

Wayne State University
Institute of Environmental Health Sciences
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Christopher D. Kassotis, Ph.D.

Assistant Professor

Interests: endocrinology, toxicology, mixtures

<http://kassotislab.org>

EDUCATION

Ph.D., Biological Sciences, focus: Endocrinology, (2010 – 2015)
University of Missouri, Columbia, MO
Advisors: Susan C. Nagel and Frederick S. vom Saal
Dissertation: *Unconventional Oil and Gas Extraction as a Novel Source of Endocrine Disrupting Chemicals to Water and the Potential for Adverse Human and Animal Health Outcomes*

Graduate Certificate, Science and Public Policy, (2010 – May 2015)
University of Missouri, Columbia, MO
Advisor: Michael A. Diamond

B.S. Biology, (2004 – 2008)
Keene State College, Keene, NH
Advisor: Karen R. Cangialosi

EMPLOYMENT HISTORY

Assistant Professor September 2020 – current
Institute of Environmental Health Sciences and
Department of Pharmacology, School of Medicine
Wayne State University, Detroit, MI

K99/R00 Postdoctoral Research Scholar May 2019 – August 2020
Heather Stapleton Laboratory
Nicholas School of the Environment
Duke University, Durham, NC

NRSA Postdoctoral Research Scholar April 2017 – May 2019
Heather Stapleton Laboratory
Nicholas School of the Environment
Duke University, Durham, NC

Postdoctoral Research Associate September 2015 – April 2017
Heather Stapleton Laboratory
Nicholas School of the Environment
Duke University, Durham, NC

- Postdoctoral Research Associate May 2015 – August 2015
Susan Nagel Laboratory
Department of Obstetrics, Gynecology, and Women's Health.
University of Missouri, Columbia, MO
- Environmental Protection Agency STAR Fellow August 2012 – May 2015
Susan C. Nagel Laboratory
Department of Obstetrics, Gynecology, and Women's Health.
University of Missouri, Columbia, MO
- Graduate Research Assistant June 2012 – August 2012
Susan C. Nagel Laboratory
Department of Obstetrics, Gynecology, and Women's Health.
University of Missouri, Columbia, MO
- Graduate Teaching Assistant January 2012 – May 2012
Mammalian Reproductive Biology, Biological Sciences #4984
University of Missouri, Columbia, MO
- Graduate Research Assistant January 2011 - December 2011
Susan C. Nagel Laboratory
Department of Obstetrics, Gynecology, and Women's Health.
University of Missouri, Columbia, MO
- Graduate Teaching Assistant August 2010 - December 2010
Introductory Biology Laboratory, Biological Sciences #1500
University of Missouri, Columbia, MO
- Analytical Chemist II June 2008 - June 2010
Taylor Technology, Princeton, NJ

PUBLICATIONS

Under review:

Kassotis, CD*(corr), Hoffman, K, Kim, SM, Schlezinger, JJ, Bovolín, P, Cottone, E, Saraceni, A, Scandiffio, R, Ermler, S, Legler, J, Atlas, E, Leingartner, K, Pu, Y, Veiga-Lopez, A, Völker, J, Mesmar, F, Bondesson, M, Fenton, S, Chappell, V, and Stapleton, HM. Reproducibility of Adipogenic Responses to Metabolic Disrupting Chemicals in the 3T3-L1 Pre-adipocyte Model System: An Interlaboratory Study. *In review*.

Filer, D, Hoffman, K, Sargis, RM, Trasande, L, and **Kassotis, CD*(corr)**. Building a Predictive Model with ToxCast Data to Evaluate Potential Metabolic Disruption by Environmental Chemicals. *In revision*.

Herkert, NJ, Kassotis, CD, Ferguson, LM, and Stapleton, HM. Perfluoroalkyl substances present in defogging solutions. *In revision*.

In preparation (all data collected; manuscript being written/edited):

Kassotis, CD*(corr), Chiang, Y-T, Knuth, M, and Kullman, SM. Nonylphenol Ethoxylates Exacerbate Adipose Development in the Zebrafish. *In preparation*.

Kirsten E. Overdahl, Christopher D. Kassotis, Kate Hoffman, Gordon Getzinger, Allison Phillips, Stephanie Hammel, P. Lee Ferguson, Heather M. Stapleton. Characterizing azobenzene disperse dyes and related compounds in house dust: implications for human exposure. *In preparation*.

Heindel, JJ, ..., Kassotis, CD, ... et al. Metabolic Disrupting Chemicals: A Comprehensive Review of Mechanisms and Effects. *In preparation*.

Published (32 total):

Kassotis, CD*(corr) and Trasande, L. Chapter II. Endocrine Disruptor Global Policy. Invited Book chapter. Endocrine Disrupting Chemicals, Advances in Pharmacology, volume 92; Elsevier. 2021.

Kassotis, CD, Hoffman, K, Phillips, AL, Webster, TF, and Stapleton, HM. Characterization of Adipogenic, PPAR γ , and TR β Activities in House Dust Extracts and Their Associations with Organic Contaminants. *Science of the Total Environment*. 2020. 758: 143707.

Kassotis, CD, Hoffman, K, Hammel, SC, Herkert, NJ, Kullman, SW, Sosa, JA, and Stapleton, HM. Thyroid Receptor Antagonism of Mixtures Isolated from Personal Silicone Wristbands: Associations with Papillary Thyroid Cancer. *Environmental Science & Technology*. 2020; 54(23): 15296-15312.

Kassotis, CD, Harkness, JS, Hoffman, K, Vu, DC, Lin, C-H, Cinnamon, KM, Vengosh, A, Tillitt, DE, and Nagel, SC. Endocrine Disrupting Activities and Inorganic Geochemistry of Surface and Groundwater are Associated with Unconventional Oil and Gas Wells and Wastewater Spills. *Science of the Total Environment*. 2020. 748: 142236.

Kassotis, CD, Vandenberg, L, Demeneix, B, Slama, R, Trasande, L. Endocrine Disrupting Chemicals: Economic, regulatory, and policy implications. *Lancet Diabetes & Endocrinology*. 2020; 8(8): 719-730.

