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EDUCATION

2001 Ph.D. Population Biology, Ecology and Evolution, Emory University, Atlanta, GA
Dissertation: Phytoestrogenic effects on neuroendocrine function and behavior.
Mentor: Patricia Whitten, Ph.D., Department of Anthropology
Co-Mentor: Larry Young, Ph.D., Center for Behavioral Neuroscience
1995 B.S. with Honors, Zoology, University of Florida, Gainesville, FL

EMPLOYMENT

Associate Dean for Research, College of Biological Sciences, North Carolina State University, 2019 - present
Professor, Department of Biological Sciences, North Carolina State University, 2015-present
2019 – Inducted into the NCSU Research Leadership Academy
Associate Professor, Department of Biological Sciences, North Carolina State University, May 2012 – 2015
2013 – Named a Chancellor’s Faculty Excellence Scholar
Assistant Professor, Department of Biology, North Carolina State University, July 2006 – May 2012
Associate Member, Department of Toxicology, North Carolina State University
Member, W. M. Keck Center for Behavioral Biology, North Carolina State University
Research Investigator, CIIT Centers for Health Research at the Hamner Institute, Jan – July 2006
Post-Doctoral Fellow, CIIT Centers for Health Research at the Hamner Institute, 2004 – 2005
Mentor: Eva Polston, Ph.D.
Post-Doctoral Fellow, Yerkes National Primate Research Center, Emory University, 2001 – 2004
Mentor: Mark Wilson, Ph.D.

AWARDS AND HONORS

2019 NCSU Alumni Association Outstanding Research Award
2017 Outstanding Reviewer for *Endocrinology*
2016 Chair of the Gordon Research Conference on Environmental Endocrine Disruptors
2015 Senate Briefing hosted by Senator Feinstein on the lack of regulatory policy for personal care products.
2015 NCSU “Thank a Teacher” Award (student-selected)
2014 Senate Briefing hosted by Senator Feinstein on the health effects of BPA
2013 NCSU Faculty Excellence Scholar
2012 Chair-elect for the 2016 Gordon Conference on Endocrine Disruptors
2009 Science Communication Fellow for Environmental Health News
2007 NIEHS Outstanding New Environmental Scientist (ONES) Awardee
2005 Travel Award, Society for Behavioral Neuroendocrinology
2002 Young Investigator Award, Workshop on Steroid Hormones and Brain Function
2001 Poster Award, Second Annual Emory University Interdisciplinary Science Symposium
2001 Recognized by the Nutrition & Health Sciences Program at Emory University for outstanding research contributions of relevance to Nutrition
1999 Two-year ARCS Scholar
1999 Travel Award, Society for Behavioral Neuroendocrinology

GRANTS (External)

R01ES028110 (Patisaul)	08/01/2017 – 07/31/2022	3 calendar
The placenta: a novel target of sex specific neurotoxicity by fire retardants NIH/NIEHS	\$2,210,410	

These studies will establish the degree to which fire retardants sex-specifically bioaccumulate and disrupt placental activity, particularly in regards to impacts on the developing brain. Systems of interest include placental neurotransmitter production and thyroid hormone disruption.

R01ES028110-02S1 (Patisaul) 08/01/2018 – 07/31/2019
Supplement to: The placenta: a novel target of sex specific neurotoxicity by fire retardants 1 calendar
NIH/NIEHS \$144,175

These supplemental studies will be conducted in collaboration with NC State chemist David Muddiman and use MALDESI technology to spatially determine where in the placenta flame retardants and their primary metabolites accumulate, and how they region-specifically impact placental function.

AR160055 (Patisaul) A Department of Defense Autism Research Program, Idea Development Award
Environmental Contaminants and Autism Risk 08/15/2017 - 08/14/2020 2 calendar
DoD \$564,935

This project will use the prairie vole to explore how developmental exposure to fire retardants impact the development of the social brain and behaviors considered relevant to autism spectrum disorder.

U01ES026717 (Aylor) 06/01/2016 – 04/30/2020 1.5 calendar
Systems Toxicogenomics of Endocrine Disrupting Chemicals in Brain
NIH/NIEHS \$2,452,533

Establishing how environmental chemical exposures may impact human health is extraordinarily difficult, particularly in inaccessible tissues like the brain. This project is part of the TARGET II Consortium which seeks to examine how epigenetic changes resulting from chemical exposures are consistent across different tissues, ages, and different strains of mice. My role is to oversee the dosing, tissue collection and neuroanatomy.

R01MH109471 (Meitzen) 05/19/2016 – 28/02/2021 0.5 calendar
Elucidating the Mechanisms by Which Estradiol Regulates Female Striatal Neuron Excitability
NIH/NIEHS \$1,837,683

This project is exploring the mechanisms and extent to which estradiol organizes and then modulates the striatal neuron electrophysiological properties that ultimately enable sex specific changes in function and behavior. My role is to oversee the behavioral testing and help mentor the PI (a new investigator) and the postdoctoral fellow.

Multi-PI and Training Grants

P30ES025128 (Smart)
Center for Human Health and the Environment
NIH/NIEHS \$6,125,298 1 summer
I am co-chair of the Molecular/Cellular-Based Systems and Model Organisms Team and I also lead specialty groups in environmental neuroscience and endocrine disrupting chemicals. This center was renewed in 2020.

T32ES007046 (Smart) \$263,569 N/A
I am currently mentoring two students under this training grant in toxicology.

COMPLETED

External

F31 (Rock)
Effects of Prenatal Firemaster 550 Exposure on Placental Gene Expression and Serotonergic Innervation in the Developing Forebrain
NIH/NIEHS
This NRSA fellowship supported my graduate student, Kylie Rock, through 2020.

U011ES020929-01 (Patisaul) 09/19/2011 – 09/09/2017
Neurobehavioral effects of Bisphenol A across age and sex
NIH/NIEHS \$478,596
This consortium project included researchers at NIEHS and the NCTR/FDA. It used animals enrolled in the NCTR/FDA chronic BPA exposure study (collectively referred to as the CLARITY-BPA project) initiated in summer 2012 to test the hypothesis that perinatal exposure to BPA alters sex-specific brain development and behavior.

R56ES022957-01A1 (Patisaul) 09/10/2014 – 09/09/2017
Toxicokinetics and metabolic disrupting actions of the flame retardant mixture FM550
NIH/NIEHS \$299,959

This project explored the sex specific impacts of FM550 on metabolic reprogramming. We also established the capacity for FM550 to accumulate in placenta, alter non-reproductive behaviors and gestationally and lactationally transfer from the dam to the fetus.

R21ES021233-01 (Patisaul) 01/01/2012 – 12/31/2015
Interaction of BPA and soy isoflavones on sociosexual behavior
NIH/NIEHS \$220,048

This project tested the hypothesis that a soy-rich diet can mitigate the adverse sociosexual behavioral effects of perinatal BPA exposure using a rat model.

RO1ES016001-01 (Patisaul) 07/04/2007 – 05/31/2013
Endocrine Disruption of the Hypothalamic Signaling that Regulates Puberty
NIH/NIEHS \$1,915,013

This was an NIEHS ONES award. The major goals of this project were to identify the hypothalamic pathways through which exposure to the endocrine disruptors genistein and BPA advance female puberty.

RC2 ES018736-01 (Swan) 11/01/2009 – 12/01/2012
Prenatal Bisphenol A and Sexually Dimorphic Neurodevelopment
NIH/NIEHS \$169,433

The primary objective of this grant was to determine if early life exposure to low dose BPA alters hypothalamic sexual differentiation using a rat model.

IF31MH012763-01A1 (NRSA) 04/01/2001 – 10/01/2001
Effect of Phytoestrogens on Estrogen Dependent Processes
NIH/NIMH

Role: PI (training fellowship)
Direct Costs: N/A NRSA Pre-Doctoral Fellowship

Internal

07/01/2017 – 06/30/2018
Sex-Specific Placental Accumulation and Disruption by the Flame Retardant Firemaster 550
Source: NCSU Center for Human Health and the Environment
PI: Patisaul, H
Direct Costs: 25,000

07/01/2013 - 06/30/2014
Next Generation of High Performance Flame Retardants with Low Environmental/Toxicological Impact
Source: NCSU Research and Innovation Seed Funding Program
PIs: Pasquinelli, Melissa; Hinks, David; Tonelli, Alan E.; Barker, Roger L.; Patisaul, Heather B
Direct Costs: \$20,078

01/01/2014 -12/31/2014
Metabolic Disrupting Actions of the Flame Retardant Mixture Firemaster 550
Source: NCSU Center for Human Health and the Environment
PI: Patisaul, H
Direct Costs: \$21,320

06/01/2000 – 06/01/2001
Neural Mechanisms of Phytoestrogen Action on Reproductive Behavior
Source: Center for Behavioral Neuroscience
Direct Costs: \$30,000

