lao, V Raco-Rands, D. Greenstein,





D. Diehl, M. Kelley, B. Duncan, and T.J. McDonald. 2009 SETAC Annual Meeting, New Orleans, LA.

“Methods for Monitoring Environmental Contamination in Central and Eastern Europe.” T.J. McDonald, Lingenfelter, R., Z. Naufal, C. Naspinski, R.L. Autenrieth, A. Islamzadeh, K.C. Donnelly. AECEH Bi-Annual Meeting, Istanbul Turkey. March 2008.

Lingenfelter, R., Z. Naufal, L. Cizmas, C. Naspinski, L.Y. He, G.D. Zhou, T.J. McDonald, G. Denoux, R.L. Autenrieth, A. Mektiev, A. Islamzadeh, K.C. Donnelly. (2006). Measurement of exposure to complex mixtures of polycyclic aromatic hydrocarbons in human populations. *The Toxicologist*. 90(1): 255

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“Sediment and Tissue Hydrocarbons – Effects of oil and gas exploration development.” T.J. McDonald, J.M. Brooks and A.D. Hart. MMS ITM Meeting, January 2005 (New Orleans, LA).

“Long-term temporal and spatial patterns of environmental contaminants at NOAA National Status and Trend sites.” S. J. McDonald, E.N. Powell, J.A. Ramirez, T.J. McDonald, D.S. Frank, R.R. Fay and J. M. Brooks SETAC Annual Meeting November 2004 (Portland Oregon).

“Contaminants in environmental samples from residential areas in Sumgayit, Azerbaijan.” T.J. McDonald, K.C. Donnelly, J. Bickham, and R.L. Autenrieth. NIEHS Conference – Central and Eastern European Environmental Health Conference (October 2004 – Prague Czech Republic).

“Genotoxicity assessment of wood-preserving waste contaminated sediment and groundwater undergoing bioremediation.” S. Garcia, K.C. Donnelly, T.J. McDonald, R.L. Autenrieth, and D. L. Golden). NIEHS Conference on Bioremediation, June 2002.

“Genotoxicity and chemical analysis of wood-preserving waste.” (L. Cizmas, K.C. Donnelly, T. J. McDonald, and R. Barhoumi). SETAC, April 2001.

“Differential biodegradation of polynuclear aromatic hydrocarbons.” (T.J. McDonald, S. Aldrett, J.S. Bonner, R.L. Autenrieth, and P.M. Morris). Fourth International Battelle - In-Situ and On-Site Bioremediation Symposium, New Orleans, Louisiana, April 1997.

“Macroseepage of oil and gas on the west Africa margin.” (J. M. Brooks, W.R. Brumbaugh, M. Brandau, S.W. Brown, W.R. Bryant, and T.J. McDonald). London, England, February 1997.

“Petroleum degradation by a defined microbial community.” (P.J. Morris, R. Frontera-Suau, F.D. Bost, R. Samuel, A. Stack, and T.J. McDonald). ACS 211th National Meeting, New Orleans, Louisiana, March 24-28, 1996.



"Extensive biodegradation of fossil fuels extracted from soil and sediments." (P. J. Morris, M.E. Shelton, T.J. McDonald, and P.J. Chapman). Gordon Research Conference on Applied Microbiology, Plymouth, New Hampshire, 2-7 July 1995.

"Assessing bioremediation of crude oil in soils and sludges." (S. J. McMillen, N. R. Gray, J. M. Kerr, A. G. Requejo, T. J. McDonald and G.S. Douglas). Third International In Situ and On-Site Bioremediation Symposium. San Diego, California April 1995.

"Characterization of contaminant sources in marine sediments using multivariate analysis: An approach to an environmental assessment." (A. G. Requejo, T. J. McDonald, G. J., Denoux, M. C. Kennicutt, II, and R. Sassen). 4th Latin American Congress on Organic Geochemistry, Bacaramanga, Colombia, 1994.

"Significance of two- and three-ring aromatic hydrocarbon distributions on northern Gulf of Mexico oils." (A. G. Requejo, R. Sassen, M. C. Kennicutt, II, T. J. McDonald, G. J., Denoux, and J. M. Brooks.) 4th Latin American Congress on Organic Geochemistry, Bacaramanga, Colombia, 1994.

"Origin of high sulfur oils, Gulf of Mexico continental slope." (R. Sassen, A. G. Requejo, T. J. McDonald, M. C. Kennicutt, II, and J. M. Brooks.) GCAGS-GCS/SEPM Annual Convention, Austin Texas 1994.

"Quantitation of Saturated and Aromatic Biological Markers by GC/MS." (T. J. McDonald, M. C. Kennicutt, II, A. G. Requejo, and G. J. Denoux.) ACS National Meeting, Washington D.C., August 1994.

