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Department of Biological Sciences
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ACADEMIC APPOINTMENTS

2021-present	Professor	Minnesota State University, Mankato Department of Biological Sciences
2016-2021	Associate Professor	Minnesota State University, Mankato Department of Biological Sciences
2012-2016	Assistant Professor	Minnesota State University, Mankato Department of Biological Sciences

EDUCATION

2002-2007	Ph.D., September 2007	University of Massachusetts-Amherst Program in Molecular and Cellular Biology Dissertation Title: <i>Environmental Toxicants and White Matter Composition: Understanding the Role of Thyroid Disruption</i>
1995-1999	B.S., May 1999	University of New Hampshire Department of Zoology

RESEARCH EXPERIENCE

2007-2012	Postdoctoral Fellow , National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Laboratory of Endocrinology and Receptor Biology Mentor - Dr. Douglas Forrest <i>Research Focus</i> : Thyroid hormone action during cochlear development
2002-2007	Research Assistant , Department of Biology, University of Massachusetts Mentor - Dr. R. Thomas Zoeller <i>Research Focus</i> : The effects of hypothyroidism and polychlorinated biphenyl exposure on white matter development (Ph.D. Dissertation Research)
1999-2002	Research Technologist , Wellman Labs of Photomedicine, MGH/Harvard Medical School Mentor - Dr. Tayyaba Hasan <i>Research Focus</i> : Optimization of photodynamic therapy for the treatment of cancer and infectious diseases

TEACHING EXPERIENCE

CLASSROOM

Minnesota State University, Mankato

Biol 105 - RISEbio Foundational Methods in Biology (General Biology Lab for RISEbio scholars)
Biol 220 - Human Anatomy Lecture and Lab
Biol 324 - Neurobiology
Biol 330 - Human Physiology (Laboratory)
Biol 424/524 - Developmental Biology
Biol 425 - Developmental Biology Laboratory
Biol 619 - Special Topics in Biology (Environmental Endocrine Disruptors 2014; Modern Genome Manipulations 2017)
Biol 602 - Graduate Research Methods
Biol 695 - Graduate Seminar

The Foundation for Advanced Education in the Sciences, National Institutes of Health

Lecturer - Bio 246 - Human Health and Biological Diversity (new course)
Lecturer - Bio 319 - Stem Cells and their Niches
Summer Intern Journal Club Facilitator - Hormones in Development and Disease

Department of Biology, University of Massachusetts

Co-Instructor - Bio 597M - Environmental Endocrine Disruptors
Teaching Assistant - Bio 100 - Introductory Biology Laboratory

Department of Natural Resources, University of New Hampshire

Teaching Assistant - NR435 - Contemporary Conservation Issues

LABORATORY (Undergraduate and Graduate Student Mentoring)

Minnesota State University, Mankato

Master Students

2022-present	E. Gregersen – Atp2b2 in the hypothyroid cochlea
2020-present	P. Umeshi Mangedarage – Thyroid hormone regulation of Igf-1 in developing mouse cerebellum
2020-2023	M. Santiago - Thyroid hormone regulation of Apobec3 in the murine cochlea
2018-2020	M. Uscategui Calderon – Characterization of deiodinase expression in developing cochlea
2017-2019	M. Tompach – Chst15 expression in the developing mouse cochlea
2017-2019	A. Grond – Targeted over-expression of igf1 in the developing mouse brain
2015-2017	C. Graber – Quantification of Igf1 mRNA in the hypothyroid brain
2013-2015	S. Kline – Effects of hypothyroidism on the temporal expression of Igf1 in the rodent brain
2013-1515	K. Short – Cardiovascular function in hypothyroid SHR rats
2012-2014	R. Shin – Auditory function in mice lacking thyroid hormone transporters Mct8 and Oatp1c1