01/01/2002 – 06/01/2003

Microarray Analysis of Estrogen-Like Compounds in the Brain

Source: Center for Behavioral Neuroscience

Direct Costs: \$30,000

PUBLICATIONS

Books

Patisaul, HB & Belcher, SM. (2017) *Endocrine Disruptors, Brain, and Behaviors*. Oxford Series in Behavioral Neuroendocrinology. Oxford University Press. New York, New York. 272 pages

Peer Reviewed Publications (83 total); undergraduate co-authors in italics:

- Rock KD, St Armour G, Horman B, Phillips A, Ruis M, Stewart AK, Jima D, Muddiman DC, Stapleton HM, **Patisaul HB**. (2020) Effects of Prenatal Exposure to a Mixture of Organophosphate Flame Retardants on Placental Gene Expression and Serotonergic Innervation in the Fetal Rat Brain. *Toxicol Sci*. doi: 10.1093/toxsci/kfaa046
- Macari, S, Rock, KD, Santos, MS, Lima, VTM, Szawka, RE, Moss, J, Horman, B, **Patisaul HB**. (2020) Developmental exposure to the flame retardant mixture Firemaster 550 compromises adult bone integrity in male but not female rats. *Int J Nul Sci*. 21(7):2553. doi: 10.3390/ijms21072553.
- Krentzel, AA, Proano, S, **Patisaul, HP**, Meitzen, J. (2020) Temporal and bidirectional influences of estradiol on voluntary wheel running in adult female and male rats. *Hormones and Behavior*. Jan 27;120:104694. doi: 10.1016/j.yhbeh.2020.104694.
- Miller, CK, Krentzel, AA, **Patisaul, HB**, Meitzen, J. (2020) Metabotropic glutamate receptor subtype 5 (mGlu5) is necessary for estradiol mitigation of light-induced anxiety behavior in female rats. *Physiol Behav*. Feb 1;214:112770. doi: 10.1016/j.physbeh.2019.112770.
- Gillera SGA, Marinello WP, Horman B, Phillips AL, Ruis MT, Stapleton HM, Reif DM, **Patisaul HB**. (2019) Sex-specific effects of perinatal FireMaster® 550 (FM 550) exposure on socioemotional behavior in prairie voles. *Neurotoxicology and Teratology*. Nov 12:106840. doi: 10.1016/j.ntt.2019.106840 **[NIEHS Paper of the Month]**
- La Merrill MA, Vandenberg LN, Smith MT, Goodson W, Browne P, **Patisaul HB**, Guyton KZ, Kortenkamp A, Cogliano VJ, Woodruff TJ, Rieswijk L, Sone H, Korach KS, Gore AC, Zeise L, Zoeller RT. (2019) Consensus on the key characteristics of endocrine-disrupting chemicals as a basis for hazard identification. *Nat Rev Endocrinol*. 16(1):45-57. doi: 10.1038/s41574-019-0273-8
- Vandenberg, LN, Prins GS, **Patisaul HB**, Zoeller RT. (2019). The use and misuse of historical controls in regulatory toxicology: Lessons from the CLARITY-BPA study. *Endocrinology*. Nov 6. pii: bqz014. doi: 10.1210/endocr/bqz014. [Epub ahead of print]
- Ruis M, Rock, KD, Hall, S, Horman, B, **Patisaul, HB**, Stapleton, HM. (2019) PBDEs concentrate in the fetal portion of the placenta: Implications for thyroid hormone dysregulation. *Endocrinology*. 160(11):2748-2758. doi: 10.1210/en.2019-00463
- Witchey, SK, *Fuchs, J*, **Patisaul, HB**. (2019) Perinatal Bisphenol A (BPA) Exposure Alters Brain Oxytocin Receptor (OTR) Expression in a Sex- and Region- Specific Manner: a CLARITY-BPA Consortium Follow-up Study. *Neurotoxicology*. 74:139-148.
- Rock, KD, Gillera, SE, *Devarasetty, P*, Horman, B, Birnbaum, LS, Fenton, SE, **Patisaul, HB**. (2019) Sex-specific Behavioral Effects of Developmental Exposure to Tetrabromobisphenol A (TBBPA) in Wistar Rats. *Neurotoxicology*. 75:136-147.
- Patisaul, HB**. (2019) Achieving CLARITY on Bisphenol A (BPA), Brain and Behavior. *J. Neuroendo*.
- Stetzk LA, Sullivan AW, **Patisaul HB**, Cushing BS. (2018) Novel unconditioned prosocial behavior in prairie voles (*Microtus ochrogaster*) as a model for empathy. *BMC Res Notes*. Dec 4;11(1):852.
- Bagley, MC, Ekelof, M, Rock, K, **Patisaul, HB**, Muddiman, DC. (2018) IR-MALDESI mass spectrometry imaging of underivatized neurotransmitters in brain tissue of rats exposed to tetrabromobisphenol A. *Anal Bioanal Chem*. Dec;410(30):7979-7986. **[Cover Article]**
- Prins, GS, **Patisaul HB**, Belcher SM, Vandenberg, LN. (2019) CLARITY-BPA academic laboratory studies identify consistent low-dose Bisphenol A effects on multiple organ systems. *Basic Clin Pharmacol Toxicol. Suppl*. 3:14-31.
- Rock KD, **Patisaul HB**. (2018). Environmental mechanisms of neurodevelopmental toxicity. *Curr Environ Health Rep*. 5(1):145-157.
- Patisaul HB**, Fenton SE, Aylor D. (2018) Animal models of endocrine disruption. *Best Pract Res Clin Endocrinol Metab*. 32(3):283-297.

- Vogel AR, **Patisaul HB**, Arambula SE, Tiezzi F, McGraw LA (2018) Individual variation in social behaviours of male lab-reared prairie voles (*Microtus ochrogaster*) is non-heritable and weakly associated with V1aR density. *Sci Rep*. Jan 23;8(1):1396
- Willett JA, Johnson AG, Vogel AR, **Patisaul HB**, McGraw LA, Meitzen J. (2018) Nucleus accumbens core medium spiny neuron electrophysiological properties and partner preference behavior in the adult male prairie vole, *Microtus ochrogaster*. *J Neurophysiol*. Apr 1;119(4):1576-1588 [APS Select Award].
- Baldwin, KR, Horman, B, Phillips, AL, McRitchie, SL, Watson, S, Deese-Spruill, J, Stapleton, HM, Jima, D, Sumner, S, **Patisaul, HB**. (2018) EDC Impact: Molecular effects of developmental FM 550 exposure in wistar rat placenta and fetal forebrain. *Endocr Connect*. 2018 Feb;7(2):305-324 [Invited Contribution; NIEHS extramural paper of the month]
- Webb E, Moon J, Dyrszka L, Rodriguez B, Cox C, **Patisaul HB**, Bushkin S, London E (2017) Neurodevelopmental and neurological effects of chemicals associated with unconventional oil and natural gas operations and their potential effects on infants and children. *Rev Environ Health*. Mar 28;33(1):3-29.
- Arambula, SE, Jima, D, **Patisaul, HB**. (2017) Prenatal Bisphenol A (BPA) exposure alters the transcriptome of the neonate rat amygdala in a sex-specific manner: a CLARITY-BPA consortium study. *Neurotoxicology*. 65:207-220.
- Arambula, SE, *Fuchs, J*, Cao, J, **Patisaul, HB** (2017). Effects of perinatal Bisphenol A exposure on the volume of sexually-dimorphic nuclei of juvenile rats: A CLARITY-BPA consortium study. *Neurotoxicology*. 63:33-42.
- Baldwin, KR, Phillips, AL, Horman, B, Arambula, SE, Rebuli, ME, Stapleton, HM, **Patisaul, HB**. (2017) Sex specific placental accumulation and behavioral effects of developmental Firemaster 550 exposure in wistar rats. *Scientific Reports*. 7(1):7118.
- Patisaul, HB**. (2017). Chemical contributions to neurodevelopmental disorders. *Policy Insights from the Behavioral and Brain Sciences*. [Invited Contribution]
- Patisaul, HB**. (2017). Endocrine disruption of vasopressin systems and related behaviors. *Frontiers in Endocrinology*. 8:134.
- Smith, S, Lee, C, Dausch, M, Horman, B, **Patisaul, HB**, McCarty, G, Sombers, L. (2017). Simultaneous voltammetric measurements of glucose and dopamine demonstrate the coupling of glucose availability with increased metabolic demand in the rat striatum. *ACS Chemical Neuroscience*. Feb 15;8(2):272-280. [Cover Article]
- Phillips, AL, Chen, A, Rock, KD, Horman, B, **Patisaul, HB**, Stapleton, HM. Transplacental and lactational transfer of Firemaster® 550 components in dosed Wistar rats. (2016) *Toxicological Sciences*. Oct;153(2):246-57. [Editor's Highlight]
- Arambula, S, Belcher, SM, Planchart, A, Turner, SD, **Patisaul, HB**. (2016). Impact of low dose oral exposure to Bisphenol A (BPA) on the neonatal rat hypothalamic and hippocampal transcriptome: A CLARITY-BPA consortium study. *Endocrinology*. Oct;157(10):3856-3872.
- Patisaul, HB** (2016). Endocrine disruption by dietary phyto-oestrogens: impact on dimorphic sexual systems and behaviours. *Proc Nutr Soc*. Jul 8:1-15.
- Hicks, KD*, Sullivan, AW, Cao, J, Sluzas, E, Rebuli, ME, **Patisaul, HB**. (2016). Interaction of Bisphenol A (BPA) and soy phytoestrogens on sexually dimorphic sociosexual behaviors in male and female rats. *Hormones and Behavior*. Jun 30;84:121-126.
- Rebuli, ME, *Gibson, P*, Rhodes, CL, Cushing, BS, **Patisaul, HB**. (2016). Sex differences in microglial colonization and vulnerabilities to endocrine disruption in the social brain. *General and Comparative Endocrinology*. Nov 1;238:39-46.
- Rebuli, ME, **Patisaul, HB** (2015) Assessment of sex specific endocrine disrupting effects in the prenatal and pre-pubertal rodent brain. *Steroid Biochemistry & Molecular Biology* Jun;160:148-59.
- Rebuli, ME, Camacho, L, Adonay, M, Reif, D, Aylor, D, **Patisaul, HB**. (2015) Impact of low dose oral exposure to Bisphenol A (BPA) on juvenile and adult rat exploratory and anxiety behavior: A CLARITY-BPA Consortium Study. *Toxicological Sciences*. 148(2):341-354.
- Cao, J, Echelberger, R, Liu, M, Sluzas, E, McCaffrey, K, Buckley, B, **Patisaul, HB** (2015). Soy but not Bisphenol A (BPA) or the phytoestrogen genistin alters developmental weight gain and food intake in pregnant rats and their offspring. *Reproductive Toxicology* 58:282-294.
- Veiga-Lopez, A, Pennathur, S, Kannan, K, **Patisaul, HB**, Dolinoy, DC, Zeng, L, and Padmanabhan, V. (2015). Impact of gestational bisphenol a on oxidative stress and free Fatty acids: human association and interspecies animal testing studies. *Endocrinology* 156(3), 911-22.
- Filer, D, **Patisaul, HB**, Schug, T, Reif, D, Thayer, K. (2014). Test driving Toxcast: Endocrine profiling for 1858 chemicals included in Phase II. *Current Opinion in Pharmacology*. 19:145-152.