Muncke, J, Andersson, A-M, Backhaus, T, Boucher, JM, Almroth, BC, Castillo, A, Chevrier, J, Demeneix, BA, Emmanuel, JA, Fini, J-B, Gee, D, Geueke, B, Groh, K, Heindel, JJ, Houlihan, J, Kassotis, CD, Kwiatkowski, CF, Lefferts, LY, Maffini, MV, Martin, OV, Myers, JP, Nadal, A, Nerin, C, Pelch, KE, Fernández, SR, Sargis, RM, Soto, AM, Trasande, L, Vandenberg, LN, Wagner, M, Wu, C, Zoeller, RT, and Scheringer, M. Impacts of food contact chemicals on human health: a consensus statement. *Environmental Health*. 2020; 19: 25.

Nagel, SC, Kassotis, CD, Vandenberg, LN, Lawrence, BP, Robert, J, and Balise, VD. Developmental exposure to a mixture of unconventional oil and gas chemicals: A review of effects on adult health, behavior, and disease. *Molecular & Cellular Endocrinology*. 2020; 513: 110722.

McElroy, JA, Kassotis, CD, and Nagel, SC. In our backyard: Beliefs about fracking, science, and health by community members. *New Solutions*. 2020; 30(1): 42-51.

Balise, VD, Cornelius-Green, J, Parmenter, B, Baxter, S, Kassotis, CD, Rector, RS, Thyfault, JP, Palanza, P, Ruiz, D, Sargis, R, and Nagel, SC. Developmental Exposure to a Mixture of Unconventional Oil and Gas Chemicals Increased Risk-Taking Behavior, Activity and Energy Expenditure in Aged Female Mice After a Metabolic Challenge. *Frontiers in Endocrinology*. 2019; 10: 460.

Balise, VD, Cornelius-Green, J, Kassotis, CD, Rector, RS, Thyfault, JP, and Nagel, SC. Preconceptional, Gestational, and Lactational Exposure to an Unconventional Oil and Gas Chemical Mixture Alters Energy Expenditure in Adult Female Mice. *Frontiers in Endocrinology*. 2019; 10: 323.

Kassotis, CD, Kollitz, EM, Hoffman, K, Sosa, JA, and Stapleton, HM. Thyroid Receptor Antagonism as a Contributory Mechanism for Indoor House Dust Extract-Induced Adipogenesis in 3T3-L1 Cells. *Science of the Total Environment*. 2019; 666, 431-444.

Kassotis, CD*(corr), Hoffman and Stapleton, HM. Endocrine-Mediated Mechanisms of Metabolic Disruption and New Approaches to Examine the Public Health Threat. *Frontiers in Endocrinology*. 2019; 10 (39), 1-22.

Kollitz, EM, Kassotis, CD, Hoffman, K, Ferguson, PL, Sosa, JA, and Stapleton, HM. Chemical Mixtures Isolated From House Dust Disrupt Thyroid Receptor β (TR β) Signaling. *Environmental Science & Technology*. 2018; 52 (20), 11857-11864.

Kassotis, CD, Nagel, SC, and Stapleton, HM. Unconventional Oil and Gas Chemicals and Wastewater-Impacted Water Samples Promote Adipogenesis via PPAR γ -Dependent and Independent Mechanisms in 3T3-L1 Cells. *Science of the Total Environment*. 2018; 640-641, 1601-1610.

Kassotis, CD, Vu, DC, Vo, PH, Lin, C-H, Cornelius-Green, JN, Patton, S, and Nagel, SC. Endocrine Disrupting Activities and Organic Contaminants in Wyoming Groundwater Associated with Unconventional Oil and Gas Operations. *Archives of Environmental Contamination and Toxicology*. 2018; 75 (2), 247-258.

Boule, L, Chapman, T, Hillman, S, Georas, S, Kassotis, CD, Balise, VD, Nagel, SC, and Lawrence, BP. Developmental exposure to chemicals associated with unconventional oil and gas extraction alters CD4+ T cell populations in multiple immune responses. *Toxicological Sciences*. 2018; 163 (2), 639-654.

Sapouckey, SS, Kassotis, CD, Nagel, SC, and Vandenberg, LN. Prenatal Exposure to Unconventional Oil and Gas Operation Chemical Mixtures Altered Mammary Gland Development in Adult Female Mice. *Endocrinology*. 2018; 159 (3), 1277-1289.

Luz, AL, Kassotis, CD, Stapleton, HM, and Meyer, JN. The high-production volume fungicide pyraclostrobin induces triglyceride accumulation associated with mitochondrial dysfunction, and promotes adipocyte differentiation independent of PPAR activation, in 3T3-L1 cells. *Toxicology*. 2018; 393, 150-159.

Kassotis, CD, Kollitz, EM, Ferguson, PL, and Stapleton, HM. Ethoxylated Alkylphenol and Alcohol Surfactants Promote Adipogenesis in 3T3-L1 Cells. *Toxicological Sciences*. 2018; 162 (1), 124-136.

Kassotis, CD, Hoffman, K, and Stapleton, HM. Characterization of Adipogenic Activity of Semi-Volatile Indoor Contaminants and House Dust. *Environmental Science & Technology*. 2017; 51(15), 8735-8745.

Kassotis, CD, Masse, L, Kim, S, Schlezinger, JJ, Webster, TF, and Stapleton, HM. Characterization of Adipogenic Chemicals in Three Different Cell Culture Systems: Implications for Reproducibility Based on Cell Source and Handling. *Scientific Reports*. 2017; 7, 42104.

Kassotis, CD, Klemp, KC, Bromfield, JJ, Meng, C-X, Besch-Williford, CL, Pinatti, L, Zoeller, RT, Balise, VD, Isiguzo, CI, Williams, MA, Tillitt, DE, and Nagel, SC. Endocrine Disrupting Activity of Hydraulic Fracturing Chemicals and Adverse Health Outcomes Following Prenatal Exposure in Female Mice. *Endocrinology*. 2016; 157(9): 3469-3481.

Balise, VD, Meng, C-X, Cornelius-Green, J, Kassotis, CD, Kennedy, R, and Nagel, SC. A systematic review of the association between oil and natural gas extraction processes and human reproduction. *Fertility & Sterility*. 2016; 106(4): 795-819.

Wylie, S, Schultz, K, Thomas, D, Kassotis, CD, and Nagel, SC. Inspiring Collaboration: The Legacy of Theo Colborn's Trans-Disciplinary Research on Fracking. *New Solutions*. 2016; 26(3): 360-388.