Undergraduate Students

2023-present	J. Hawco - Thyroid hormone insufficiency and adverse outcomes
2022-present	E. Cha – Thyroid hormone transporters in adrenal gland development
2022-present	O. Muca – Thyroid hormone transporters in adrenal gland development
2022-present	M. Jensen – Fam107a in cochlea
2022-present	D. Johnson – Fam107a in cochlea
2021-present	A. Hemmen – Thyroid hormone insufficiency and adverse outcomes
2020-2022	J. Sakowicz – Thyroid hormone transporters in adrenal gland development
2020-2022	J. Wimp – Thyroid hormone insufficiency and adverse outcomes
2020-2021	A. Ockenga – Thyroid hormone transporters in adrenal gland development
2018-2020	L. Krieg – Thyroid hormone insufficiency and adverse outcomes
2018-2020	A. Lind – Thyroid hormone insufficiency and adverse outcomes
2018-2020	O. Valenta – Igf1 in Retinal Development
2018-2020	N. Jock – Thyroid hormone insufficiency and adverse outcomes
2017-2020	M. Swenson – Thyroid Hormone and Igf1 in Development
2016-2018	E. Kim – Fstl1 as a Potential Deafness Gene
2016-2018	M. Burant - Growth hormone regulation of Igf1 in the hypothyroid brain
2016-2019	A. Onadipe - Thyroid hormone, Igf1, and Brain Development
2015-2016	L. Hesser - Fstl1 as a Potential Deafness Gene
2015-2017	A. Wright - Growth hormone regulation of Igf1 in the hypothyroid brain
2015-2017	N. Moses - Auditory function in mice lacking thyroid hormone transporters Mct8 and Oatp1c1
2015-2016	I. Omar - Thyroid hormone, Igf1, and Brain Development
2014-2018	S. Petersen - Auditory function in mice lacking thyroid hormone transporters Mct8 and Oatp1c1
2014-2016	A. Rice - Triclosan and Development
2013-2015	B. Nygard - Pressure natriuresis in hypothyroid SHR Rats, Triclosan and Development
2013-2015	J. Verdon - Triclosan exposure and auditory function
2013-2015	J. Gute - Pressure natriuresis in hypothyroid SHR Rats
2013-2015	A. Zawed - The effects of hypothyroidism on photoreceptor outer segments
2013-2015	C. Graber - Chst15 as a novel target of the thyroid hormone receptor
2013-2014	N. Rahman - Auditory function in mice lacking thyroid hormone transporters Mct8 and Oatp1c1

2013-2014 A. Nicholson - Chst15 as a novel target of the thyroid hormone receptor
2012-2013 S. Piroso - The effects of hypothyroidism on hair cell stereocilia
2012-2013 M. Haack - The effects of hypothyroidism on hair cell stereocilia

National Institutes of Health

2010-2011 J. Chen - Characterization of a thyroid hormone receptor target gene in the developing cochlea
2009 A. Swaroop - Comparison of early stages of rod and cone generation in mouse retina

University of Massachusetts

2006-2007 L. Meyer - MCT8 as an adaptive mechanism to thyroid hormone insufficiency
2005-2006 T. Toomey - Cloning of the thyroxine transporter, Oatp1c1
2004 A. Mousette - The effects of perchlorate exposure on the expression of the Na/I-symporter

GRANTS

Funded (\$3,329,930 total)

2023-present National Science Foundation, Scholarships-STEM - Supporting Low-Income Student Success in STEM Through Community, Mentoring, and Immersive Research in Biology and Biochemistry - \$1,500,000. Role: Co-PI
2019-2021 Faculty Research Grant, Regulation of Cochlear Deiodinases, MSU, Mankato - \$5,000. Role: PI
2017-present National Science Foundation, Scholarships-STEM - Research Immersive Scholastic Experience in Biology (RISEbio): A Scholarship and Support Program Assisting Biology Students to Rise to their Full Potential - \$1,000,000. Role: PI
2017-2020 National Science Foundation, Major Research Instrumentation - Acquisition of a Laser Confocal Microscope System for a Multi-User Core Imaging Facility Supporting Research and Training in the Sciences - \$575,000. Role: PI
2016-2019 American Thyroid Association Research Grant - \$57,500. Role: PI
2016-2017 Strategic Priority Funding, MSU Mankato, Acquisition of an Anatomage - \$70,250. Role: PI
2015-2016 Faculty Research Grant, MSU, Mankato - \$4,980. Role: PI
2013-2014 Faculty Research Grant, MSU, Mankato - \$5,000. Role: PI
2010 American Thyroid Association / International Thyroid Congress Travel Grant - \$500. Role: PI
2004-2007 USEPA Science to Achieve Results (STAR) Predoctoral Fellowship - \$110,000. Role: PI
2007 Society of Toxicology Graduate Student Travel Grant - \$500.
2004 Gordon Conference on Endocrine Disruptors Student Travel Grant - \$700
2002 American Society of Photobiology Annual Conference Travel Grant - \$500