"Quantitation of Aromatic Hydrocarbons in Petroleum: A New Look at an Old Approach." (A. G. Requejo, N. R. Gray, T. J. McDonald, G. J. Denoux, R. Sassen, and J. M. Brooks.) ACS National Meeting, Washington D.C., August, 1994.

"Utility of Biological Markers and Aromatic Hydrocarbons in Correlating Submarine Seeps and Assessing Their Origin and Maturation Level." (A. G. Requejo, R. Sassen, T. J. McDonald, M. C. Kennicutt, II, G. J. Denoux, and J. M. Brooks.) AAPG Hedberg Conference on Near Surface Expression of Hydrocarbon Migration, Vancouver British Columbia, April 1994.

"Quality assurance/quality control of large litigation sensitive data sets: Examples from the Exxon Valdez oil spill." (T. L. Wade, J. M. Brooks, M. C. Kennicutt, II, T. J. Jackson, T. J. McDonald, and G. J. Denoux.) ASTM Meeting, Atlanta, Georgia 1993.

"Quantitative determination of steranes, triterpanes, and aromatized steranes in petroleum." (Thomas J. McDonald, M. C. Kennicutt, II, T. J. Jackson, G. J. Denoux, P. A. Comet and J. M. Brooks). ASMS 39th National Meeting, Nashville, TN, June 1991.

"Oil spills in polar climates: The Bahia Pariso accident." (M. C. Kennicutt, II, S. T. Sweet, T. J., McDonald, and G. J. Denoux.). Offshore Technology Conference, Houston Texas 1991.



"The effects of the 1990 Galveston Bay oil spill on hydrocarbon contamination in aquatic organisms." (J. M. Brooks, T. L. Wade, S. J. McDonald, D. L. Wilkinson, M. C. Kennicutt, II, and T. J. McDonald). Offshore Technology Conference, Houston, Texas 1991.

"Oysters as biomonitors of oil in the ocean." (T. L. Wade, J. M. Brooks, M. C., Kennicutt, II, T. J., McDonald, and G. J. Denoux). Offshore Technology Conference, Houston, Texas 1991.

"Biomarker Abundance's and Fingerprints as Paleodepositional Signals in Extensively Altered Oils from Sarita, Eugene Island-330, and South Marsh Island-128 Fields, Gulf of Mexico Region". (J. K. Rafalska, P. A. Comet, M. C. Kennicutt, II, T. J. McDonald, and J. M. Brooks). GSA National Meeting, Dallas Texas, October 1990.

"Source and maturity of organic matter in selected Prydz Bay sediments Site 739C and Site 741A, ODP Leg 119". (T. J. McDonald, M. C. Kennicutt II, and J. K. Rafalska), Southern Regional Geochemistry Meeting, May 1990.

"Quantitative Determination of Hopanes, Steranes, and Aromatized Steranes by GC/MS" (T. J. McDonald, M. C. Kennicutt II, J. M. Brooks, and P. A. Comet), Invited Paper - ASTM Meeting on Gas Chromatography, Houston, Texas, October 1989.

"Hydrocarbons in Bering Sea Sediments" (M. C. Kennicutt II, J. M. Brooks, and T. J. McDonald), Poster Session at the 4th International Meeting on Organic Geochemistry, Paris, France, September 1989.

"Volatile Organic Compounds in Gulf of Mexico Sediments" (T. J. McDonald, M. C. Kennicutt II, J. M. Brooks, and R. R. Fay), Poster Session at the National GSA Meeting, Denver Colorado, November, 1988.

"Relationship between oil and gas seepage and gas hydrates in the Gulf of Mexico" (J. M. Brooks, H. B. Cox, T. J. McDonald, and M. C. Kennicutt II), 12th Organic Geochemistry Meeting, Julich, Germany, Sept. 1985.

"Thermogenic Gas Hydrates in the Gulf of Mexico" (M.C. Kennicutt II, J. M. Brooks, R. R. Fay, T. J. McDonald, and R. Sassen). Poster session at the Gordon Research Conference on Organic Geochemistry, Plymouth, New Hampshire, 20-24 August 1984.

"Gas Hydrates of the Middle America Trench - DSDP/IPOD Leg 84" (K. A. Kvenvolden and T. J. McDonald). DOE Meeting on Gas Hydrates, Morgantown, West Virginia, 1983.

"Volatile Organic Compounds in the Marine Environment" (T. J. McDonald, J. M. Brooks and M. C. Kennicutt II). Southern Regional Organic Geochemistry Meeting, 19 April 1983.



"The Effects of Dispersants on Volatile Hydrocarbon Incorporation into the Water Column" (T. J. McDonald, J. M. Brooks and M.C. Kennicutt II). Symposium on Oil Spill Dispersant: Five Years of Research, Miami, Florida, 12-13 October 1982.

