

Danielle Goodspeed, PhD

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TITLE

Visiting Assistant Professor, Sam Houston State University, Department of Biological Sciences

EDUCATION

REACH IRACDA Affiliate, Baylor College of Medicine, Houston TX 2015-2017

Postdoctoral Associate, Baylor College of Medicine, Houston, TX, 2013-2017

Rice University, Houston, TX, Ph.D. (Biochemistry and Cell Biology) 2013

Rice University, Houston, TX, M.A. (Biochemistry and Cell Biology) 2011

Roger Williams University, Bristol, RI, B.S. (Chemistry) 2003

Roger Williams University, Bristol, RI, B.S. (Biology) 2003

PROFESSIONAL EXPERIENCE

Present	Visiting Assistant Professor, Sam Houston State University, Department of Biological Sciences
2017	Temporary Full-Time Professor, Blinn College, Department of Biology
2016-2017	Adjunct Faculty, University of St. Thomas, Department of Biology
2003-2008	Senior Laboratory Technician, Wadsworth Center, NY State Department of Health

RESEARCH EXPERIENCE

2013-2017	<p>Postdoctoral Fellow, Baylor College of Medicine, Department of Obstetrics and Gynecology, Maternal Fetal Medicine</p> <p>Advisor: Kjerstie Aagaard, MD PhD</p> <p>Main research interests: Determining how an altered circadian clock can affect the risk of metabolic disease in the mammalian system. Specifically, we are focusing on deciphering how maternal health and behavior impacts the <i>in utero</i> environment and fetal metabolic development.</p>
2008-2013	<p>Graduate Student, Rice University, Department of Biochemistry and Cell Biology</p> <p>Advisor: Janet Braam, PhD</p> <p>Main research interests: Uncovering the physiological relevance of the plant circadian clock's control of biotic stress resistance and phytohormone levels. Studies focused on plant resistance to insect herbivory and fungal infections, and hormone and metabolite accumulations, as well as post-harvest fruit and vegetable circadian clock entrainment to increase pest resistance and human nutrition.</p>
2003-2008	<p>Senior Laboratory Technician, Health Research, Inc.</p> <p>Supervisor: William Shain, PhD</p> <p>Main research interests: Investigating the acute and chronic cellular and tissue responses of neural prosthetic device implantation. I also studied post-mortem human brain tissue obtained after autopsy from patients previously treated with deep brain stimulation to develop protocols for using immunohistochemistry to assess device-related brain responses.</p>
2000-2003	<p>Undergraduate Research, Roger Williams University, Department of Chemistry</p>

Advisor: Stephen O'Shea, PhD

Main research interests: Uncovering the environmental effects of tributyltin use as an antifouling agent on marine boats. We also determined the levels of heavy metal contamination in a nearby bay, Mount Hope Bay.

PUBLICATIONS

1. O'Neil DS, Stewart CJ, Chu DM, **Goodspeed DM**, Gonzalez-Rodriguez PJ, Shope CD, Aagaard, KM. (2017) Conditional postnatal deletion of the neonatal murine hepatic circadian gene, *Npas2*, alters the gut microbiome following restricted feeding. *Am J Obstet Gynecol*, 217, 218.e1-218.e15.
2. Gonzalez-Rodriguez P, Cantu J, O'Neil D, Seferovic MD, **Goodspeed DM**, Suter MA, Aagaard KM. (2016) Alterations in expression of imprinted genes from the H19/IGF2 loci in a multigenerational model of intrauterine growth restrictions (IUGR). *Am J Obstet Gynecol*, 214, 625.e1-625.e11.
3. Seferovic MD, **Goodspeed DM**, Chu DM, Krannich LA, Gonzalez-Rodriguez PJ, Cox JE, Aagaard KM. (2015) Heritable IUGR and adult metabolic syndrome is reversible and associated with alterations in the metabolome following dietary supplementation of one-carbon intermediates. *FASEB J*, 29, 2640-2652.
4. Liu JD*, **Goodspeed D***, Sheng Z, Li B, Yang Y, Kliebenstein DJ, Braam J. (2015) Keeping the clock running: light/dark cycles during postharvest storage preserve the tissue integrity and nutritional content of leafy plants. *BMC Plant Biol*, 15, 92.
5. **Goodspeed D**, Seferovic MD, Holland W, Mcknight RA, Summers SA, Branch DW, Lane RH, Aagaard KM. (2015) Essential nutrient supplementation prevents heritable metabolic disease in multi-generational intrauterine growth restricted rats. *FASEB J*. 29, 809-819.
6. **Goodspeed D**, Liu JD, Chehab EW, Sheng Z, Francisco M, Kliebenstein DJ, Braam J. (2013) Post-harvest circadian entrainment enhances crop pest resistance and phytochemical cycling. *Current Biol*. 23, 1235-1241.
7. **Goodspeed D**, Chehab EW, Covington MF, Braam J. (2013) Circadian control of jasmonates and salicylates: The clock role in plant defense. *Plant Signal Behav*. 8, e23123.
8. **Goodspeed D**, Chehab EW, Min-Venditti A, Braam J, Covington MF. (2012) *Arabidopsis* synchronizes jasmonate-mediated defense with insect circadian behavior. *PNAS* 109, 4674-4677.