- Patisaul, HB, Mabrey, N, Adewale, HB, Sullivan, AW.** (2014). Soy but not Bisphenol A (BPA) induces hallmarks of polycystic ovary syndrome (PCOS) and related metabolic co-morbidities in rats. *Reproductive Toxicology*. 49C:209-218.
- Sullivan, AW, Elsworth, CB, Stetzk, LA, Perry, A, *D'Addezio, AS*, Cushing, BS, **Patisaul, HB.** (2014). A novel model for neuroendocrine toxicology: Neurobehavioral effects of BPA. *Endocrinology*. 155(10):3867-3881. [cover article]
- Belcher, SM, Cookman, CJ, **Patisaul, HB**, Stapleton, HM. (2014) In vitro assessment of human nuclear hormone receptor activity and cytotoxicity of the flame retardant mixture FM 550 and its triarylphosphate and brominated components. *Toxicology Letters*. 228(2):93-102.
- Rebuli, ME, Cao, J, Sluzas, E, Delclos, KB, Camacho L, Lewis SM, Vanlandingham MM, **Patisaul HB.** (2014) Investigation of the effects of subchronic low dose oral exposure to Bisphenol A (BPA) and Ethinyl Estradiol (EE) on estrogen receptor expression in the juvenile and Adult Female Rat Hypothalamus. *Toxicological Sciences*. 140(1):190-203.
- Hoffman, K, Fang, M, Horman, B, **Patisaul, HB**, Garantzotis S, Birnbaum S, Stapleton HM. (2014) Urinary Tetrabromobenzoic Acid (TBBA) as a Biomarker of Exposure to the Flame Retardant Mixture Firemaster 550. *Environmental Health Perspectives*. 122(9):963-969.
- Cao, J, Joyner, L, Mickens, JA, *Leyrer SM*, **Patisaul, HB.** (2014) Sex specific estrogen receptor beta (ER β) mRNA expression in the rat hypothalamus and amygdala is altered by neonatal Bisphenol A (BPA) exposure. *Reproduction*. 147(4):537-554.
- Yeo M, **Patisaul, HB**, Liedtke, W (2013) Decoding the language of epigenetics during neural development is key for understanding development as well as developmental neurotoxicity. *Epigenetics*. 8(11):1128-1132
- Cao, J, Rebuli, ME, Rogers, J, Todd, KL, *Leyrer, SM*, Ferguson, SA, **Patisaul, HB** (2013) Prenatal Bisphenol A exposure alters sex specific estrogen receptor expression in the neonatal rat hypothalamus and amygdala. *Toxicological Sciences*. 133(1):157-173.
- McCaffrey, KA, Jones, B, *Mabrey, N*, Weiss, B, Swan, SH, **Patisaul, HB** (2013) Sex specific impact of perinatal Bisphenol A (BPA) exposure over a range of orally administered doses on rat hypothalamic sexual differentiation. *Neurotoxicology*. 36:55-62.
- Cao, J, **Patisaul, HB.** (2013) Sex specific expression of estrogen receptors α and β and kiss1 in the postnatal rat Amygdala. *Journal of Comparative Neurology*. 521(2):465-478.
- Patisaul, HB**, Roberts, SC, *Mabrey, N*, McCaffrey, KA, Gear, RB, Braun, J, Belcher, SM, Stapleton, HM. (2013) Accumulation and endocrine disrupting effects of the flame retardant mixture Firemaster 550 in rats: An exploratory assessment. *Journal of Biochemistry and Molecular Toxicology*. 27(2):124-136. [NIEHS extramural paper of the month]
- Patisaul, HB**, Sullivan, AW, Radford, ME, Walker, DM, Adewale, HB, Bozena, W, Coughlin, JL, Buckley, B, Gore, AC. (2012) Anxiogenic effects of low-dose developmental Bisphenol A (BPA) exposure are associated with gene expression changes in the adolescent amygdala and mitigated by soy diet in rats. *PLoS One*. 7(9):e43890
- Losa-Ward, SM, Todd, KL, McCaffrey, KA, **Patisaul, HB.** (2012) Disrupted organization of RFamide pathways in the hypothalamus is associated with advanced puberty in female rats neonatally exposed to Bisphenol A (BPA). *Biology of Reproduction*. 87(2):28
- Jefferson, WN, **Patisaul, HB**, Williams, C. (2012) Reproductive consequences of developmental phytoestrogen exposure. *Reproduction*. 143(3):247-260.
- Patisaul, HB**, Losa, SM, Todd, KL, McCaffrey, K, Mickens, JA. (2012) Influence of ER β selective agonism during the neonatal period on the sexual differentiation of the rat hypothalamic-pituitary-gonadal (HPG) axis. *Biology of Sex Differences*. 3(1):2
- Cao, J, Mickens, JA, McCaffrey, KA, *Leyrer, SM*, **Patisaul, HB.** (2011) Neonatal Bisphenol A exposure alters sexually dimorphic gene expression in the postnatal rat hypothalamus. *Neurotoxicology*. 33(1):23-36.
- Frye, C, Bo, E, Calamandrei, G, Calza, L, Dessi-Fulgheri, F, Fernandez, M, Fusani, L, Kah, O, Kajita, M, Le Page, Y, **Patisaul, HB**, Venerosi, A, Wojtowicz, AK, Panzica, GC. (2011) Endocrine Disruptors: A review of some sources, effects, and mechanisms of actions on behavior and neuroendocrine systems. *Journal of Neuroendocrinology* 24(1):144-159. [2nd most highly cited paper in this journal in 2011]
- Cao, J, **Patisaul, HB.** (2011). Sexually dimorphic expression of hypothalamic estrogen receptors α and β and Kiss1 in neonatal male and female rats. *Journal of Comparative Neurology* 519(15):2954-2977.
- Sullivan, AW, *Hamilton, P*, **Patisaul, HB.** (2011). Neonatal agonism of ER β impairs male reproductive behavior and attractiveness. *Hormones and Behavior*. 60(2):185-194.