Kassotis, CD, Iwanowicz, L, Akob, DM, Cozzarelli, IM, Mumford, A, Orem, WH, and Nagel, SC. Endocrine Disrupting Activities of Surface Water Associated with a West Virginia Oil and Gas Wastewater Disposal Site. *Science of the Total Environment*. 2016; 557-558: 901-910.

Kassotis, CD, Tillitt, DE, Lin, C-H, McElroy, JA, and Nagel, SC. Endocrine Disrupting Chemicals and Oil and Natural Gas Operations: Recommendations to Assess Complex Environmental Mixtures. *Environmental Health Perspectives*. 2016; 124(3): 256-264.

Kassotis, CD, Klemp, KC, Vu, DC, Lin, C-H, Meng, C-X, Besch-Williford, CL, Pinatti, L, Zoeller, RT, Drobni, EZ, Balise, VD, Isiguzo, CJ, Williams, MA, Tillitt, DE, and Nagel, SC. Endocrine Disrupting Activity of Hydraulic Fracturing Chemicals and Adverse Health Outcomes

Following Prenatal Exposure in Male Mice. *Endocrinology*. 2015; 156(12): 4458-4473.

Heindel, JJ, vom Saal, FS, Blumberg, B, Bovolin, P, Calamandrei, G, Ceresini, G, Cohn, BA, Fabbri, E, Gioiosa, L, Kassotis, CD, Legler, J, La Merrill, M, Rizzir, L, Machtinger, R, Mantovani, A, Mendez, MA, Montanini, L, Molteni, L, Nagel, SC, Parmigiani, S, Panzica, G, Paterlini, S, Pomatto, V, Ruzzin, J, Sartor, G, Schug, TT, Street, ME, Suvorov, A, Volpi, R, Zoeller, RT, Palanza, P. Parma Consensus Statement on Metabolic Disruptors. *Environmental Health*. 2015; 14(54): 1-7.

Kassotis, CD, Alvarez, DA, Taylor, JA, Vom Saal, FS, Nagel, SC, and Tillitt, DE. Potential Novel Route of Exposure to Bisphenol A through Characterization of Missouri Waters near Point Sources of Pollution. *Science of the Total Environment*. 2015; 524-525: 384-393.

Bhandari RK, Deem SL, Holliday DK, Jandegian CM, Kassotis CD, Nagel SC, Tillitt DE, Vom Saal FS, and Rosenfeld CS. Effects of the environmental estrogenic contaminants bisphenol A and 17 α -ethinyl estradiol on sexual development and adult behaviors in aquatic wildlife species. *General and Comparative Endocrinology*. 2015; 214: 195-219.

Webb, E, Bushkin-Bedient, S, Cheng, A, Kassotis CD, Balise, V, and Nagel SC. Developmental and reproductive effects of chemicals associated with unconventional oil and natural gas operations. *Reviews on Environmental Health*. 2014; 29(4): 307-318.

Kassotis, CD, Tillitt, DE, Davis, JW, Hormann, AM, and Nagel, SC. Estrogen and Androgen Receptor Activity of Natural Gas Drilling Chemicals and Surface and Ground Water in a Drilling-Dense Region. *Endocrinology*. 2014; 155(3): 897-907.

AWARDS, HONORS, AND FELLOWSHIPS

K99/R00 Pathway to Independence Award, NIEHS	(2019-2024)
Postdoctoral Fellowship, NIEHS National Research Service Award (NRSA)	(2017-2020)
Doctoral Fellowship, Environmental Protection Agency STAR Fellowship	(2012-2015)
Best Postdoctoral Publication Award, Society of Toxicology	(2020)
Mixtures Poster Session Chair, Society of Toxicology Annual Meeting	(2020)
Top Ten Abstracts Award, Mixtures Specialty Section, Society of Toxicology Annual Meeting	(2018)
Endocrine Toxicology Poster Session Chair, Society of Toxicology Annual Meeting	(2018)
Best Postdoctoral Poster Award, EDC-NC Annual Meeting	(2018)
Selected for 2017 Advancing Green Chemistry Science Communication Fellowship	(2017)
Elected as Co-Chair of 2018 Gordon Research Seminar, Environmental Endocrine Disruptors	(2016)
Gordon Research Conference Travel Award, Environmental Endocrine Disruptors	(2016)
Gordon Research Seminar Travel Award, Environmental Endocrine Disruptors	(2016)
Endocrine Society 2015 Meeting Presidential Poster Award	(2015)

Endocrine Society Early Career Forum Travel Award, The Endocrine Society Annual Meeting (2015)
Endocrine Society In-Training and Early Career Travel Grant, Prenatal Programming & Toxicity IV Meeting (2014)
Selected for Endocrine Society 2014 Meeting Presidential Poster Competition (2014)
Graduate Professional Council Travel Award, University of Missouri (2014)
Second Place Poster Award, *Genetics, Evolution, and Environment*, University of Missouri Life Sciences Week (2014)
Kassotis, et al. featured on cover of March 2014 issue of *Endocrinology* (2014)
Honorable Mention, National Science Foundation Graduate Research Fellowship (2012)
Gordon Research Conference Travel Award, Environmental Endocrine Disruptors (2012)
Larry Ewing Memorial Trainee Travel Fund, Society for the Study of Reproduction (2011)
National Society of Collegiate Scholars (Inducted 2004)

GRANT SUPPORT

Ongoing

K99/R00 ES030405 (NIH; NIEHS) 5/2019-5/2024

Role: PI

Title: “Mechanisms of Environmental-Mixture Induced Metabolic Disruption”

This award was designed to expand experience in utilizing the zebrafish model to study adipose physiology as a model for human metabolic dysfunction and assess the role of polyethoxylated surfactants in promoting metabolic dysfunction *in vitro* and *in vivo* as a model for potential human effects, as well as to quantify their role in adipogenic responses by complex environmental samples and identify their underlying molecular mechanisms.

P30 ES020957 Pilot Award (NIH; NIEHS) 10/2020-4/2022

Role: PI

Title: “Enhanced Metabolic Disruption from Co-Exposures to Organic and Inorganic Pollutants”

This pilot award through the CURES P30 Center Grant was designed to generate preliminary data on mixture effects for inorganic and organic contaminants relevant to the Detroit and greater Michigan area through targeted *in vitro* and *in vivo* zebrafish experiments.