"Gas hydrates of the Middle America Trench Region: DSDP/IPOD Leg 84" (T. J. McDonald, J. M. Brooks, M. C. Kennicutt II, and K. A. Kvenvolden). Southern Regional Geochemistry Meeting, April 1982.

"Volatile Organic Studies in Gulf of Mexico Estuarine and Coastal Ecosystems" (J. M. Brooks, M. C. Kennicutt II, T. J. McDonald, and J. K. Kim). Joint AGU and ASLO Meeting, San Antonio, Texas, 16-19 February 1982.

## CONFERENCE PROCEEDINGS

Gray, N.R., McMillen, S.J., Requejo, A.G., Kerr, J.M., Denoux, G.J., and McDonald, T.J. (1993). Rapid characterization of PAH's in oils and soils by Total Scanning Fluorescence. First SPE/EPA Joint Conference, SPE/EPA Exploration and Production Environmental Conference 1993. pp. 465-475.

Wade, T.L. Jackson, T.J., McDonald, T.J., Wilkinson, D.L., and Brooks, J.M. (1993). Oysters as biomonitors of the Apex Barge oil spill. In: International Oil Spill Conference (Prevention, Preparedness and Response). pp. 313-317.

Kennicutt, M.C. II, Sweet, S.T., McDonald, T.J., and Denoux G.J. (1991). Oil spills in polar climates: The Bahia Paraiso accident. Proceedings 23rd Offshore Technology Conference, pp. 239-247.

Wade, T.L., Brooks, J.M., Kennicutt, M.C. II, McDonald, T.J., and Denoux G.J. (1991). Oysters as biomonitors of oil in the ocean. Proceedings Offshore Technology Conference, pp. 275-280.

Kvenvolden, K.A. and McDonald, T.J. (1986). Organic Geochemistry aboard the *JOIDES Resolution* - An Assay. Technical Note #6 pp. 147.

Kvenvolden, K. A., McDonald, T.J., (1982). Gas hydrates in continental margin sediments of the Middle America Trench - Summary of results from DSDP/IPOD Leg 84: Methane Hydrates Workshop, Technical Proceedings, DOE/METC/82-49, pp. 82-91.

## SELECTED MAJOR PROJECT EXPERIENCE

- ONR ANWAP Projects, Arctic Nuclear Waste Assessment Projects-environmental assessment study, June 1993 – Sept. 1996, ~ \$2.5 million. (Co-PI)



- EPA EMAP-NC Louisiana Province, Field sampling, analysis and interpretation of environmental data, Apr. 1991 – Mar. 1994, ~\$0.86 million. (Co-PI)
- TX General Land Office NRI Study, Field sampling, analysis and interpretation of environmental data in Texas Estuaries, Jun. 1994 – Aug. 1995, ~ \$0.6 million/year. (Co-PI)
- US Fish & Wildlife Service Trace Organic Studies, Contaminant analytical services for analysis of tissues, sediments, plants and water, Jan. 1994 – Jan. 1995, ~\$2.2 million. (Co-PI)
- TX General Land Office. Bioremediation Studies of petroleum contaminated coastal marshlands. Jan. 1996 – August 2003. ~\$1.5 million/year. (Co-PI)
- EPA, Bioavailability and Risk Assessment of Complex Mixtures November 1996 – November 1999. ~\$0.45 million. (Co-PI)
- TX General Land Office Analytical Support for Identifying the Source of Spilled Crude Oil and Refined Petroleum Products. September 1998 – August 2005. ~\$20,000/year. (PI)
- Chemical Land Holdings. “Passaic River Study Area Project.” June 1999 –January 2001. ~\$280,000. (PI)
- NOAA NS&T Mussel Watch Project, Field sampling, analysis and interpretation of environmental data, October 1999 – Oct.2009, ~\$0.5 million/year. (Co-PI)
- NIH Superfund Research Program, “Procedures to Assess the Hazards of a Superfund Site”, April 2000 – March 2005, ~\$75,000/year. (Co-PI)
- Entrix, Inc. “PEPCo Chalk Point Damage Assessment.” April 2000 – May 2010. ~\$500,000. (PI)
- Mineral Management Service, “Effects of Oil and Gas Exploration and Development” Jan. 2000– Jan. 2005, ~\$80,000. (Co-PI)
- USEPA, “Analysis of Multimedia samples.” February 2002 - December 2002. ~\$50,000. (PI)
- US Fish & Wildlife Service, “Trace Organic Studies, Contaminant analytical services for analysis of tissues, sediments, plants and water.” Nov. 2002 – Oct. 2012, ~\$2.2 million. (Co-PI)
- Yukon-Kuskokwim Health Corporation, “The Cape Romanof Contaminant Migration and Subsistence Receptor Study.” June 2002 – August 2004. ~\$160,000. (PI).
- Environ, Inc. “AK Steel Middletown Ohio PCB Project.” December 2004 - May 2009. ~\$220,000. (PI).
- NIH Superfund Research Program, “Procedures to Assess the Hazards of a Superfund Site”, April 2005 – March 2010, ~\$80,000/year. (Co-PI).
- NIEHS/CERH, “Cumulative Exposure to Endocrine Disrupting Chemicals (EDCs) and Effects on Estrogenic/Anitestrogenic Activity and Gene Expression.” April 2005 – March 2006. \$36,000/year. (PI).
- Mineral Management Service. Investigations of Chemosynthetic Communities on the Lower Continental Slope of the Gulf of Mexico. September 2005 – June 2009. (Co-PI).
- Texas Commission on Environmental Quality. August 2007 – September 2009, \$100,000. Houston Air Toxics Biomarkers of Exposure Study (HATBES). (Co-PI).
- NOAA NS&T Mussel Watch Project, Field sampling, analysis and interpretation of environmental data, October 2009 – October 2014, ~\$0.5 million/year. (Co-PI).
- DHHS-HRSA. Public Health Traineeship Program. 7/1/09 - 6/30/11. \$18,000/year (PI),
- DHHS-HRSA. Public Health Traineeship Program. 9/1/09 – 8/30/12. \$35,000 (total) (PI),
- CDC/ATSDR/DHHS. Border Health and Toxicology Educational Research Program. 9/1/2009 – 8/31/2012. \$250,000/year. (PI),