- Dickerson, SM, Cunningham, SL, **Patisaul, HB**, Woller, MJ, Gore, AC. (2011). Endocrine disruption of brain sexual differentiation by developmental PCB exposure. *Endocrinology*. 152(2):581-594.
- Cao, J, **Patisaul, HB**, Petersen, SL. (2011). Aryl hydrocarbon receptor activation in lactotropes and gonadotropes interferes with estradiol-dependent and -independent preprolactin, glycoprotein alpha and luteinizing hormone beta gene expression. *Molecular and Cellular Endocrinology*. 333(2):151-159.
- Losa, SM, Todd, KL, Sullivan, A, Cao, J, Mickens, JA, **Patisaul, HB**. (2011). Neonatal exposure to genistein adversely impacts the ontogeny of hypothalamic kisspeptin signaling pathways and ovarian development in the peripubertal female rat. *Reproductive Toxicology*. 31(3):280-289.
- Adeyale, HB, **Patisaul, HB**. (2011). The impact of neonatal bisphenol-A exposure on sexually dimorphic hypothalamic nuclei in the female rat. *Neurotoxicology*. 32(1):38-49.
- Patisaul, HB**, Jefferson, WN. (2010). The pros and cons of phytoestrogens. *Frontiers in Neuroendocrinology* 31(4): 400-419. [*Was one of the top 10 most frequently downloaded papers from this journal in 2010*]
- Patisaul, HB**, Adeyale, HB. (2009). Long-term effects of environmental endocrine disruptors on reproductive physiology and behavior. *Frontiers in Behavioral Neuroscience*. 3:10
- Adeyale, HB, Jefferson, WN, Newbold, RR, **Patisaul, HB**. (2009). Neonatal bisphenol-A exposure alters rat reproductive development and ovarian morphology without impairing GnRH neuronal activation. *Biology of Reproduction*. 81(4):690-699.
- Patisaul, HB**, Todd, KL, Mickens, JA, Adeyale, HB, (2009). Impact of neonatal exposure to the ER α agonist PPT, bisphenol-a or phytoestrogens on hypothalamic kisspeptin fiber density in male and female rats. *Neurotoxicology*. 30(3):350-357.
- Pazol, K, Northcutt, KV, **Patisaul, HB**, Wallen, K, Wilson, ME (2009). Progesterone and medroxyprogesterone acetate differentially regulate $\alpha 4$ subunit expression of GABAA receptors in the CA1 hippocampus of female rats. *Physiology and Behavior*. 97(1):58-61.
- Patisaul, HB**, Burke, KT, *Hinkle, RE*, Adeyale, HB, Shea, D (2009). Systemic administration of diarylpropionitrile (DPN) or phytoestrogens does not affect anxiety-related behaviors in gonadally intact male rats. *Hormones and Behavior*. 55:319-328.
- Patisaul, HB**, Adeyale, HB, Mickens, JL (2009). Neonatal agonism of ER α masculinizes serotonergic (5-HT) projections to the female rat ventromedial nucleus of the hypothalamus (VMN) but does not impair lordosis. *Behavioural Brain Research*. 196(2):317-322.
- Bateman, HL, **Patisaul, HB** (2008). Disrupted female reproductive physiology following neonatal exposure to phytoestrogens or estrogen specific ligands is associated with decreased GnRH activation and kisspeptin fiber density in the hypothalamus. *Neurotoxicology*. 29(6):988-997.
- Patisaul, HB**, Bateman, HL (2008). Neonatal exposure to endocrine disrupting compounds or an ER β agonist increases adult anxiety and aggression in male rats. *Hormones and Behavior*. 53(4): 580-588.
- Patisaul, HB**, Fortino, AE, Polston, EK (2008). Sex differences in serotonergic (5-HT) but not GABAergic projections to the rat ventromedial nucleus of the hypothalamus (VMN). *Endocrinology*. 149(1):397-408.
- Patisaul, HB**, Polston, EK (2008). Influence of endocrine active compounds on the developing rodent brain. *Brain Research Reviews*. 57(2):352-362.
- Patisaul, HB**, Fortino, AE, Polston, EK (2007). Differential disruption of nuclear volume and neuronal phenotype in the preoptic area by neonatal exposure to genistein and Bisphenol-A. *Neurotoxicology*. 28(1):1-12.
- Patisaul, HB**, Fortino, AE, Polston, EK (2006). Neonatal genistein or bisphenol-A exposure alters sexual differentiation of the AVPV. *Neurotoxicology and Teratology*. 28(1):111-118.
- Patisaul, HB**, Blum, A, *Luskin, JR*, Wilson, ME (2005). Dietary soy supplements produce opposite effects on anxiety in intact male and female rats in the elevated plus maze. *Behavioral Neuroscience*. 119(2):587-594.
- Patisaul, HB** (2005). Phytoestrogen action in the adult and developing brain. *Journal of Neuroendocrinology*. 17(1):57-64.
- Patisaul, HB** and Whitten, PL (2004). Dietary Phytoestrogens. In: *Endocrine Disruptors: Effects on Male and Female Reproductive Systems*. Second Ed., Boca Raton, CRC Press.
- Patisaul, HB**, Luskin, JR, Wilson, ME (2004). A soy supplement and tamoxifen inhibit sexual behavior in female rats. *Hormones and Behavior*. 45(4):270-277.
- Patisaul, HB**, *Scordalakes, EM*, Young, LJ, Rissman, EF (2003). Oxytocin and arginine vasopressin but not oxytocin receptors are regulated by ER β in the female mouse hypothalamus. *Journal of Neuroendocrinology*. 15:787-793.

- Patisaul, HB**, Aultman, EA, Bielsky, IF, Young, LJ, Wilson, ME (2003). Immediate and residual effects of tamoxifen and ethynylestradiol in the female rat hypothalamus. *Brain Research*. 978:185-193.
- Patisaul, HB**, Melby, M, Whitten, PL, Young, LJ (2002). Genistein affects ER β - but not ER α -dependent gene expression in the hypothalamus. *Endocrinology*. 143:2189-2197.
- Whitten, PL, **Patisaul, HB**, Young, LJ (2002). Neurobehavioral actions of coumestrol and related isoflavonoids in rodents. *Neurotoxicology and Teratology*. 24: 1-8.
- Patisaul, HB**, Dindo, M, Whitten, PL, Young, LJ (2001). Soy isoflavone supplements antagonize reproductive behavior and ER α - and ER β - dependent gene expression in the brain. *Endocrinology*. 142:2946-2952.
- Jacob, DA, Temple, JL, **Patisaul, HB**, Young, LJ, Rissman, EF (2001). Coumestrol antagonizes neuroendocrine actions of estrogen via the estrogen receptor α . *Proceedings of the Society for Experimental Biology and Medicine*. 226:301-306.
- Whitten, PL, **Patisaul, HB** (2001). Cross-species and interassay comparisons of phytoestrogen action. *Environmental Health Perspectives*. 109(Suppl 1): 5-20.
- Patisaul, HB**, Whitten, PL and Young, LJ (1999). Regulation of estrogen receptor beta mRNA in the brain: Opposite effects of 17 β -estradiol and the phytoestrogen, coumestrol. *Molecular Brain Research*. 67:165-171.

Commentaries and Special Publications:

- Wang T, Pehrsson EC, Purushotham D, Li D, Zhuo X, Zhang B, Lawson HA, Province MA, Krapp C, Lan Y, Coarfa C, Katz TA, Tang WY, Wang Z, Biswal S, Rajagopalan S, Colacino JA, Tsai ZT, Sartor MA, Neier K, Dolinoy DC, Pinto J, Hamanaka RB, Mutlu GM, **Patisaul HB**, Aylor DL, Crawford GE, Wiltshire T, Chadwick LH, Duncan CG, Garton AE, McAllister KA; TaRGET II Consortium, Bartolomei MS, Walker CL, Tyson FL. The NIEHS TaRGET II Consortium and environmental epigenomics. *Nat Biotechnol*. 2018 Mar 6;36(3):225-227.
- Barrett, ES, **Patisaul, HB** (2018). Introduction to the special issue on endocrine disrupting chemicals and behavior. *Hormones and Behavior*.101:1-2.
- Barrett, ES, **Patisaul, HB** (2017). Endocrine disrupting chemicals and behavior: Re-evaluating the science at a critical turning point. *Hormones and Behavior*.96:A1-A6.
- Project TENDR: Targeting Environmental Neuro-Developmental Risks. The TENDR Consensus Statement (2016)
- Deborah Bennett, David C. Bellinger, Linda S. Birnbaum, Asa Bradman, Aimin Chen, Deborah A. Cory-Slechta, Stephanie M. Engel, M. Daniele Fallin, Alycia Halladay, Russ Hauser, Irva Hertz-Picciotto, Carol F. Kwiatkowski, Bruce P. Lanphear, Emily Marquez, Melanie Marty, Jennifer McPartland, Craig J. Newschaffer, Devon Payne-Sturges, **Heather B. Patisaul**, Frederica P. Perera, Beate Ritz, Jennifer Sass, Susan L. Schantz, Thomas F. Webster, Robin M. Whyatt, Tracey J. Woodruff, R. Thomas Zoeller, Laura Anderko, Carla Campbell, Jeanne A. Conry, Nathaniel DeNicola, Robert M. Gould, Deborah Hirtz, Katie Huffling, Philip J. Landrigan, Arthur Lavin, Mark Miller, Mark A. Mitchell, Leslie Rubin, Ted Schettler, Ho Luong Tran, Annie Acosta, Charlotte Brody, Elise Miller, Pamela Miller, Maureen Swanson, and Nsedu Obot Witherspoon. *Environmental Health Perspectives*. 124(7): DOI:10.1289/EHP358.
- Andrea C. Gore, David Crews, Loretta Doan, Michele La Merrill, **Heather B Patisaul**, Ami Zota (2014) Introduction to Endocrine Disrupting Chemicals (EDCs) A Guide for Public Interest Organizations and Policy-Makers. International Pesticide Elimination Network (IPEN).
- Patisaul, HB** (2012). Infertility in the southern white rhino: is diet the source of the problem? *Endocrinology*. 153(4): 1568-1571.
- Novack, PJ, Arnold, WA, Blazer, VS, Halden, U, Klaper, RD, Kolpin, DW, Kribel, D, Love, NG, Martinovic-Weigelt, D, **Patisaul, HB**, Snyder, SA, vom Saal, FS, Weisbrod, AV, Swackhamer DL. (2011). On the need for a national (US) research program to elucidate the potential risks to human and health and the environment posed by contaminants of emerging concern. *Environmental Science and Technology*. [*Commentary resulting from a 2010 Wingspread workshop on "contaminants of emerging concern"*]
- Gore, AC, **Patisaul, HB** (2010). Neuroendocrine disruption: historical roots, current progress, questions for the future. *Frontiers in Neuroendocrinology*. 31(4):395-399.
- Patisaul, HB** (2010). Assessing risks from Bisphenol A. *American Scientist*. 98(1):30-39. [*Excerpts have been translated and reprinted for similar publications in Spain and France*]