Unfunded

2020 Training future scientists: Supporting student success through the Research Immersive Scholastic Experience in biology and biochemistry (RISEbio) program - \$1,500,000. Role: Co-PI
2018 Regenerative Medicine Minnesota, Thyroid Hormone Action During Cartilage Replacement - \$250,000. Role: Co-PI
2017 Council on Undergraduate Research, Curricular Transformation - \$10,000. Role: Co-PI
2015 Strategic Priority Funding, MSU Mankato, Establishment of the Biological Sciences Gateway
2015/6 NSF, MRI - Acquisition of a Laser Scanning Microscope - \$571,712. Role: Co-PI
2014 Strategic Priority Funding, MSU Mankato. Establishment of the Integrated Center for Biological Imaging and Observation (ICBIO - "I See Bio") - \$350,000: Role: PI
2013 Faculty Improvement Grant, MSU Mankato. Co-chair and participate in the 2013 American Thyroid Associations Trainees' and Career Advancement Educational Track - \$1,469.40

Student Sponsored (graduate and undergraduate: funded \$16,715)

2022 MSU, Mankato, Foundation Grant - Undergraduate Research Center (Johnson/Jensen) - \$1,000
2021 MSU, Mankato, College of Graduate Studies Research Grant (P. Umeshi Mangedarage) - \$1,000
2021 MSU, Mankato, College of Graduate Studies Research Grant (M. Santiago) - \$1,000
2020 MSU, Mankato, Undergraduate Research Center Supply Grant (Krieg/Wimp) - \$500
2020 MSU, Mankato, Undergraduate Research Center Supply Grant (Ockenga/Sakowicz) - \$500
2019 MSU, Mankato, Undergraduate Research Center Supply Grant (Swenson/Valenta) - \$500
2019 MSU, Mankato, Foundation Grant - Undergraduate Research Center (Lind/Jock/Krieg) - \$1,000
2018 MSU, Mankato, Undergraduate Research Center Supply Grant (Onadipe) - \$500
2018 MSU, Mankato, Undergraduate Research Center Supply Grant (Swenson) - \$500
2017 MSU, Mankato, Foundation Grant - Undergraduate Research Center (Onadipe/Burandt) - \$1,000
2017 MSU, Mankato, Undergraduate Research Center Supply Grant (Peterson/Swenson) - \$500

2016	MSU, Mankato, Foundation Grant - Undergraduate Research Center (Moses) - \$515
2016	MSU, Mankato, Foundation Grant - Undergraduate Research Center (Wright/Burandt) - \$575
2016	MSU, Mankato, Department of Biological Sciences Graduate Student Grant (Graber) - \$1,000
2015	MSU, Mankato, Creating a Strong and Vibrant Graduate Community Grant (Kline) - \$750
2015	MSU, Mankato, Department of Biological Sciences Graduate Student Grant (Kline) - \$1,000
2015	MSU, Mankato, Undergraduate Research Center Supply Grant (Peterson/Moses) - \$500
2014	MSU, Mankato, Creating a Strong and Vibrant Graduate Community Grant (Short) - \$750
2014	MSU, Mankato, Foundation Grant - Undergraduate Research Center (Verdon) - \$625
2014	MSU, Mankato, Foundation Grant - Undergraduate Research Center (Gute) - \$500
2014	MSU, Mankato, Department of Biological Sciences Graduate Student Grant (Short) - \$1,000
2013	MSU, Mankato, Undergraduate Research Center Supply Grant (Zawed) - \$500
2013	MSU, Mankato, Undergraduate Research Center Supply Grant (Graber/Nicholson) - \$500
2012	MSU, Mankato, Undergraduate Research Center Supply Grant (Haack/Piroso) - \$500