* Authors contributed equally to the manuscript, co-first authorship.

TEACHING EXPERIENCE

Instructional Teaching Experience

2017	Visiting Assistant Professor, Sam Houston State University, Department of Biological Sciences: Contemporary Biology
2017	Visiting Assistant Professor, Sam Houston State University, Department of Biological Sciences: Advanced Cell Biology
2017	Temporary Full-Time Professor, Blinn College, Department of Biology: Anatomy and Physiology II
2017	Adjunct Faculty, University of St. Thomas, Department of Biology: Anatomy and Physiology II
2016	Adjunct Faculty, University of St. Thomas, Department of Biology: Population Biology and Evolution
2013	Guest Lecturer at Prairie View A&M University for undergraduate and graduate student journal club
2009-2010	Teacher's Assistant for Biochemistry I and II
2008	Implantable Neuroprosthetics: Technologies and Techniques. Ann Arbor, MI. Instructor in Lab Modules: Perfusion Fixation Techniques and Imaging Techniques
1999-2003	Math tutor for Calculus, Statistics, and Algebra

Bench/Research Mentoring Experience

2013-Present Mentoring and supervising graduate and medical students in biomedical research, circadian biology, and genetics
2014 Bench mentor for SMART undergraduate summer student
2008-2013 Mentoring and supervising undergraduate students in biochemistry, molecular biology, cell biology, and genetics
2003-2008 Mentoring and supervising high school and graduate students in neuroscience, immunohistochemistry, and imaging

SELECTED HONORS

2013 Current Biology publication recommended in Faculty of 1000
2013 Proceedings of the National Academy of Sciences Cozzarelli Prize 2012
2012 PNAS publication recommended in Faculty of 1000
2012 George J. S. Schroepfer, Jr Award for Outstanding Published Research in Biochemistry and Cell Biology
1999-2003 Roger Williams Student Scholarship

SEMINARS AND MEETINGS

1. Poster, The Society for Maternal Fetal Medicine, 2017.
2. Poster, The Society for Maternal Fetal Medicine, 2017.
3. Poster, The Society for Maternal Fetal Medicine, 2017.
4. Poster, The Society for Maternal Fetal Medicine, 2017.
5. Oral Presentation, The Society for Maternal Fetal Medicine, 2016.
6. Poster, The Society for Maternal Fetal Medicine, 2015.
7. Poster, American Society of Plant Biologists, 2012.
8. Poster, 225th American Chemical Society National Meeting, 2003.
9. Poster, 223rd American Chemical Society National Meeting, 2002.

FUNDING

2016-2017 T32 HD0007166-37 PI: B.W. O'Malley, MD
2015-2016 T32 HD0007166-36 PI: B.W. O'Malley, MD

PATENT PENDING DISCLOSURE

Invention Disclosure (Pending): Post-harvest circadian entrainment. William Marsh Rice University, Houston TX, Filed on June 20, 2013.