Book Chapters:

- Patisaul, HB**, Gore, AC, Crews, D (2016). Environmental Endocrine Disruption of Brain and Behavior. In: Pfaff, D.W and Joëls, M. (editors-in-chief), *Hormones, Brain, and Behavior* 3rd edition, Vol 5. Oxford: Academic Press; 2017. pp. 63–88.

- Patisaul, HB.** (2012). Effects of Environmental Toxicants and Phytoestrogens on the Kisspeptin System In: Kisspeptin Signaling in Reproductive Biology. Adv Exp Med Biol. 2013;784:455-79
- Patisaul, HB** (2010). Reproductive System” In: A Textbook of Modern Toxicology (4th Ed.) by Earnest Hodgson, Wiley Interscience.
- Patisaul HB** (2008). Authored the “Instructor’s Resources” for the textbook Brain and Behavior, and Introduction to Biological Psychology (2nd Ed.) by Bob Garrett, Sage Publications.
- Patisaul, HB** and Whitten, PL (2004). Dietary Phytoestrogens. In: Endocrine Disruptors: Effects on Male and Female Reproductive Systems. (1st and 2nd Editions), Boca Raton, CRC Press.

EXPERT PANELS and WORKING GROUPS

- Invited presenter and expert on EDCs for the IPEN Global Meeting and Forum on Chemicals and Waste, Kuriftu Resort, Lake Bishoftu, Ethiopia, February, 6-10, 2020
- Invited presenter and expert on developmental neurotoxicity for the Workshop on the Triggering of the Cohorts of the Extended One-Generation Reproductive Toxicity Study (EOGRTS) as published by OECD and hosted by ECHA in Helsinki, Finland October 8-9, 2019.
- Invited participant for the Six Classes Toxics Reduction Retreat VII sponsored by the Green Science Policy Institute, Sequoia Retreat Center, Ben Lomand, California, April 28-May 1, 2019.
- Representative for the Endocrine Society at the 2018 European Food Safety Authority (EFSA) Conference on Science, Food and Society, Parma, Italy, September 18-21, 2018.
- Participant in the Joint Research Center of the European Commission Workshop “Bridging across methods in Biosciences (BEAMS),” Ispra, Italy, June 19-20, 2018. [*Invitation Only; Was the only American participant*]
- Organizer and co-host for the “Endocrine Disruption Strategies Workshop” held at NCSU December 2-3, 2017.
- Organizing Committee member for the National Academy of Sciences workshop “Cultivating Confidence: Understanding Pathways to a Paradigm Shift in Toxicity Testing and Decision Making” held Nov. 20-21, 2017
- Invited representative for the Endocrine Society at the June, 2016 meeting of the Extended Advisory Group on Molecular Screening and Toxicogenomics (EAGMST) of the OECD.
- Member of the National Academy of Sciences committee on Incorporating 21st Century Science Into Risk-Based Evaluations, National Academy of Sciences, Washington DC, 2015-2016.
- Advisors Meeting on “Scientific Engagement in New Federal Chemical Testing Efforts,” Environmental Defense Fund, Washington DC, December 11, 2013.
- Member of the National Academy of Sciences committee to evaluate the EPA document, State of the Science Evaluation: Nonmonotonic Dose Responses as They Apply to Estrogen, Androgen, and Thyroid Pathways and EPA Testing and Assessment Procedures, National Academies of Sciences, Washington DC, 2013
- “Chemical Testing in the 21st Century” a working group assembled by the Environmental Defense Fund, Washington DC, January 22-24, 2013
- “Designing Endocrine Disruption Out of the Next Generation” a follow-up to the workshop held in 2011. This working group compiled by two NGOs, Advancing Green Chemistry and Environmental Health Sciences developed a strategy for developing products that do not leach endocrine disrupting compounds. The information was published on a website and as manuscript. October 15-17, 2012, Pontifco, NY, 2012
- Low Dose Effects and Non-monotonic Dose Responses for Endocrine Active Chemicals: Science to Practice. Berlin, Germany, Sept 11-13, 2012
- National Institute of Environmental Health Sciences Strategic Planning Stakeholder Community Workshop, Research Triangle Park, NC, July 12-14, 2011
- “Designing Endocrine Disruption Out of the Next Generation” a working group compiled by two NGOs, Advancing Green Chemistry and Environmental Health Sciences – this three day workshop brought together biologists and chemists with the goal of ensuring green chemists had ready access to the best people, tools, and assays in environmental health science to help develop products that do not leach endocrine disrupting compounds. San Francisco, CA, March 21-23, 2011
- Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Scientific Vision Workshop on Environment, Bethesda, MD, March 10-11, 2011.
- Joint Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO) Expert meeting to review the toxicological and health aspects of Bisphenol A (BPA), Ottawa, Canada, November 1-5, 2010
- Johnson Foundation at Wingspread workshop on Contaminants of Emerging Concern, Racine, WI, May 23-26, 2010
- NC Biotechnology Center Environmental Health Summit exploring the research needs and possible health consequences of contaminants in our water supply from the use of pharmaceutical products, Research Triangle Park, NC, Feb 2008

SYMPOSIUM ORGANIZER

Planning Committee for the Annual EDC-NC Meeting, NIEHS, (2018, 2019)

Program Committee and Discussant for the 2017 Copenhagen Workshop on Endocrine Disruption, May 1-5, 2017, Copenhagen, Denmark.

Chair of the 2016 Gordon Research Conference on Environmental Endocrine Disruption, June 19-24, Sunday River Resort, Newbury, ME.

Vice-chair for the 2014 Gordon Research Conference on Environmental Endocrine Disruption, May 11-16, 2014, Renaissance Ciocco, Tuscany Italy

Session Chair for the symposium, “New Insights into the Reproductive and Developmental Toxicity of Bisphenol A.” Annual Meeting of the Society of Toxicology, March 11-15, 2012, San Francisco, CA.

Organizer and Chair for the symposium, “Environmental Endocrine Disruptors.” Annual Meeting of the Society for Behavioral Neuroendocrinology, June 24-27, 2009, East Lansing, MI.

Organizer and Chair for the symposium, “Dietary Influences on Aggression.” Annual Meeting of the International Society for Research on Aggression, July 25-29, 2006, Minneapolis, MN.

Organizer and Chair for the workshop, “Soy on the Brain: Practical and theoretical aspects of phytoestrogen action on neuroendocrine systems and behavior.” Annual Meeting of the Society for Behavioral Neuroendocrinology, June 21-26, 2005, Austin, TX.

INVITED PRESENTATIONS (73 total, only representative examples listed)

Prenatal Pollution: Endocrine Disruption of the Placenta and Neurodevelopment, University of California, Riverside, January 15, 2020.

EDCs and Placental Function, 2nd African Conference on Health Effects of Endocrine Disruptors, Pretoria, South Africa, Nov 4-7, 2019.

Endocrine Disruption and Developmental Neurotoxicity: Cognitive and Socioemotional Behaviors, Workshop on EOGRTS, European Chemicals Agency (ECHA), Helsinki, Finland, Oct 7, 2019.

