

# Curriculum Vitae

Kylie D. Rock, Ph.D.  
230 Parkway Drive,  
134 Long Hall, Clemson, SC 29634  
rock5@clemson.edu | (864) 656 – 2328

## I. Education

North Carolina State University Laboratory of Dr. Scott Belcher	<i>Postdoctoral Fellow</i> August 2021 – 2023
University of Maryland School of Medicine Laboratory of Dr. Tracy Bale	<i>Postdoctoral Fellow</i> September 2019 – August 2021
North Carolina State University Thesis Advisor: Dr. Heather Patisaul	<i>Ph.D. in Toxicology</i> August 2014 – 2019
St. Lawrence University Thesis Advisors: Drs. Marilyn Mayer and Alexander Schreiber	<i>B.S. in Biology</i> August 2008 – May 2012

## II. Professional Experience

2023 – Present	Assistant Professor, Department of Biological Sciences, Clemson University, Clemson, SC.
2021 – 2023	Postdoctoral Researcher, Laboratory of Dr. Scott Belcher, Department of Biological Sciences, North Carolina State University, Raleigh, NC.
2019 – 2021	Postdoctoral Researcher, Laboratory of Dr. Tracy Bale, Department of Pharmacology, University of Maryland, Baltimore, MD.
2014 – 2019	Graduate Research Assistant, Laboratory of Dr. Heather Patisaul, Department of Biological Sciences, North Carolina State University, Raleigh, NC.
2013 - 2014	Lab Manager, Laboratory of Dr. Heather Stapleton, Nicholas School of the Environment, Duke University, Durham, NC.
2012 - 2013	Research Assistant, Laboratory of Dr. Heather Stapleton, Nicholas School of the Environment, Duke University, Durham, NC.
2012	Limnology Research Assistant, Laboratory of Dr. Brad Baldwin, Biology Department, St. Lawrence University, Canton, NY.

## III. Honors and Awards

2023	Clemson University/Prisma Health NIH Accelerator Program
2023	NIEHS Extramural Paper of the Month (DOI: 10.1021/acs.est.3c01146)
2022	NC State Strengthening the Impact of Research Scholar
2021	University of Maryland Postdoctoral Professional Development Award
2017 – 2018	Preparing the Professoriate Fellowship
2010	Daniel F. '65 and Ann H. Sullivan St. Lawrence University Summer Research Fellowship
2008 – 2012	Augsbury North Country Scholarship

## IV. Research Support Completed

1F31ES029000-01 (NRSA) 01/22/18 – 08/13/19  
Effects of prenatal Firemaster 550 exposure on placental gene expression and serotonergic innervation in the developing forebrain  
Source: NIH/NIEHS  
Role: PI (Training Fellowship)  
Direct Costs: N/A NRSA Pre-Doctoral Fellowship

## V. Memberships

Women in Toxicology  
Society of Toxicology  
Society of Toxicology: North Carolina Chapter  
Society of Toxicology: Southeastern Chapter

## Curriculum Vitae

Society of Environmental Toxicology & Chemistry  
Carolinas Society of Environmental Toxicology & Chemistry