AWARDS

2023	Douglas R. Moore Lectureship, MSU Mankato (includes monetary award)
2022	Distinguished Faculty Scholar, MSU Mankato (includes monetary award)
2018	Excellence in Research Award, College of Science, Engineering, and Technology, MSU Mankato,
2017/18/19	Nominated: Dr. Duane Orr Teacher of the Year Award or Vic Swenson Student Friendly Award
2015	Excellence in Advising Award, College of Science, Engineering, and Technology, MSU Mankato
2013/14/15/16/21	Impact Professor – Honors Program, MSU - Student Nominated
2011	Best Oral Presentation – NIDDK Postdoctoral Fellow Retreat - NIH
2009	Byron Prize for Best Dissertation – University of Massachusetts
2008	Dr. Butcher New Investigator Award – Neurobehavioral and Teratology Society
2006	Best Student Poster Award – MCB Program Annual Retreat

SERVICE

Editorial Service:

2015-present Review Editor, Editorial Board of *Thyroid Endocrinology*, a specialty of *Frontiers in Endocrinology*.

Ad Hoc Review Service to Professional Journals

Biochimica et Biophysica Acta (BBA) - General Subjects

Endocrine

Endocrinology

Environmental Endocrine Disruptors

Environmental Health Perspective

Environmental Science and Technology

Environmental Toxicology and Pharmacology

Frontiers

International Journal of Molecular Sciences

Journal of Neuroendocrinology

Journal of Neuroscience

Lancet: Diabetes & Endocrinology

Neurotoxicology

Neurotoxicology

Nutritional Neuroscience

Scientific Reports

Toxicological Sciences

Additional Ad Hoc Review Service

2022 Expert reviewer, French National Research Agency (ANR)

2018 Developmental Biology Textbook, Julia Paxson, Oxford University Press

2016 Chick Development eBook, Mary Tyler, Sinauer Associates, Inc., Publishers

2015 Expert reviewer, French National Research Agency (ANR)

2013 Ohio University Research Committee – External Grant Reviewer

2012 United States Environmental Protection Agency (US-EPA) – Technical Manuscript Reviewer

Minnesota State University, Mankato – University and Departmental Service

2022-present	Scholarship Committee Member, Department of Biological Sciences
2022-present	Tenure Track Microbiologist Search Committee Member, Department of Biological Sciences
2021-2022	Tenure Track Med Lab Sciences Search Committee Member, Department of Biological Sciences
2018-present	Biology MS Program Coordinator (<i>sabbatical leave AY2020-2021</i>)
2018-2020	Advisory Committee Member, Department of Biological Sciences
2019	AVP for Research & Dean of Graduate Education Search Committee Member
2018-2019	Tenure Track Anatomist Search Committee Member (Chair), Department of Biological Sciences
2015-2017	Faculty Improvement and Sabbatical Committee (University wide committee)
2015-2017	Graduate Committee (AY16-17 Chair), Department of Biological Sciences
2015-2016	Search Committee for Safety Office 1 Position (University EH&S)
2014-2015	Tenure Track Microbiologist Search Committee Member, Department of Biological Sciences
2014-2017	Faculty Advisor, Beta Beta Beta, National Biological Honor Society
2013-present	Marketing and Website Committee, Department of Biological Sciences
2012-2013	Tenure Track Physiologist Search Committee Member, Department of Biological Sciences
2012-2014	Advisory Committee Member, Department of Biological Sciences

American Thyroid Association

2022-present	Trainees and Career Advancement Committee Member
2021	Research Grants Task Force Member
2019-2021	Publication Committee
2018	Basic Fellow Career Tract, Co-Chair, 88 th Annual Meeting of American Thyroid Association
2014	Co-Chair – Basic Fellow Tract, 84 th Annual Meeting of American Thyroid Association
2013	Co-Chair – Basic Fellow Tract, 83 rd Annual Meeting of American Thyroid Association
2012-2013	Basic Science Research Guidelines Task Force Member
2012-2019	Trainees and Career Advancement Committee