- DHHS-HRSA. Public Health Traineeship Program. 7/1/11 - 7/30/12. \$18,000/year (PI).
- USEPA- Office of Children's Health Protection. "Building Environmental Awareness for Teachers and Parents in Head Start Centers in Webb County, Texas". 10/1/11 – 9/30/12. \$100,000/year (PI).
- DHHS-HRSA. Public Health Traineeship Program. 7/1/12 - 7/30/13. \$17,000/year (PI)
- DOD-Army-Fort Sam Houston. University Affiliation for Principles of Military Preventative Medicine Program of Instruction. (Dr. Tony Rene PI) Role is a CO-I. 10/1/2012 – 9/30/2016. \$693,353 total award.
- DHHS-HRSA. Public Health Traineeship Program. 9/1/14 – 8/31/15. \$148,000/year (PI).
- DHHS-HRSA/RHRC. 9/1/2016-8/31/2018. \$700,000/year (Co-I).
- T32 Regulatory Science in Environmental Health-Training Program. NIEHS. 6/1/16-5/31/2021. \$255,000/year (Mentor).
- NIEHS Superfund Research Program (P42), "Comprehensive tools and models for addressing exposure to mixtures during environmental emergency-related contamination events." April 2017 – March 2022, \$58,000/year. (PI research Translation Core).
- NIEHS Superfund Research Program, "Comprehensive tools and models for addressing exposure to mixtures during environmental emergency-related contamination events." Supplemental funding - Hurricane Florence and Michael. December 2018 – March 2022, \$206,810 (total) (Co-PI).
- National Academy of Sciences, Engineering and Medicine, "Prioritizing Risks from Oil Spills: Supporting Decisions with Read-Across Using 21st Century Exposure and Toxicological Sciences." December 2018 – December 2019, \$14,910 (Co-PI).

## **PROFESSIONAL MEMBERSHIPS**

- Sigma XI - Full Member
- American Chemical Society
- SETAC Member
- Delta Omega – Alpha Tau
- Member of San Jacinto Junior College Industrial Advisory Board. January 10, 2010- Present. Appointed from San Jacinto College.
- Member of the Advisory Council for the Center for Transportation Safety of the Texas Transportation Institute. January 2011 to January 2012. Appointed from TTI.

## **ACTIVITIES AND AWARDS**

- Regents Professor, Texas A&M University 2019.
- Fellow, Institute for Sustainable Communities, Texas A&M University. 2018.
- The Association of Former Students of Texas A&M University, Distinguished Achievement Award at the College Level for Teaching, Fall 2015.
- Editorial Board Member, Regional Studies in Marine Science, Elsevier. July 2014 to present.
- Member of Advisory Council for the TTI "Center for Transportation Safety". Feb. 2011-Feb. 2013.
- Award for Excellence in Leadership and Service, Texas A&M Health Science Center, January 20, 2010.
- Member of San Jacinto Junior College Industrial Advisory Board. January 10, 2010- Present.



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- Session Co-Chairperson: Geochemistry Session on Quantitative Determinations of Biological Markers, ACS National Meeting 1994.
- Outstanding Graduate Student Award - Division of Environmental Chemistry, American Chemical Society 1988.
- Organic Geochemist, Ocean Drilling Project, Leg 104, 1985.
- Organic Geochemist, Deep Sea Drilling Project, Leg 84, 1982.