### VI. Publications

ORCID ID: 0000-0003-2954-1110

1. **Rock KD**, Bhoothapuri S, Lassiter E, Belcher SM. (*In Review*) Mercury Concentrations in Canned Tuna can Exceed Guidelines for Safe Consumption. *Environmental Toxicology and Chemistry*.
2. Starnes HM, Jackson TW, **Rock KD**, Belcher SM. (*In Review*) Quantitative Cross-Species Comparison of Serum Albumin Binding of Per- and Polyfluoroalkyl Substances from Five Structural Classes. *Toxicological Sciences*.
3. **Rock KD**, Folts L, Zierden HC, Marx-Rattner R, Leu A, Nugent BM, Bale TL. (2023) Developmental Transcriptomic Patterns can be Altered by Transgenic Overexpression of Uty. *Scientific Reports*.
4. **Rock KD**, Polera ME, Guillette TC, McCord J, Dean K, Watters M, Stevens-Stewart D, Belcher SM. (2023) Companion Animals as Sentinels of Per- and Polyfluoroalkyl Substance (PFAS) Exposure and Associated Health Biomarkers in Gray's Creek North Carolina. *Environmental Science and Technology*.
5. Zierden HC, Marx-Rattner R, **Rock KD**, Montgomery KR, Anastasiadis P, Folts L, Bale TL. (2023) Extracellular Vesicles are Dynamic Regulators of Maternal Glucose Homeostasis During Pregnancy. *Scientific Reports*.
6. **Rock KD**, Starnes HM, Belcher SM. (2023) Reproductive Toxicology, Female. *Encyclopedia of Toxicology*.
7. Belcher SM, Guillette MP, Robb F, **Rock KD**. (2022) Comparative Assessment of Blood Mercury in American Alligators (*Alligator mississippiensis*) from Coastal North Carolina and Florida. *Ecotoxicology*.
8. Starnes HM, **Rock KD**, Jackson TW, Belcher SM. (2022) A Critical Review and Meta-Analysis of Impacts of Per- and Polyfluorinated Substances on the Brain and Behavior. *Frontiers in Toxicology*.
9. Jašarević E, Hill EM, Kane PJ, Rutt L, Gyles T, Folts L, **Rock KD**, Howard CD, Morrison KE, Ravel J, Bale TL. (2021) Colonization at Birth with Human CST IV Cervicovaginal Microbiota Alters Development and Increases Neonatal Mortality in Mice. *Nature Communications*.
10. Arumugasaamy N, **Rock KD**, Kuo C, Bale TL, Fisher JP. (2020) Microphysiological Systems of the Placental Barrier. *Advanced Drug Delivery Reviews*.
11. Macari S, **Rock KD**, Santos MS, Lima VTM, Szawka RE, Horman B, Patisaul HB. (2020) Developmental Exposure to the Flame Retardant Mixture Firemaster 550 Compromises Adult Bone Integrity in Male but not Female Rats. *International Journal of Molecular Sciences*.
12. **Rock KD**, St Armour G, Horman B, Phillips A, Ruis M, Stewart A, 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 Developing Forebrain. *Toxicological Sciences*.
13. Jackson TW, Bendfeldt GA, Beam KA, **Rock KD**, Belcher SM. (2020) Heterozygous mutation of Sonic Hedgehog receptor (Ptch) drives cerebellar overgrowth and sex-specifically alters activity and social behavior in female mice. *Neurotoxicology and Teratology*.
14. Ruis M, **Rock KD**, Hall S, Horman B, Patisaul H, Stapleton H. (2019) PBDEs Concentrate in the Fetal Portion of the Placenta: Implications for Thyroid Hormone Dysregulation. *Endocrinology*.
15. **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*.
16. Bagley M, Ekelöf M, **Rock KD**, Patisaul H, Muddiman D. (2018) IR-MALDESI Mass Spectrometry Imaging of Underivatized Neurotransmitters in Brain Tissue of Rats Exposed to Tetrabromobisphenol A (TBBPA). *Analytical and Bioanalytical Chemistry*.
17. **Rock KD**, Horman B, Phillips A, McRitchie S, Watson S, Deese-Spruiell J, Stapleton H, Jima D, Sumner S, Patisaul H. (2018) Molecular Effects of Developmental Firemaster® 550 Exposure in Wistar Rat Placenta and Fetal Forebrain. *Endocrine Connections*.
18. **Rock KD**, Patisaul H. (2018) Environmental Mechanisms of Neurodevelopmental Toxicity. *Current Environmental Health Reports*.
19. **Baldwin KR**, Phillips A, Horman B, Arambula S, Rebuli M, Stapleton H, Patisaul H. (2017) Sex Specific Placental Accumulation and Behavioral Effects of Developmental Firemaster® 550 Exposure in Wistar Rats. *Scientific Reports*.
20. Phillips A, Chen A, **Rock KD**, Horman B, Patisaul H, Stapleton H. (2016) Transplacental and Lactational Transfer of Firemaster® 550 Components in Dosed Wistar Rats. *Toxicological Sciences*.
21. Macaulay L, Chen A, **Rock KD**, Dishaw L, Dong W, Hinton D, Stapleton H. (2015) Developmental toxicity of the PBDE metabolite 6-OH-BDE-47 in zebrafish and the potential role of thyroid receptor  $\beta$ . *Aquatic Toxicology* 168: 38-47.