National Institutes of Health

2008-2009	Steering Committee Member for 2 nd Annual NIH Career Symposium
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Molecular and Cellular Biology Program, University of Massachusetts

2005-2006	Steering Committee - Program in Molecular and Cellular Biology, University of Massachusetts
2004-2005	Colloquia Organizer - Program in Molecular and Cellular Biology, University of Massachusetts
2003-2004	Student President - Program in Molecular and Cellular Biology, University of Massachusetts
2002-2003	Social Chair - Program in Molecular and Cellular Biology, University of Massachusetts

Northeast Alliance for Graduate Education and the Professoriate (NEAGEP), University of Massachusetts

2003-2004	NEAGEP Post-Baccalaureate Intern Mentor
2002-2003	Graduate Student Tutor

PROFESSIONAL AFFILIATIONS

American Thyroid Association (member since 2010, active)
Endocrine Society (member since 2006, membership lapsed 2017)
Society for Neuroscience (member since 2003, lapsed 2012/2019)
American Association for the Advancement of Science (Member since 2005, lapsed 2015)

INVITED TALKS, SEMINARS, AND PANELS

2021	Department of Biological Sciences Seminar. Thyroid Hormone Relationship Status: It's Complicated with Igf-1. Minnesota State University, Mankato. Mankato, MN.
2021	Undergraduate Research Center Certificate Program: Bringing Research into the Classroom. A CURE for the 1 st year: RISEbio. Minnesota State University, Mankato. Mankato, MN. (<i>virtual</i>)
2021	Panelist, NIH Career Symposium - Faculty at State Schools (<i>virtual</i>)
2020	14th International Workshop on Resistance to Thyroid Hormone and Thyroid Hormone Action. Thyroid hormone and Igf1 in developing brain. Monterey, CA. (<i>impacted by COVID19</i>)
2020	Panelist, NIH Career Symposium - Introduction to Academia (<i>virtual</i>)

- 2020 Department of Biological Sciences Seminar. RISEbio: Achievements and Challenges. Minnesota State University, Mankato. Mankato, MN. Co-Presenters: R. Cohen, A. Land, and B. Smith.
- 2019 Health & Biomedical Sciences Summit – The Future of Healthcare: Talent, Expansion, Innovation, Minnesota State University, Mankato. Early Engagement with Authentic Laboratory Experiences: Pathways to Scientific Careers through the RISEbio Program. Co-presenters: R. Cohen, A. Land, B. Martensen, and B. Smith
- 2018 Health and Biomedical Sciences Summit, Minnesota State University Mankato
Thyroid Hormone and Smart Phone Apps: A Partnership with the American Thyroid Association
Co-presenter: Guarionex Salivia, Department of Computer Information Sciences
- 2018 Scholars at Work Conference, Minnesota State University Mankato
Helping Students RISE to Their Full Potential: The Research Immersive Scholastic Experience in Biology (RISEbio) Program and How It Can Help Our Students Succeed
Co-presenters: R. Cohen, A. Land, B. Martensen, D. Sharlin, and B. Smith
- 2018 MSU Mankato Alumni Foundation Breakfast, Minneapolis Club, Minneapolis, MN
The RISE of Student Researchers - How engaging undergraduate students in thyroid research led to rethinking the freshman year
- 2018 Beta Beta Beta Honor Society, Minnesota State University Mankato
The Magic Elixir of Life: Thyroid Hormone
- 2016 Department of Biological Sciences, Minnesota State University, Mankato.
Pump-Up the Volume: Endocrine Disruption and The Auditory System
- 2017 St. Catherine University, St. Paul, MN
Auditioning for a Role in Cochlear Development: Thyroid Hormone Transporters
- 2017 Endocrine Society's 99th Annual Meeting (EndoCareers Forum), Orlando, FL.
Teaching and Research at Primarily Undergraduate Institutions
- 2017 Winona State University, Winona, MN
Dissecting the role of thyroid hormone transporters in cochlear development
- 2016 American Thyroid Association Annual Meeting, Denver, CO
Adaptive Mechanisms to Thyroid Disrupting Chemicals
- 2016 Endocrine Society's 98th Annual Meeting (EndoCareers Forum), Boston, MA.
Teaching and Research at Primarily Undergraduate Institutions
- 2014 Gordon Research Conference on Environmental Endocrine Disruptors, Barga (Lucca), Italy
EDCs, thyroid hormone action, and auditory development in animal models
- 2013 Department of Biology, St. Thomas University, St. Paul, MN
Hear, Hear! Thyroid Hormone and Cochlear Development
- 2012 American Thyroid Association Annual Meeting, Quebec City, Quebec, Canada
Thyroid Hormone Transporters in Cochlear Development
- 2012 Department of Biological Sciences, University of Wisconsin – Parkside
Hear, Hear! Thyroid Hormone and Cochlear Development
- 2012 Department of Biological Sciences, Minnesota State University, Mankato
Hear, Hear! Thyroid Hormone and Cochlear Development
- 2012 Department of Biology, University of Wisconsin – Stevens Point
Thyroid Hormone and Cochlear Development
- 2011 Department of Biology, University of Wisconsin – Eau Claire
Thyroid Hormone and Cochlear Development
- 2011 NIDDK, NIH, Fellows Retreat, Bethesda, MD.
Developmental and Cell-Specific Expression of Thyroid Hormone Transporters in the Mouse Cochlea
- 2010 International Thyroid Congress Meeting, Paris, France