Wayne State University Postdoctoral Fellow Support 6/1/2021-5/31/2023

Office of the Vice President for Research Faculty Competition for Postdoctoral Fellows

Role: PI

Title: Metabolic Disruption Potential of Environmental Contaminant Mixtures

Wayne State University Core Facility Support 1/1/2021-3/31/2021
CURES (Center for Urban Response to Environmental Stressors) Core Facility Utilization
Support

Title: Nonylphenol polyethoxylates and metabolic disruption

Role: PI

Pending

UG3/UH3 New Cohorts for Environ Exposures and Cancer Risk (NIH; NCI, NIEHS) 2/2021

Title: Mixtures Of TOxicants With Neoplastic Potential (MOTOWN): The Detroit Cohort

Role: Co-I

R01 Katz (NIH; NIEHS) 6/2021

Role: PI

Title: Environmental impacts on maternal and children's health in residents of Detroit: A One Health Initiative

Completed

F32-ES027320 (NIH; NIEHS) 5/2017-5/2019

Role: PI

Title: "Development of affinity-directed isolation methods to identify novel hormonally active chemicals"

This fellowship was designed to expand experience in analytical chemistry techniques and address research aims to identify causative chemicals present in complex environmental samples contributing to adipogenic responses and to identify the causative mechanistic pathways.

FP-91747101 (US EPA) 6/2012-6/2015

Role: Graduate Student Fellow (EPA STAR)

Title: "Environmentally Relevant Mixtures of Endocrine Disrupting Chemicals"

This fellowship was designed to assess the endocrine disrupting chemicals used in the process of hydraulic fracturing via molecular characterization of commonly-used hydraulic fracturing chemicals, characterization of surface and groundwater near hydraulic fracturing operations, and elucidation of potential adverse outcomes through a developmental exposure study in mice.

PRIMARY RESEARCH PRESENTATIONS AND POSTERS

Platform/Oral Presentations (32 total):

Kassotis, CD. Metabolic Disrupting Chemical Mixtures: Combination Effects Towards Adipogenic Outcomes. **Invited Oral (Virtual) Presentation**. Wayne State University, Metabolic Disease Interest Group. April 21, 2021.

Kassotis, CD. Endocrine Disrupting Chemical Mixtures and Metabolic Health. **Invited Oral (Virtual) Presentation.** Wayne State University, Department of Pharmacology Seminar Series. March 26, 2021.

Kassotis, CD. Environmental Endocrine Disrupting Chemicals and Adverse Metabolic Health. **Invited Oral (Virtual) Presentation.** Wayne State University, Department of Biology Seminar Series. December 14, 2020.

Kassotis, CD., Hoffman, K, Hammel, SC, Herkert, NJ, Kullman, SW, Sosa, JA, and Stapleton, HM. Thyroid Receptor Antagonism of Mixtures Isolated from Personal Silicone Wristbands: Associations with Papillary Thyroid Cancer. **Invited Oral (Virtual) Presentation.** Society for Environmental Toxicology and Chemistry Annual Meeting. Virtual, November 19, 2020.

Kassotis, CD. Endocrine Disrupting Activities Associated with Unconventional Oil and Gas Operations. **Invited Oral Presentation.** Columbia University Virtual Convening on Fracking, Environmental Health, and Gender Justice. October 6, 2020.

Kassotis, CD. Metabolic Disruption Potential of Complex Environmental Mixtures. **Invited Oral Presentation.** Michigan State University, Department of Pharmacology and Toxicology Seminar Series. Virtual, September 23, 2020.

Kassotis, CD. Impacts of Chemical Mixtures Isolated from Household Dust on Metabolic Health. **Invited Oral Presentation.** Young Endocrine Disruptor Researchers Seminar Series via Collaborative on Health and the Environment and Healthy Environment and Endocrine Disruptors. Virtual, July 1, 2020.

Kassotis, CD. From Fracking to Fat Cells: How Environmental Contaminants Can Disrupt Metabolic Health. **Invited Oral Presentation.** University of Michigan, Department of Environmental Health Sciences, School of Public Health. Ann Arbor, MI, February 18, 2020.

Kassotis, CD. From Fracking to Fat Cells: How Environmental Contaminants Can Disrupt Metabolic Health. **Invited Oral Presentation.** University of North Carolina Wilmington, Department of Biology and Marine Biology. Wilmington, NC, January 31, 2020.

Kassotis, CD. From Fracking to Fat Cells: How Environmental Contaminants Can Disrupt Metabolic Health. **Invited Oral Presentation.** Wayne State University, Institute of Environmental Health Sciences Seminar Series. Detroit, MI, October 17, 2019.

Kassotis, CD. From Fracking to Fat Cells: How Environmental Contaminants Can Disrupt Metabolic Health. **Invited Oral Presentation.** Emory University, Department of Environmental Health, School of Public Health. Atlanta, GA, July 18, 2019.

Kassotis, CD. From Fracking to Fat Cells: How Environmental Contaminants Can Disrupt Metabolic Health. **Invited Oral Presentation.** The National Institute of Occupational Safety and Health (NIOSH): Seminar Series. Morgantown, WV, May 8, 2019.

Kassotis, CD. From Fracking to Fat Cells: How Environmental Contaminants Can Disrupt Metabolic Health. **Invited Oral Presentation.** New York University (NYU), Department of Endocrinology and Metabolism. New York City, NY, April 22, 2019.

Kassotis, CD. From Fracking to Fat Cells: How Environmental Contaminants Can Disrupt Metabolic Health. **Invited Oral Presentation.** University of North Carolina -Greensboro: Biological Sciences Seminar Series. Greensboro, NC, April 3, 2019.

Kassotis, CD. From Fracking to Fat Cells: How Environmental Contaminants Can Disrupt Metabolic Health. **Invited Oral Presentation.** University of Massachusetts – Amherst, School of Public Health. Amherst, MA, February 7, 2019.

Kassotis, CD. From Fracking to Fat Cells: How Environmental Contaminants Can Disrupt Metabolic Health. **Invited Oral Presentation.** University of Rochester, School of Medicine & Dentistry. Rochester, NY, January 31, 2019.