The CLARITY-BPA Project: Reproducible Evidence of Low Dose Effects on the Developing Brain, 10th International Meeting on Steroids and the Nervous System, February 16-19, Torino Italy, 2019.

Plastics, Puberty and Brain Health – How Endocrine Disruptors Impact the Brain and Behavior, NIEHS, Workshop for Science Literacy (for middle and high school teachers in in NC), RTP, NC, January 7, 2019.

Plenary Lecture: Prenatal Pollution: Endocrine Disruption of the Placenta and Neurodevelopment, 3rd Annual Meeting of the US DOHaD Society, Chapel Hill, NC, October 1-2, 2018.

CLARITY on Brain and Behavior: Reproducible Evidence of Low Dose Effects, PPTOX IV, Faroe Islands, Denmark, May 25-31, 2018.

Endocrine Disruption of Neuroendocrine Pathways and Behaviors, Annual Meeting for the Triangle Society for Neuroscience, Cary, NC, May 24, 2018.

Plenary Mentoring Lecture: Life post-ONES Ten Years Out: Leveraging success and lessons learned. NIEHS ONES Award Grantee Meeting, RTP, NC, April 8-9, 2018.

Endocrine Disruption of Sexually Dimorphic Neuroendocrine Pathways and Behaviors. Annual Meeting of the Organization for the Study of Sex Differences (OSSD), Atlanta, GA, April 1-4, 2018.

Endocrine Disruption and Neurodevelopment: Emerging Ideas and Animal Models. University of North Carolina Greensboro (UNCG), February 28, 2018.

Sexually Dimorphic Effects of Endocrine Disruption on Neuroendocrine Systems, Brain and Behavior. 23rd Annual Environmental Health Sciences Research Symposium; “Environmental Exposures and Endocrine Disruption” School of Public Health, University of Michigan, Ann Arbor, MI, February 8, 2018.

Using 21st Century Science to Improve Risk-Related Evaluations. US EPA, RTP, NC, September 20, 2017.

Endocrine Disruptors, Brain and Behavior. NC Department of Health and Human Services, Raleigh, NC, September 12, 2017.

The Brain as a Reproductive Organ. International Congress of Andrology, Copenhagen, Denmark, May 6, 2017.

Sexually Dimorphic Outcomes of Endocrine Disrupting Chemical (EDC) Exposure on Neuroendocrine Systems Brain and Behavior, Duke University, Integrated Toxicology and Environmental Health Program (ITEHP) Spring Symposium, Durham, NC, March 24, 2017.

Endocrine Disruption in the Developing Brain: Emerging Ideas and Animal Models. University of Victoria, Victoria, British Columbia (Canada), January 20, 2017.

Building a Brain: Critical Windows Extend Well Beyond Birth. NIEHS Science Fest, RTP, NC, December 5-8, 2016.

Keynote Lecture: Endocrine Disruption and Sexual Differentiation of the Developing Brain: New Questions and New Tools. NIEHS Science Days, NIEHS, RTP, NC, November 3, 2016.

Neuroendocrine Disruption in the Developing Brain: Emerging ideas and animal models. University of Illinois at Champagne-Urbana, Urbana, IL, October 21, 2016.

Behaving Badly: Endocrine Disruptors, Brain and Behavior. University of Texas at El Paso, El Paso, Texas, April 14, 2016.

Endocrine Disruption by Dietary Phyto-Oestrogens: Impact on Dimorphic Sexual Systems and Behaviours. Nutrition Society Scottish Section, Royal College of Physicians, Edinburgh, Scotland, UK, March 21-22, 2016.

Genes, Environment, Brain and Behavior: Endocrine Disruption of the Developing Brain. National Toxicology Program, RTP, NC, October 14, 2015.

Brain Chemistry: Endocrine Disruption of Neuroendocrine Pathways and Behaviors, Seminar Series for the Reproductive Biology Group of the Kansas University Medical Center, Kansas City, KS, October 9, 2015.

Rewired: Endocrine disruption of sexually dimorphic neuroendocrine signaling pathways, 8th International Meeting of Steroids and the Nervous System, Torino, Italy, February 14-18, 2015.

Impacts of Early Life Exposure to Endocrine Disruptors on Neuroendocrine development, 30th Annual Perspectives in Biology Symposium, Wake Forest University, Winston Salem, NC, November 8, 2014.

Plenary/Popular Science Lecture: The Politics and Perils of Endocrine Disrupting Compounds, 30th Annual Perspectives in Biology Symposium, Wake Forest University, Winston Salem, NC, November 7, 2014.

Neuroendocrine and Behavioral Effects of Developmental Exposure to Endocrine Disruptors, Neuroscience and Behavior Seminar Series, University of Massachusetts, Amherst, Amherst, MA, November 5, 2014.

Disconnected: Endocrine Disruption of Brain and Behavior, Tulane University Fall 2014 Neuroscience Seminar Series, Tulane University, New Orleans, LA, October 9, 2014.

Plenary Lecture: Endocrine Disruptors and Mechanisms of Actions on Behavior and Neuroendocrine Systems, Annual Meeting of the German Society of Experimental and Clinical Pharmacology and Toxicology, Hanover, Germany, April 1-4, 2014.

Keynote Lecture: Endocrine Disruption of the Social Brain, 2013 International Conference on Pollinator Biology, Health and Policy, Penn State University, University Park, PA, August 14-17, 2013.

PROFESSIONAL MEMBERSHIPS

MEMBER SINCE

Society for Behavioral Neuroendocrinology	1999
Education Committee, 2007 - 2012	
Chair of SFN-Sponsored Social, 2011	
Membership Committee, 2013-2016	
Awards/Honors Committee, 2016-present	
Society for Neuroscience	1999
Triangle Consortium for Reproductive Biology	2003
Society of Toxicology	2010
The Endocrine Society	2012
Advocacy & Public Outreach Committee, 2016-present	
Chair, 2020 - 2023	
Chair, AOP Task Force, 2016 - 2019	
EDC Task Force, 2015-present	
Strategic Planning Group, 2016-present	

CONFERENCE POSTERS/ ABSTRACTS (last 5 years only; undergraduate authors in italics)

Fredenburg JD, Parker JP, Konneker TI, Allard NE, Hoarman B, Safi A, Crawford GE, **Patisaul HP**, Aylor DL. Early life exposure to TCDD alters the chromatin landscape across the life course. *Genome Informatics*, Nov 6-9, 2019. Cold Spring Harbor, MA,

Pace, CL, Ekelof, M, Horman, B, **Patisaul, HB**, Stapleton, H, Muddiman, DC. IR-MALDESI Mass Spectrometry Imaging of Rat Placental Tissue after Exposure to Flame Retardants. *ASMS*, June, 2019, Atlanta, GA.

Gillera S, Marinello, W, Horman, B, *Grinceviciute, R*, **Patisaul, HB**. Novel Approaches for Neurotoxicology: use of the Prairie Vole to Assess the Impact of Developmental Flame Retardant Exposure on Social Behaviors. Annual Meeting of the Society for Behavioral Neuroendocrinology, June 19-23, 2019, Bloomington, IN. **[Poster Award]**

Gillera, S, Horman, B, Marinello, W, *Grinceviciute, R*, **Patisaul, HB**. Social Behavioral Effects in Prairie Voles Prenatally Exposed to Firemaster 550. *Triangle SFN*, April 4, 2019. Cary, NC. **[Best Poster Award]**

Rock, K, Horman, B, Phillips, AL, Ruis, M, Stapleton, HM, **Patisaul, HB**. The Placenta as a Potential Target of Neuroendocrine Disruption: Effects of Brominated and Organophosphate Flame Retardants. *PanAmerican Neuroendocrine Meeting*, March 21-22, 2019, New Orleans, LA