Identification of Novel Targets of Thyroid Hormone in the Developing Inner Ear by Global Transcriptional Profiling of Laser Microdissected Cells

- 2010 NIDDK, NIH, Fellows Retreat. Cambridge, MD.
Identification of Novel Targets of Thyroid Hormone Signaling in the Developing Inner by Global Transcriptional Profiling
- 2009 Molecular and Cellular Biology Program, University of Massachusetts, Amherst, MA
The 3 W's of Thyroid Hormone Transporters: Where, When, and Why
- 2008 Neurobehavioral and Teratology Society Annual Meeting, Monterey, CA.
White Matter Development and Thyroxine: A Balancing Act

BIBLIOGRAPHY (#graduate student mentee, *undergraduate student mentee)

Peer Reviewed Publications

Tran Q, Sudasinghe A, Jones B, Xiong K, Cohen RE, **Sharlin DS**, Hartert KT, Goellner GM. FAM171B is a novel polyglutamine protein widely expressed in the mammalian brain. *Brain Res.* 2021 Sep 1; 1766.

Sharlin D.S., Ng L, Verrey F, Visser T, Liu Y, Olszewsji R.T., Hoa M, Heuer H, Forrest D. Deafness and loss of cochlear hair cells in the absence of thyroid hormone transporters Slc16a2 (Mct8) and Slc16a10 (Mct10). *Scientific Reports* 8, Article number: 4403. 2018.

Bianco A.C. (chair), **[Authors Listed Alphabetically]** Anderson G., Forrest D., Galton VA, Gereben B., Kim B., Kopp P., Lia XH, Obregon M.J., Peeters R.P., Refetoff S., **Sharlin D.S.**, Simonides W.S., Weiss R.E, Williams G.R. The American Thyroid Association Handbook to Investigate Thyroid Hormone Economy and Action in Rodent and Cell Models. *Thyroid.* 2014 Jan;24(1):88-168

Lee GS, He Y, Dougherty E.J., Jimenez-Movilla M, Avella M, Grullon S, **Sharlin D.S.**, Guo C, Blackford J.A., Awasthi S, Zhang Z, Armstrong S.P., London E.C., Chen W, Dean J, Simons S.S. *Disruption of Ttl15/Stamp gene (Tubulin tyrosine ligase-like protein 5/SRC-1 and TIF2 associated modulatory protein gene) in male mice causes sperm malformation and infertility.* *J Biol Chem.* 2013 May 24;288(21):15167-80.