Kassotis, CD. Metabolic Disrupting Potential of Unconventional Oil and Gas Operation Chemicals and Mixtures. **Invited Oral Presentation.** The Endocrine Disruption Exchange, Oil and Gas Program Webinar Series. September 4, 2018.
Recording of presentation and PDF of slides available at:
<https://endocrinedisruption.org/audio-and-video/oil-and-gas/webinar-kassotis>

Kassotis, CD., Nagel, Susan C., and Stapleton, Heather M. Endocrine Disrupting Activities Associated with Unconventional Oil and Gas Operations. **Invited Oral Presentation.** International Society of Exposure Science/International Society of Environmental Epidemiology Joint Annual Meeting. Ottawa, Canada, August 28, 2018.

Kassotis, CD. Mechanisms of Metabolic Disruption by Environmental Contaminants and Mixtures. **Invited Oral Presentation.** The Environmental Protection Agency: Emerging Topics Seminar Series. Durham, NC, February 14, 2018.

Kassotis, CD. Mechanisms of Adipogenic Activity of Environmental Contaminants and Mixtures. **Invited Oral Presentation.** Duke University: Integrated Toxicology and Environmental Health Program Seminar Series. Durham, NC, October 13, 2017.

Kassotis, CD. Chemicals in House Dust: Potential Contributors to Obesity and Metabolic Disease. **Invited Oral Presentation.** Collaborative on Health and the Environment: EDC Strategies Partnership, a Teleconference Series. October 18, 2017.
Recording of presentation and PDF of slides available at:
https://www.healthandenvironment.org/partnership_calls/95946

Kassotis, CD, Hoffman, Kate, and Stapleton, Heather M. Adipogenic Activity of Indoor House Dust Extracts in 3T3-L1 Cells and Associations with Flame Retardants. **Oral Presentation.** Brominated Flame Retardants (BFR) 2017. York, UK, May 8, 2017.

Kassotis, CD, Stapleton, Heather M. Characterization of Potential Obesogens *in vitro* and Implications for Reproducibility. **Invited Oral Presentation**. Gordon Research Conference: Environmental Endocrine Disruptors, 2016. Sunday River, ME, June 21, 2016.

Kassotis, CD, Stapleton, Heather M. Characterizing the Adipogenic Potential of Flame Retardants Using 3T3-L1 Cell Cultures. **Oral Presentation**. Brominated Flame Retardants (BFR) 2016. Toronto, Canada, May 7, 2016.

Kassotis, CD. Unconventional Oil and Gas Extraction and Endocrine Disruptors: Potential Implications for Human and Animal Health. **Invited Oral Presentation**. The Endocrine Disruption Exchange: Endocrine Disruption and Unconventional Oil and Gas Production, a Teleconference Series. April 7, 2016.

Recording of presentation and PDF of slides available at:

<http://endocrinedisruption.org/chemicals-in-natural-gas-operations/uoged-kassotis>

Kassotis, CD. Unconventional Oil and Gas Extraction as a Novel Source of Endocrine Disrupting Chemicals to Water and the Potential for Adverse Human and Animal Health Outcomes. **Invited Oral Presentation**. The Environmental Protection Agency: Emerging Topics Seminar Series. Durham, NC, January 14, 2016.

Kassotis, CD. Endocrine Disrupting Potential of Unconventional Oil and Gas Production. **Invited Oral Presentation**. Social Science – Environmental Health Collaborations Conference: Northeastern University, Social Science Environmental Health Research Institute (SSEHRI). Boston, MA, May 21, 2015.

Kassotis, CD. Endocrine Disrupting Potential of Unconventional Oil and Gas Extraction. **Invited Oral Presentation**. Duke University: Durham, NC, April 28, 2015.

Kassotis, CD, Klemp, Kara C, Vu, Danh C, Lin, Chung-Ho, Drobnis, Erma Z, Balise, Victoria D, Isiguzo, Chiamaka J, Williams, Michelle A, Tillitt, Donald E., and Nagel, Susan C. Endocrine Disrupting Activity of Hydraulic Fracturing Chemicals and Health Outcomes Following Prenatal Exposure in Mice. **Oral Presentation**. The 249th American Chemical Society Meeting: Denver, CO, March 23, 2015.

Kassotis, CD. Hormones, Endocrine Disrupting Chemicals, and Hydraulic Fracturing. **Oral Presentation**. Hinsdale High School: Hinsdale, NH, October 31, 2014.

Kassotis, CD. Hydraulic Fracturing Chemicals and Implications for Water Contamination. **Invited Oral Presentation**. Keene State College: Keene, NH, September 30, 2013.

Kassotis, CD, Cook-Bailey, Audrey M, Hormann, Annette M, and Nagel, Susan C. Hormonal Activity of Surface and Ground Water in Natural Gas Drilling-dense Areas. **Oral Presentation**. Endocrine Disruptor Discussion Group: Columbia, MO, March 12, 2012.

Poster Presentations (30 total):

Kassotis, CD, Hoffman, K, Schlezinger, JJ, Bovolin, P, Cottone, E, Legler, J, Atlas, E, Veiga-Lopez, A, Völker, J, Bondesson, M, Fenton, S, and Stapleton, HM. Reproducibility of Adipogenic Responses to Metabolic Disrupting Chemicals in the 3T3-L1 Pre-Adipocyte Model System: An Interlaboratory Reproducibility Study. Poster Presentation. Society of Toxicology Annual Meeting 2021. *Virtual*.

Kassotis, CD, Herkert, K, Hammel, SH, Hoffman, K, Xia, Q, Kullman, SW, and Stapleton, HM. Thyroid Receptor Antagonism of Mixtures Isolated from Personal Silicone Wristbands. Poster Presentation. Society of Toxicology Annual Meeting 2020. *Virtual*.

Kassotis, CD., Hoffman, Kate, Phillips, Allison L., Choyke, Sarah, Ferguson, P. Lee, and Stapleton, Heather M. Assessment of Causative Chemicals and Molecular Mechanisms of Indoor House Dust Extract-Induced Adipogenesis. Poster Presentation. Endocrine Disruption Chemicals Research in NC (EDC-NC) Annual Meeting 2018. NIEHS, Durham, NC, April 6, 2019.