- Gillera, S, Horman, B, Marinello, W, *Grinceviciute, R*, **Patisaul, HB**. Social Behavioral Effects in Prairie Voles Perinatally Exposed to Firemaster 550. Annual Meeting, Society of Toxicology, March 10-14, 2019, Baltimore, MD.
- Rock, KD, Horman, B, Phillips, AL, Ruis, M, Stapleton, HM, **Patisaul, HB**. The Placenta as A Potential Target of Neuroendocrine Disruption: A Comparison of Brominated and Organophosphate Flame Retardants. Annual Meeting, Society of Toxicology, March 10-14, 2019, Baltimore, MD. **[Best Poster Award – Reproductive Tox Section]**
- Frantz, AM*, Arambula, SE, *Idres, S*, Horman, B, **Patisaul, HB**. The effects of BPA (Bisphenol-A) as an estrogenic compound on sexually dimorphic brain regions in female rats. State of North Carolina Undergraduate Research and Creativity Symposium. NCSU, November, 10, 2018.
- Gillera, SE, **Patisaul, HB**. Exploring the Impact of Developmental Exposure to the Flame Retardant Mixture Firemaster 550 (FM550) on Social Behavior Health Using a Prosocial Animal Model. 3rd Annual Meeting of the US DOHaD Society, Oct. 1-2, 2018, Chapel Hill, NC.
- Rock, KR, **Patisaul, HB**. Sex-Specific Placental Accumulation of the Flame Retardant Mixture FM550 and Sex-Specific Disruption of the Placental and Fetal Forebrain Transcriptome in the Wistar Rat. 3rd Annual Meeting of the US DOHaD Society, Oct. 1-2, 2018, Chapel Hill, NC.
- Rock, KR, **Patisaul, HB**. The Placenta: A Potential Target of Neuroendocrine Disruption by the Flame Retardant Mixture Firemaster[®] 550. Gordon Research Conference – Environmental Endocrine Disruptors, June, 3-8, 2018, Les Diablerets, Switzerland.
- Baldwin, KR, Horman, B, Phillips, AL, McRitchie, SL, Watson, S, Deese-Spruill, J, Stapleton, HM, Jima, D, Sumner, S, **Patisaul, HB**. Neuroendocrine Disruption of Placental and Brain Function by the Flame Retardant Mixture Firemaster[®] 550. Triangle Society for Neuroscience Annual Meeting, May, 2018, Research Triangle Park, RTP, NC.
- Rock, KR, Phillips, AL, Horman, B, Arambula, SE, Rebuli, ME, Stapleton, HM, **Patisaul, HB**. Sex Specific Accumulation, Neuroendocrine, and Behavioral Impacts Following Developmental Exposure to the Flame Retardant Mixture Firemaster[®] 550 in Wistar Rats. Inaugural EDC-NC Annual Meeting, National Institute of Environmental Health Sciences, February 2018, Research Triangle Park, NC. **[Poster Award]**
- Rhodes, C, Rebuli, M, **Patisaul, HB**. Microglia colonization and endocrine disruption in the developing brain of a prosocial species. Molecular Biotechnology Training Program (MBTP) Symposium, North Carolina State University, November 2, 2017, Raleigh, NC. **[Poster Award]**
- Fuchs, JE*, Arambula, SE, *Idres, S*, Patisaul, HB. Perinatal BPA (Bisphenol A) has minimal effects on the volume of juvenile rat sexually dimorphic nuclei: Results from a CLARITY-BPA Consortium study. Society for Neuroscience Annual Meeting, November, 2017, Washington D.C. **[Selected for presentation at the Faculty for Undergraduate Neuroscience poster section]**
- Rock, KR, Phillips, AL, Horman, B, Arambula, SE, Rebuli, ME, Stapleton, HM, **Patisaul, HB**. Sex Specific Accumulation, Neuroendocrine, and Behavioral Impacts Following Developmental Exposure to the Flame Retardant Mixture Firemaster[®] 550 in Wistar Rats. Society for Neuroscience Annual Meeting, November, 2017, Washington D.C.
- Rock, KR, Phillips, AL, Horman, B, Arambula, SE, Rebuli, ME, Stapleton, HM, **Patisaul, HB**. Sex Specific Accumulation, Neuroendocrine, and Behavioral Impacts of Developmental Exposure to the Flame Retardant Mixture Firemaster[®] 550 in Wistar Rats. Society for Behavioral Neuroendocrinology Annual Meeting, June 12-16, 2017, Long Beach, CA.
- Arambula SE, Belcher SM, Planchart AP, Turner S, **Patisaul HB**. Sex-specific impact of gestational bisphenol a exposure on hypothalamic and hippocampal gene expression. Triangle Chapter of the Society for Neuroscience 3rd Annual Research Symposium. May, 21, 2017. Cary, NC.
- Fuchs JE*, Arambula SE, **Patisaul HB**. Water bottle woes: BPA and the developing brain. Triangle Chapter of the Society for Neuroscience 3rd Annual Research Symposium. May, 21, 2017, Cary, NC.
- Deverasetty, P*, Rock, K, Horman, B, *Alday, S*, Birnbaum, L, Fenton, S, **Patisaul, HB**. TBBPA Behavioral Effects on Activity and Anxiety in Wistar Rats. NCSU Keck Center Student Symposium, April 21, 2017, Raleigh, NC.
- Rhodes, C, Vogel, A, Horman, B, McGraw, L, **Patisaul, HB**. Kisspeptin and the Social Brain: Environmental Effects and Neuronal Distribution in a Socially Monogamous Species (*Microtus ochrogaster*). Kisspeptin 2017: Brain and Beyond, March 30-31, 2017, Orlando, FL.
- Fuchs JE*, Arambula SE, **Patisaul HB**. The effect of BPA on hormone sensitive regions of the developing brain. State of North Carolina Undergraduate Research Symposium. November 5, 2016, Durham, NC.
- Fuchs JE*, Arambula SE, **Patisaul HB**. Assessing the morphological effects of BPA on the sexually dimorphic nucleus of perinatally exposed Sprague-Dawley rats. Science Saturday. North Carolina Museum of Natural Sciences. October 1, 2016, Raleigh, NC.
- Idries S*, Patisaul, HB. Effects of prenatal exposure to endocrine-disrupting compounds on sex differences in rat nuclear volume. Science Saturday at the Natural Museum of Sciences, October 1, 2016, Raleigh, NC.

Arambula SE, Belcher SM, Planchart A, Turner SD, **Patisaul HB**. Effects of gestational BPA exposure on sex-specific gene expression in the neonate rat hypothalamus and hippocampus. 25 Years of Endocrine Disruption Research: Past Lessons and Future Directions. NIEHS. National Institutes of Health (NIH) Main Campus. September 18-20, 2016 Bethesda, MD.

Fuchs JE, Arambula SE, **Patisaul HB**. Assessing the morphological effects of BPA on the sexual dimorphic nucleus of perinatally exposed Sprague-Dawley rats. North Carolina State University Undergraduate Summer Research Symposium. August 10, 2016, Raleigh, NC.

Arambula SE, Belcher SM, Planchart A, Turner SD, **Patisaul HB**. Impact of prenatal BPA exposure on sex-specific neonatal rat hypothalamic and hippocampal Gene Expression. Gordon Research Conference – Environmental Endocrine Disruptors. June 18-24, 2016, Newry, ME.

Rock, K, Horman, B, Phillips, A, Arambula, S, Stapleton, H, **Patisaul, HB**. Sex Specific Neuroendocrine and Behavioral Effects of Developmental Exposure to the Flame Retardant Mixture Firemaster® 550 in Wistar Rats. Gordon Research Conference on Environmental Endocrine Disruptors, June 18-24, 2016, Newry, ME.

Arambula, S, Belcher, SM, Turner, SD, Gonzales, KL, **Patisaul, HB**. Prenatal Exposure to Bisphenol A Alters Hypothalamic and Hippocampal Gene Expression in Neonatal Rats of Both Sexes. Annual Meeting of the Endocrine Society, April 1-4, 2016, Boston, MA.

Gillera, SA, Tucker, DK, Filgo, AJ, Flawas, JA, Horman, B, **Patisaul, HB**, Fenton SE. Low dose tetrabromobisphenol A alters mammary and uterine development following prenatal exposure in Wistar rats. Annual Meeting of Society of Toxicology, March 13-17, 2016 New Orleans, LA.

Cao, J, Echelberger, R, Liu, M, Sluzas, E, McCaffrey, K, Buckley, B, **Patisaul, HB**. Soy but not Bisphenol A (BPA) or the phytoestrogen genistin alters developmental weight gain and food intake in pregnant rats and their offspring. The Endocrine Society's 97th Annual Meeting and Expo, March 5-8, 2015, San Diego, CA.

Phillips, A, Chen, A, Horman, B, **Patisaul, HB**, Stapleton, HM. Gestational vs. Lactational Transfer of Firemaster® 550 Components in Perinatally-Dosed Rats. SETAC, November 6-10, 2015, Orlando, FL.