Peeters R.P., Hernandez A, Ng L, Ma M, **Sharlin D.S.**, Pandey M, Simonds W.F., St Germain D.L., Forrest D. *Cerebellar Abnormalities in Mice Lacking Type 3 Deiodinase and Partial Reversal of Phenotype by Deletion of Thyroid Hormone Receptor $\alpha 1$.* *Endocrinology.* 2013 Jan;154(1):550-61

Yusuf D, Butland SL, [101 authors; arranged by transcription factor name], **D.S. Sharlin**, [9 authors], Wasserman WW. *The transcription factor encyclopedia.* *Genome Biology,* 2012;13(3):R24

****D.S. Sharlin**, T.J. Visser, D. Forrest. *Developmental and Cell-Specific Expression of Thyroid Hormone Transporters in the Mouse Cochlea.* *Endocrinology.* 2011 Dec;152(12):5053-64 ****Selected for a News and Views highlight**

L. Ng, A. Lu, A. Swaroop, **D.S. Sharlin**, A. Swaroop, and D. Forrest. *Two transcription factors can direct three photoreceptor outcomes from rod precursor cells in mouse retinal development.* *J Neurosci.* 2011 Aug 3; 31(31): 11118-25.

****D.S. Sharlin**, M.E Gilbert, M. Taylor, D.Ferguson and R. Thomas Zoeller. *The Nature of the Compensatory Response to Low Thyroid Hormone in the Developing Brain.* *J Neuroendocrinol.* 2010 Mar; 22(3):153-65. ****Selected for cover highlight and cover art**

P. Wangemann, H.M. Kim, S. Billings, K. Nakaya, X. Li, R. Singh, **D.S. Sharlin**, D. Forrest, D.C. Marcus, P. Fong. *Developmental delays consistent with cochlear hypothyroidism contribute to failure to develop hearing in mice lacking Slc26a4/pendrin expression.* *Am J Physiol Renal Physiol.* 2009 Nov; 297(5): F1435-47.

****D.S Sharlin**, D. Tighe, M. Gilbert, R.T. Zoeller. *The Balance between Oligodendrocyte and Astrocyte Production in Major White Matter Tracts is Linearly Related to Serum Total Thyroxine.* *Endocrinology,* April 2008. Volume 149 (5): 2527-2536. ****This work was highlighted in the April 2008 issue of Endocrine News, Endocrine Society's trade journal**

K.J. Gauger, S. Giera, **D.S. Sharlin**, R. Bansal, E. Iannacone, and R.T. Zoeller. *Polychlorinated Biphenyls 105 And 118 Form Thyroid Hormone Receptor Agonists Following Cytochrome P4501A1 Activation In Rat Pituitary GH3 Cells.* *Environ Health Perspect.* 2007 Nov;115(11):1623-30.

D.S. Sharlin, R. Bansal, RT. Zoeller. *Polychlorinated Biphenyls Exert Selective Effects on Cellular Composition of White Matter in a Manner Inconsistent with Thyroid Hormone Insufficiency*. *Endocrinology*, February 2006. Volume 147 (2): 846-858.

K. O'Riordan, **D.S. Sharlin**, J. Gross, S. Chang, D. Errabelli, O. Akilov, S. Kosaka, G. Nau, T. Hasan. *Photoinactivation of Mycobacterium bovis BCG-Induced Granulomatous Infection*. *Antimicrobial Agents and Chemotherapy*, May 2006. Volume 50 (5): 1828-1834.

B. Ortel, **D.S. Sharlin**, D. O'Donnell, A. Sinha, E. Maytin, T. Hasan. *Differentiation enhances ALA-dependent photodynamic treatment in LNCaP prostate cancer cells*. *British Journal of Cancer*, Nov. 18, 2002. Volume 187 (11): 1321-7.

Book Chapters

D.S. Sharlin. *Disruption of auditory function by thyroid hormone receptor mutations*. In: *Thyroid Hormone Disruption and Neurodevelopment*. Springer Publishing. Editors N. Koibuchi, M.D., Ph.D. and P.M. Yen, M.D. 2016. Chapter 9. Pgs 130-150.