Kassotis, CD., Hoffman, Kate, Phillips, Allison L., Choyke, Sarah, Ferguson, P. Lee, and Stapleton, Heather M. Assessment of Causative Chemicals and Molecular Mechanisms of Indoor House Dust Extract-Induced Adipogenesis. Poster Presentation. The Endocrine Society Annual Meeting: New Orleans, LA, March 25, 2019.

Kassotis, CD., Kollitz, Erin M., Hoffman, Kate, and Stapleton, Heather M. Thyroid Receptor Antagonism as a Contributory Mechanism for Indoor House Dust Extract-Induced Adipogenesis in 3T3-1 Cells. Poster Presentation. The United States Society for Developmental Origins of Health and Disease 2018 Conference. Chapel Hill, North Carolina, October 1, 2018.

Kassotis, CD., Kollitz, Erin M., Hoffman, Kate, and Stapleton, Heather M. Adipogenic Activity of Indoor House Dust Extracts Occurs at Environmentally Relevant Concentrations. Poster Presentation. Gordon Research Conference on Environmental Endocrine Disruptors 2018. Les Diablerets, Switzerland, June 6, 2018.

Kassotis, CD., Kollitz, Erin M., Hoffman, Kate, and Stapleton, Heather M. Adipogenic Activity of Indoor House Dust Extracts Occurs at Environmentally Relevant Concentrations. Poster Presentation. Gordon Research Seminar on Environmental Endocrine Disruptors 2018. Les Diablerets, Switzerland, June 2, 2018.

Kassotis, CD., Kollitz, Erin M., Hoffman, Kate, and Stapleton, Heather M. Adipogenic Activity of Indoor House Dust Extracts Occurs at Environmentally Relevant Concentrations. Poster Presentation. Society of Toxicology Annual Meeting 2018. San Antonio, TX, March 13, 2018.

Kassotis, CD., Kollitz, Erin M., Hoffman, Kate, and Stapleton, Heather M. Adipogenic Activity of Indoor House Dust Extracts Occurs at Environmentally Relevant Concentrations. Poster Presentation. Endocrine Disruption Chemicals Research in NC (EDC-NC) Annual Meeting 2018. NIEHS, Durham, NC, February 23, 2018.

Kassotis, CD, Hoffman, Kate, and Stapleton, Heather M. Adipogenic Activity of Indoor House Dust Extracts in 3T3-L1 Cells and Associations with Flame Retardants. Poster Presentation. Brominated Flame Retardants (BFR) 2017. York, UK, May 8, 2017.

Kassotis, CD, Hoffman, Kate, and Stapleton, Heather M. Characterization of Adipogenic Activity of Semi-Volatile Indoor Contaminants and House Dust Extracts in 3T3-L1 Cells. Poster Presentation. NIEHS Fest: The Environmental Health Science Festival. Durham, NC, December 7, 2016.

Kassotis, CD and Stapleton, Heather M. Characterization of Adipogenic Activity of Semi-Volatile Indoor Contaminants and House Dust Extracts in 3T3-L1 Cells. Poster Presentation. 25 Years of Endocrine Disruption Research: Past Lessons and Future Directions. Bethesda, MD, September 19, 2016.

Kassotis, CD, Harkness, JS, Vu, DC, Lin, C-H, Cinnamon, KM, Vengosh, A, Tillitt, DE, and Nagel, SC. Endocrine Disrupting Activities and Inorganic Geochemistry of Surface and Groundwater are Associated with Unconventional Oil and Gas Wells and Wastewater Spills. Poster Presentation. 25 Years of Endocrine Disruption Research: Past Lessons and Future Directions. Bethesda, MD, September 19, 2016.

Kassotis, CD, Harkness, JS, Vu, DC, Lin, C-H, Cinnamon, KM, Vengosh, A, Tillitt, DE, and Nagel, SC. Endocrine Disrupting Activities and Inorganic Geochemistry of Surface and Groundwater are Associated with Unconventional Oil and Gas Wells and Wastewater Spills. Poster Presentation. Gordon Research Conference: Environmental Endocrine Disruptors, 2016. Sunday River, ME, June 21, 2016.

Kassotis, CD, Harkness, JS, Vu, DC, Lin, C-H, Cinnamon, KM, Vengosh, A, Tillitt, DE, and Nagel, SC. Endocrine Disrupting Activities and Inorganic Geochemistry of Surface and Groundwater are Associated with Unconventional Oil and Gas Wells and Wastewater Spills. Poster Presentation. Gordon Research Seminar: Environmental Endocrine Disruptors, 2016. Sunday River, ME, June 18, 2016.

Kassotis, CD, Bromfield, John J, Klemp, Kara C, Meng, Chun-Xia, Wolfe, Andrew, Balise, Victoria D, Isiguzo, Chiamaka J, Tillitt, Donald E., and Nagel, Susan C. Adverse Reproductive and Developmental Health Outcomes Following Prenatal Exposure to a Hydraulic Fracturing Chemical Mixture in Female C57Bl/6 Mice. Poster Presentation. The National Institute of Environmental Health Sciences: Triangle Consortium on Reproductive Biology. Durham, NC, February 6, 2016.

Kassotis, CD, Klemp, Kara C, Vu, Danh C, Lin, Chung-Ho, Drobnis, Erma Z, Balise, Victoria D, Isiguzo, Chiamaka J, Williams, Michelle A, Tillitt, Donald E., and Nagel, Susan C. Endocrine Disrupting Activity of Hydraulic Fracturing Chemicals and Health Outcomes Following Prenatal Exposure in Mice. Poster Presentation. The Endocrine Society Annual Meeting: San Diego, CA, March 5, 2015.

Kassotis, CD, Lin, Chung-Ho, Tillitt, Donald E., and Nagel, Susan C. Endocrine Disrupting Activity of Hydraulic Fracturing Chemicals and Health Outcomes Following Prenatal Exposure in Mice. Poster Presentation. Health Sciences Research Day: Columbia, MO, November 13, 2014.

Kassotis, CD, Lin, Chung-Ho, Tillitt, Donald E., and Nagel, Susan C. Endocrine Disrupting Activity of Hydraulic Fracturing Chemicals and Health Outcomes Following Prenatal Exposure in Mice. Poster Presentation. Prenatal Programming and Toxicity IV: Boston, MA, October 27, 2014.