## Curriculum Vitae

### VII. Conference Abstracts and Proceedings Oral Presentations

#### National

1. **Rock K.** One Health Case Studies: PFAS, Pine Trees, Pets, and Predators. July 2022. USEPA Emerging Topics Seminar, Raleigh, NC.
2. **Rock K.** One Health Case Studies: PFAS, Pine Trees, Pets, and Predators. June 2022. Gordon Research Conference – Environmental Endocrine Disruptors, Newry, ME.
3. **Rock K.** PFAS Exposure is Associated with Autoimmunity in the American Alligator. March 2022. Society of Toxicology Annual Meeting, San Diego, CA.
4. **Rock K.** Defining the Molecular Mechanisms by which Stress Alters Placental Function and Fetal Brain Development. April 2021. Virtual Placenta-Interface Seminar Series.
5. **Rock K.** The Placenta: A Novel Target of Sex-specific Neuroendocrine Disruption. February 2019. Neuroscience Trainee Seminar Series, North Carolina State University, NC.
6. **Rock K.** 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. October 2018. The United States Society for Developmental Origins of Health and Disease, Chapel Hill, NC.
7. **Rock K.** Neurodevelopment: What's the placenta got to do with it? March 2018. Brain Awareness Night, North Carolina Museum of Natural Sciences, NC.
8. **Rock K.** The Placenta as a Potential Target of Neurotoxicity. November 2017. Toxicology Program Seminar, North Carolina State University, NC.
9. **Rock K.** Firemaster<sup>®</sup> 550, Placenta, Brain and Behavior. April 2017. W.M. Keck Center for Behavioral Biology Student and Postdoc Symposium, North Carolina State University, NC.
10. **Rock K.** Methylmercury Uptake and Distribution in Metamorphosing *Xenopus laevis* Tadpoles Fed a Swordfish Diet. April 2012. Festival of Science at St. Lawrence University, Canton, NY.

#### International

1. **Rock K.** The Placenta: A Potential Target of Neuroendocrine Disruption by the Flame Retardant Mixture Firemaster<sup>®</sup> 550. June 2018. Gordon Research Seminar – Environmental Endocrine Disruptors, Les Diablerets, Switzerland.

### VIII. Local and National Service

#### National Service

- 2023 – 2025 Postdoctoral Representative, Reproductive and Developmental Toxicology Specialty Section of the Society of Toxicology
- 2019 – 2022 Program committee member for the 2022 Gordon Research Conference on Environmental Endocrine Disruptors
- 2018 – 2022 Chair for the 2022 Gordon Research Seminar on Environmental Endocrine Disruptors

#### Local Service

- 2023 Booth Host, Brain Awareness Night North Carolina Museum of Natural Sciences, Raleigh, NC
- 2022 – 2024 Postdoctoral Representative, North Carolina Chapter of Society of Toxicology, Raleigh, NC.
- 2021 Organizer, Big10 Neuroscience Virtual Seminar Series
- 2019 – 2021 Volunteer, CERCH Reading in the Brain
- 2019 Booth Host, Brain Awareness Night North Carolina Museum of Natural Sciences. Raleigh, NC
- 2018 Volunteer, UNC Science Expo University of North Carolina at Chapel Hill. Chapel Hill, NC
- 2018 Event Coordinator, Neuroscience Trivia hosted by Triangle Chapter of Society for Neuroscience. December. Hickory Tavern. Cary, NC

### IX. Teaching Service

- Fall 2023 Instructor, Senior Seminar: Developmental Origins of Health and Disease (BIOL 4930) Clemson University
- Fall 2022 Instructor, Cellular Biology (BIO 414) North Carolina State University
- Fall 2018 Guest Lecturer, Neurobiology (BIO 488) North Carolina State University
- Spring 2018 Guest Lecturer, Intro. Cellular and Molecular Biology (BIO 183) North Carolina State University
- 2016 – 2017 Instructor, Intro. Cellular and Molecular Biology Lab (BIO 183) North Carolina State University
- 2010 – 2012 Instructor, General Chemistry Lab (CHEM 103 & 104)

# Curriculum Vitae

St. Lawrence University

## X. Mentoring

### Graduate Students

2023 - Present	Zachary Padgett
2021 – 2023	Hannah Starnes
2021 – 2023	Zachary McLean
2019 – 2021	Nickole Moon
2019 – 2021	Kristen Montgomery
2018 – 2019	William Marinello
2017 – 2019	Sagi Gillera
2017 – 2019	Thomas Jackson
2016 – 2018	Cassie Rhodes

### Undergraduate Students

2022 – 2023	Shriya Boothapuri
2022 – 2023	Sydney Wright
2021 – 2023	Emmanuel Lassiter
2019 – 2021	Lillian Folts
2017 – 2019	Kelby Beam
2016 – 2019	Annabelle Frantz
2016 – 2019	Pratyush Devarasetty
2015 – 2017	Jamal Moss
2015 – 2017	Annabelle Rivera
2015 – 2017	Meredyth Daniel
2014 – 2015	Emily Cox