ACADEMIC REVIEW

Editorial Work

Associate Editor:	2012 – 2017	Endocrine Disruptors
Guest Associate Editor:	2014	Endocrinology
Editorial Board:	2010 – 2019	Neurotoxicology
	2011 - present	Hormones and Behavior
	2012 – 2019	Endocrinology
	2020 – 2023	Journal of the Endocrine Society
	2020 – 2023	Frontiers in Toxicology

Ad Hoc Referee: Archives of Women's Mental Health, Behavioral Neuroendocrinology, Biological Psychiatry, Biology of Reproduction, Brain Research, Comparative Biochemistry and Physiology, Endocrine Reviews, Environmental Health Perspectives, Environmental and Molecular Mutagenesis, Frontiers in Behavioral Neuroscience, Frontiers in Neuroendocrinology, International Journal of Developmental Neuroscience, Journal of Steroid Biochemistry and Molecular Biology, Neurotoxicology and Teratology, PLOS One, PNAS, Reproductive Toxicology, Scientific Reports, Toxicological Sciences

Co-Editor for a Special Issue on Sex Differences in Neurotoxic Effects for Neurotoxicology and Teratology (*in progress*)

Co-Editor for a Special Issue on Endocrine Disruptors for Hormones and Behavior (May 2018)

Co-Editor for a Special Issue on the Neuroendocrine Effects of Endocrine Disruptors for Frontiers in Neuroendocrinology (October 2010)

Peer Review for Regulatory Bodies

2007 Peer Reviewer of the Environmental Protection Agency (EPA) Draft Integrated Summary Report for the Pubertal Female Endocrine Disruptor Screening Assay

Grant Review Panels

2015-2019 Standing member; ICER, NIH

ad hoc: National Institutes of Health (NIEHS), National Science Foundation, European Science Foundation

External Grant Reviewer

Illinois Waste Management and Research Center (WMRC) Research Grant Program, The US Environmental Protection Agency (EPA), University of Michigan, French National Research Agency, Carlton College, University of Rochester

TEACHING EXPERIENCE

North Carolina State University

Courses: Graduate Section of Neuroscience (ZO 588, 2016-2019)
Fetal Basis of Adult Disease (ZO 495, 2012-2017)
Primate Ecology and Brain Evolution (ZO 317, Spring 2009 - 2011)
Sexual Differentiation of the Brain and Behavior (ZO 592E, Fall, 2008)
Neurobiology of Addiction (ZO 495V/592V, Spring 2008)
Research Experience in Neurobehavior (BIO 499,)
Lectures: Neurobiology of Disease, for Fundamentals of Biomedical Sciences (CBS 565, Fall)
Reproductive Toxicology, for General Toxicology (Tox 701, Fall)
Reproductive and Developmental Toxicology, for Biochemical Toxicology (TOX 710, Spring)

Lectures in the RTP Area

I give at least one lecture a year for TOXC/ENVR 442 Biochemical and Molecular Toxicology at UNC Chapel Hill; ENV819 Mechanisms in Toxicology at Duke University; and the RTP Rodent Pathology Course (on the importance of controlling for stress in animal studies).

ADVISING AND MENTORING

Current Graduate Students (PhD)

Sagi Gillera, William Marinello

Former Graduate Students

Kylie Rock (PhD 2019)
Cassie Rhodes (MS 2018)
Sheryl Arambula (PhD 2017)
Meghan Radford Rebuli (PhD 2015)
Alana Sullivan (PhD 2014)
Sandra Losa (PhD 2013)
Heather Bateman Adewale (PhD 2011)

Thesis Committees in Progress (Other than my own students)

Elizabeth Cook (PhD Toxicology, NCSU), Stephanie Proano (PhD Biology, NCSU), Jackson Parker (MS Genetics, NCSU), Matthew Ruis (Duke University), Eugene Cheung (PhD Biology, NCSU), Drake Phelps (PhD Comparative Biomedical Sciences; immunology concentration, NCSU)

Former Thesis Committees

Allison Phillips (PhD, Duke University), Jamie Willett (PhD Comparative Biomedical Sciences; neuroscience concentration, NCSU), Caroline Leitschuh (PhD Biology, NCSU), Andrea Vogel (PhD Genetics, NCSU), Erin Quest (PhD CBM, NCSU), Debabrata Mahapartra (PhD Toxicology, NCSU), Melissa Slane (PhD Biology, NCSU), Nanshan Zhang (PhD Textiles, NCSU), Jessica Kendzioriski (PhD, U Cincinnati), Ella Nguyen (MS Physiology, NCSU), Eugene Wong (PhD Biology, NCSU), Bryan Jones (PhD Psychology, Simon Fraser University, Canada), Stephanie Bloom (MS Comparative Biomedical Sciences, NCSU), David Anack (MS Toxicology, NCSU), Christina Strom (PhD Zoology, NCSU), Carmel Martin-Fairey (PhD Zoology, NCSU), Candace Davis (PhD Zoology, NCSU), Minglang Fang (PhD, Duke University), Cassandra Kinch (PhD, University of Calgary), Heather Allardice (PhD Biology, NCSU)

Post-Doctoral Fellows

Jinyan Cao (2008 -2014)
Shannah Witchev (2018 – present)

Undergraduate Students

Current: Annabelle Frantz (Biology; Honors Program)

43 mentored to date

12 named as authors on peer reviewed publications (1 as first author)

16 named as authors on national/international conference abstracts

Undergraduate Mentorship

2018 – present Mentor for the Chancellor’s Leadership Development Program

Mentees: Jai/Lynne Wilburn, Kalynn Turner, Manika Hemmerich, Anh Nguyen

2015 – present Mentor for the Initiative for Maximizing Student Diversity Program

Mentees: Shima Idres, Joelle Fuchs

2006 - present Park Scholar Mentor (ongoing)

Mentees: Gavin Harrison, Pratyush Devarasetty, Theresa Crowgey, Rebekah Jewell, Meghan Radford, Linwood Joyner, Stephanie Leyrer, Catherine Thriveni, Alyssa D’Addezio, Austin Bath, Loujain Al Samara

ACADEMIC SERVICE (since 2010)

Research Oversight Committee (2019 – Present)

Research Leadership Academy (2019 – Present)

College of Sciences RPT Committee (2018 - 2019)

Biological Resources Advisory Board (2016 - 2019)

Search Committee (2015 – 2016) for two faculty positions in the Department of Biological Sciences, NCSU

NCSU Faculty Scholars Selection Committee (2015-2018)

Search Committee (2014) Preproposal Processor for the College of Sciences at NCSU

Poster and Oral Presentation Judge, NIEHS Science Day (2013, 2014)

Search Committee (2013) for the Chair of Biological Sciences in the College of Science at NCSU

Chair, Search Committee (2011-2012) for an assistant professor position in the Department of Biology, NCSU

SIGNIFICANT CONTRIBUTIONS TO SCIENTIFIC OUTREACH (past 3 years only)

My research has been summarized and featured in many popular press journals, radio programs and websites including: Business Week, The Chicago Tribune, Eureka!, eMaxHealth.com, Food Consumer, Fresh News, Frontline India, HealthJockey.com, Inform Magazine, Innovations Report, Medical News Today, More Magazine, Nature News, New Scientist, News-Medical.net, Newswise, The People’s Pharmacy, Science Daily, Science Centric, Triangle Business News

Community Engagement (representative examples)

2018 SAS Lunch and Learn: Hidden Chemicals in Every Day Products

Annually since 2014 – Participant in Brain Awareness Week activities at the North Carolina Museum of Natural Sciences

2017 “Beer Reviewed Science” public lecture series

2016 North Carolina Museum of Natural Sciences “science after dark” series for adults (fall and spring).

2016 Cary High School Science Club presentation: The Perils of Plastics

2016 NCSU EcoVillage presentation: Hidden Chemicals in Every Day Products

2016 SAS Lunch and Learn: Hidden Chemicals in Every Day Products

Media Outreach (representative selection)

I have given interviews to and been featured in numerous articles published by the New York Times, The Chicago Tribune, More Magazine, Men’s Health, Shape Magazine, Time Magazine and the Triangle Business Journal. I have also given multiple US Senate briefings and met with staffers on Capitol Hill on multiple occasions to discuss issues related to Environmental Health and participated in Rally for Medical Research Day on behalf of the Endocrine Society.

2019 Will be featured in the documentary **Pretty Ugly** which focuses on chemicals in personal care products.

2018 Feature article on my BPA work in the **Huffington Post**

https://www.huffingtonpost.com/entry/bpa-fda-health-study_us_5b4e2e6ce4b0b15aba894217

2018 Quoted in multiple articles about the CLARITY-BPA project and a related FDA press release regarding the safety of BPA (ex: <https://www.the-scientist.com/news-opinion/a-landmark-study-on-bpa-leaves-scientists-at-odds-65004>)

2018 Quoted in **Men’s Health** for an article about fragrance and other unregulated chemicals in personal care products

2017 Quoted in **Science** as part of a cover story on *Rules of evidence* by Warren Cornwall;

<http://science.sciencemag.org/content/355/6325/564.full>

2016 Quoted in an online piece for **The Today Show** about chemicals in cosmetics.

2016 Featured in the online article “Are you eating too much soy” by **Life** (<http://dailyburn.com/life/health/is-soy-bad-for-you>)

- 2015 Featured by local TV station **WRAL** in a special story about chemicals in personal care products.
- 2015 Interviewed for and quoted in **Shape Magazine** about the health benefits and risks of soy foods.
- 2014 Featured in an article about the impact of phthalates on male reproductive development for the **New York Times**.
- 2013 Interviewed for a piece on “natural” hormone replacement for an article in **More Magazine**
- 2012 Toxic Roulette, **Chicago Tribune**. My collaborative research with a colleague at Duke was featured in an award winning investigative series about the flame retardant industry and the potential health effects associated with these chemicals.