Kassotis, CD, Lin, Chung-Ho, Tillitt, Donald E., Davis, J. Wade, and Nagel, Susan C. Endocrine Disrupting Activity of Hydraulic Fracturing Chemicals and Mixtures. Poster Presentation. The Endocrine Society/International Congress on Endocrinology Meeting 2014: Chicago, IL, June 23, 2014.

Kassotis, CD, Lin, Chung-Ho, Tillitt, Donald E., Davis, J. Wade, and Nagel, Susan C. Endocrine Disrupting Activity of Hydraulic Fracturing Chemicals and Mixtures. Poster Presentation. Gordon Research Conference: Environmental Endocrine Disruptors: Lucca, Italy, May 14, 2014.

Kassotis, CD, Lin, Chung-Ho, Tillitt, Donald E., Davis, J. Wade, and Nagel, Susan C. Endocrine Disrupting Activity of Hydraulic Fracturing Chemicals and Mixtures. Poster Presentation. Gordon Research Seminar: Environmental Endocrine Disruptors: Lucca, Italy, May 10, 2014.

Kassotis, CD, Tillitt, Donald E., Davis, J. Wade, Hormann, Annette M, and Nagel, Susan C. Estrogen and Androgen Receptor Activities of Hydraulic Fracturing Chemicals and Surface and Ground Water in a Drilling-dense Region. Poster Presentation. Life Sciences Week: Columbia, MO, April 14, 2014.

Kassotis, CD, Tillitt, Donald E., Davis, J. Wade, Hormann, Annette M, and Nagel, Susan C. Estrogen and Androgen Receptor Activities of Hydraulic Fracturing Chemicals and Surface and Ground Water in a Drilling-dense Region. Poster Presentation. Health Sciences Research Day: Columbia, MO, November 14, 2013.

Kassotis, CD and Nagel, Susan C. Estrogen and Androgen Receptor Activities of Hydraulic Fracturing Chemicals and Surface and Ground Water in a Drilling-dense Region. Poster Presentation. Copenhagen Workshop on Endocrine Disruptors: Copenhagen, Denmark, May 28-31, 2013.

Kassotis, CD, Tillitt, Donald E., Davis, J. Wade, Hormann, Annette M, and Nagel, Susan C. Estrogen and Androgen Receptor Activities of Hydraulic Fracturing Chemicals and Surface and Ground Water in a Drilling-dense Region. Poster Presentation. Life Sciences Week: Columbia, MO, April 15-20, 2013.

Kassotis, CD, Cook-Bailey, Audrey M, Hormann, Annette M, and Nagel, Susan C. Hormonal Activity of Surface and Ground Water in Natural Gas Drilling-dense Areas. Poster Presentation. Gordon Research Conference: Mount Snow, VT, June 2-8, 2012.

Kassotis, CD, Cook-Bailey, Audrey M, Hormann, Annette M, and Nagel, Susan C. Hormonal Activity of Surface and Ground Water in Natural Gas Drilling-dense Areas. Poster Presentation. Life Sciences Week: Columbia, MO, April 16-21, 2012.

Kassotis, CD, Cook-Bailey, Audrey M, Hormann, Annette M, and Nagel, Susan C. Hormonal Activity of Surface and Ground Water in Natural Gas Drilling-dense Areas. Poster Presentation. Health Sciences Research Day: Columbia, MO, November 3, 2011.

Kassotis, CD, Cook-Bailey, Audrey M, Hormann, Annette M, Nagel, Susan C. Hormonal Activity of Surface and Ground Water in Natural Gas Drilling-dense Areas. Poster Presentation. Society for the Study of Reproduction: Portland, OR, July 31 - August 4, 2011.

TEACHING EXPERIENCE

Guest Lecture for Environmental Health and Epidemiology, ENV 537 (4/21)
Translational Toxicology in Environmental Health Research
Duke University, Durham, NC (virtual)

Guest Lecture for Principles of Environmental Health, FPH 7420 (1/21)
Environmental Toxicology
Wayne State University, Detroit, MI (virtual)

Guest Lecture for Emerging Contaminants and Advances in Environ Chem, ESCI 497R (9/20)
Environmental Endocrine Disrupting Chemicals and Adverse Metabolic Health
Western Washington University, Bellingham, WA (virtual)

Guest Lecture for Mechanisms in Environmental Toxicology, ENVIRON 819 (4/20)
Environmental Endocrine Disrupting Chemicals/Mixtures and Health
Duke University, Durham, NC (virtual)

Guest Lecture for Environmental Health (3/20)
Endocrine Disrupting Chemicals and Unconventional Oil and Gas
Northeastern University, Boston, MA (virtual)

Guest Lecture for Environmental Health, ENVIRON 537 (2/19)
Environmental and Human Health Impacts of Unconventional Oil and Gas Extraction
Duke University, Durham, NC

Guest Lecture for Mechanisms in Environmental Toxicology, ENVIRON 819 (2/19)
Environmental Endocrine Disrupting Chemical Mixtures and Health
Duke University, Durham, NC

Guest Lecture for Environmental Toxicology and Chemistry, ENVIRON 360 (2/19)
Introduction to Endocrine Disrupting Chemicals and Health
Duke University, Durham, NC

Guest Lecture for Environmental Health, ENVIRON 537 (3/18)
Environmental Health Impacts of Unconventional Oil and Gas Extraction and Potential for
Adverse Health Outcomes
Duke University, Durham, NC

Guest Lecture for Environmental Toxicology and Chemistry, ENVIRON 360 (2/17)
Endocrine Disrupting Chemicals and Adverse Health Outcomes
Duke University, Durham, NC

Guest Lecture for Environmental Health, ENVIRON 537 (3/16)
Environmental and Human Health Impacts of Unconventional Oil and Gas Extraction
Duke University, Durham, NC

Guest Lecture for Ecotoxicology, ENVIRON 610 (3/16)
Endocrine Disrupting Chemicals and Adverse Health Outcomes
Duke University, Durham, NC

Guest Lecture for Environmental Toxicology and Chemistry, ENVIRON 360 (2/16)
Endocrine Disrupting Chemicals and Adverse Health Outcomes
Duke University, Durham, NC

Guest Lectures for Senior Seminar: Endocrine Disruptors (two sections) (9/13)
Hydraulic Fracturing and Endocrine Disrupting Chemicals
Keene State College: Keene, NH

Guest Lecture for Environmental Geology (9/13)
Hydraulic Fracturing and Potential Environmental Consequences
Keene State College: Keene, NH

Graduate Teaching Assistant for Mammalian Reproductive Biology, BioSci 4984 (1/12-5/12)
University of Missouri, Columbia, MO

Graduate Teaching Assistant for Introductory Biology Laboratory, BioSci 1500 (8/10-12/10)
University of Missouri, Columbia, MO

MENTORING

Wayne State:

Laboratory technicians/staff:

Yu-Ting Chiang – Research Assistant

Postdoctoral researchers:

Matthew LeFauve – Postdoctoral Research Associate

Graduate students:

Samantha Heldman – PhD student

Previous experience:

Undergraduate students:

*Kara Klemp, B.S. Biological Sciences, University of Missouri; M.S. Genetic Counseling
Katelyn Cinnamon, B.S. Nutritional Sciences, University of Missouri*

Post-baccalaureate students:

*Christine Simbolon, Johns Hopkins University '20
Chiamaka Isiguzo, Kirksville College of Osteopathic Medicine '20*

Laboratory technicians/staff:

Jennifer Cornelius-Green, M.S. – Lab manager, Nagel Lab, University of Missouri

Graduate students:

*MacKenzie Purdy (Washburn), M.D. University of Missouri '14
Victoria Balise, Ph.D. University of Missouri '18
Anthony Luz, Ph.D. Duke University, '17
Kirsten Overdahl, Doctoral student, Duke Toxicology program '20
Matthew Ruis, Doctoral student, Duke Toxicology program '20
Rose Schrott, Doctoral student, Duke Toxicology program '21*

PROFESSIONAL ACTIVITIES

Departmental/University service:

Organizing Committee for 2020 EHS Core Center Virtual Webinar	July 2020
Participated in Pharmacology Academic Program Review	2021
IEHS Team Leader, Wayne State American Heart Association Walk	2021
Virtual Interviewing Seminar for Merrill Palmer Skillman Institute	2021

Ad hoc manuscript reviewer for the following journals:

Environmental Health Perspectives, The Lancet Planetary Health, Science of the Total Environment, Environmental Science & Technology, Toxicological Sciences, Environmental Health, Frontiers in Endocrinology, Journal of the Endocrine Society, Environment International, Environmental Pollution, Environmental Research, Environmental Toxicology & Chemistry, Scientific Reports, Endocrinology, Molecular and Cellular Endocrinology, Chemosphere, Endocrine Disruptors, Environmental and Molecular Mutagenesis, Environmental Science and Pollution Research, Marine Pollution Bulletin, Water, Water Science & Technology, and several other journals.

Articles reviewed in last year: 30

Grant review:

Served as ad hoc member for Harvard Environmental Health Pilot Program Grant Review, 2020

Service to the field:

Elected as “Councilor” to Michigan Chapter of Society of Toxicology	2021
Guest Editor for Special Issue in “Toxics” journal on Chemical Mixtures	2021
Topics Editor for “Toxics” journal	2021
Member of Advisory Board for Healthy Environment and Endocrine Disruptor Strategies (HEEDS) group, supporting international endocrine disruption efforts	2018-current
Member of “HEEDS” Young EDC Researchers Mentoring Committee	2019-current
Member of Organizing Committee for “HEEDS” Young Endocrine Disruptor Researchers Seminar Series (YESS)	2019-current
Member of Oversight Committee for “EDC-NC” Group, supporting endocrine disruption research, collaboration, and communication across North Carolina	2018-2021
Organizing Committee for 3 rd “EDC-NC” Annual Meeting (<i>postponed</i>)	February 2020
Organizing Committee for 2 nd “EDC-NC” Annual Meeting	February 2019
Organizing Committee for 1 st “EDC-NC” Annual Meeting	February 2018
Co-Chair for Gordon Research Seminar on Environmental Endocrine Disruptors	June 2018
Organizing Committee Member for Gordon Research Conference on Environmental Endocrine Disruptors	June 2018
Hosted IEHS CURES Seminar Series Speaker, Dr. Martin Wagner	February 2021
Hosted Pharmacology Seminar Series Speaker, Matthew Lefauve	November 2020
Hosted Duke Toxicology Program Seminar Series Speaker, Dr. Leo Trasande	January 2017
Hosted Biological Sciences Seminar Series speaker, Dr. Lou Guillette	April 2014
Hosted Biological Sciences Seminar Series speaker, Dr. Tom Zoeller	March 2014
Hosted Biological Sciences Seminar Series speaker, Dr. Heather Patisaul	March 2013
Coordinator for Endocrine Disruptor Discussion Group, University of Missouri	2012-2014

Society Memberships:

Michigan Society of Toxicology	2020-current
Society of Toxicology (SOT), Mixtures Specialty Section	2018-current
Society of Toxicology (SOT), Mechanisms Specialty Section	2018-current
The Endocrine Society	2012-current
Healthy Environment and Endocrine Disruptor Strategies (HEEDS)	2018-current
Intersectoral Centre for Endocrine Disruptor Analysis (ICEDA)	2021-current
International Society of Exposure Science (ISES)	2018-2020

North Carolina Society of Toxicology (NC-SOT)	2018-2020
Developmental Origins of Health and Disease (DOHaD) Society	2017-2019
American Association for the Advancement of Science (AAAS)	2013-2019
American Chemical Society (ACS), Environmental Chemistry Division	2013-2015
Society for the Study of Reproduction (SSR)	2011-2015

Outreach:

Served as expert witness in two state or township court cases related to hydraulic fracturing/unconventional oil and gas development

Provided expert testimony for Garfield County, CO West Colorado Congress in lawsuit related to hydraulic fracturing wastewater injection well near drinking water intake, February 2017

Served as expert witness for Fayette County Commission in lawsuit related to hydraulic fracturing wastewater disposal well legislation, July 2016

Serve as Scientific Advisor for Non-Toxic Communities and provide feedback and science support letters regarding pesticide use and other chemical exposure risks in and near schools

Data analysis and background for Environmental Health News “Fractured” Pennsylvania biomonitoring study of families near unconventional oil and gas operations:

<https://www.ehn.org/fractured-series-on-fracking-pollution-2650624600/fractured-fracking>