D.S. Sharlin. *Thyroid disrupting chemicals as developmental neurotoxicants*. In: *Environmental Factors in Neurodevelopmental and Neurodegenerative Disorders*. Elsevier. Editors, L.G. Costa, Pharm.D. and M. Aschner, Ph.D.. 2015. Chapter 8. Pgs 167-192.

K.J. Gauger, **D.S. Sharlin**, R.T. Zoeller. *Polychlorinated Biphenyls as Disruptors of Thyroid Hormone Action*. In: *PCBs: Recent Advances*. L.W. Robertson and L.G. Hansen, Eds. Univ Illinois Press, Champaign, IL. 2006. (Book Chapter)

Conference Abstracts

B.A. Smith, R.E. Cohen, A.M. Land, B.F. Martensen, and **D.S. Sharlin**. *Helping Students Rise to Their Full Potential through a Research Immersive Scholastic Experience in Biology*. National Association for Research in Science Teaching Annual Conference. April 2021. (virtual)

R.E. Cohen, A.M. Land, B.F. Martensen, **D.S. Sharlin**, and B.A. Smith. *Transforming the undergraduate curriculum – Engaging first year students in authentic research experiences*. Society for Integrative and Comparative Biology. Washington, DC, Virtual Conference. January 2021. (virtual)

M. Uscategui Calderon#, **D.S. Sharlin**. *Limited Adaptive Response by Deiodinase Enzymes in the Perinatal Hypothyroid Cochlea*. Endocrine Society's Annual Meeting. San Francisco, CA. March 2020 (impacted by COVID19)

C. Cleary, S. Peterson*, K. Junghans¹, K. Laprocina, H. Heuer, **D.S. Sharlin**, C.J. Huang. *Thyroid Hormone Transporter Mct8 is Specially Expressed in the Adrenal Gland Inner Cortex and Partially Mediates the Thyroid Hormone Action in the Adrenal Cortex*. Endocrine Society's Annual Meeting. New Orleans, LA. March 2019

M. Tompach#, D. Forrest, **D.S. Sharlin**. *Quantification and Localization of Carbohydrate Sulfotransferase 15 (Chst15) in Developing Hypothyroid Cochlea*. Society for Neuroscience Annual Meeting. San Diego, CA. November 2018.

A. Grond#, K. Saatman, **D.S. Sharlin**. *Ectopic Brain-Derived Insulin-Like Growth Factor-1 Partially Rescues Neuroanatomical Defects Associated with Developmental Hypothyroidism*. Society for Neuroscience Annual Meeting. San Diego, CA. November 2018.

K. Kang, **D.S. Sharlin**, R.E. Cohen. *The relationship between seasonal breeding and deiodinase expression in the green anole lizards*. Society for Neuroscience Annual Meeting. San Diego, CA. November 2018.

R.E. Cohen, A.M. Land, B.F. Martensen, **D.S. Sharlin**, B.A. Smith. *Integrating neuroscience into a new freshman research initiative at a regional comprehensive university: The Research Immersive Scholastic Experience in Biology program*. Society for Neuroscience Annual Meeting. San Diego, CA. November 2018.

D. Rajaguru, M. Bauer, **D.S. Sharlin**, G.M. Goellner. *The Polyglutamine Protein FAM171B Localizes to Neuronal Cytoplasm*. Society for Neuroscience Annual Meeting. San Diego, CA. November 2018.

C. Graber#, S. Kline#, and **D.S. Sharlin**. *Insulin-like growth factor 1 (Igf-1) positive cells are permanently reduced in the murine brain following developmental hypothyroidism*. Endocrine Society's 99th Annual Meeting. Orlando, FL. April 2017

A. Sudasinghe, **D.S. Sharlin**, and G.M. Goellner G.M., *Expression of the Novel Polyglutamine Protein FAM171B in the Developing and Adult Mouse Brain*. The Society for Neuroscience Annual Meeting. San Diego, CA. November 2016.

K.F. Short#, J. Gute*, B. Nygaard*, P. Knoblich, **D.S. Sharlin**. *A Comparison of the Effect of Hypothyroidism on Blood Pressure of the Wistar Kyoto (WKY) Rat and the Spontaneously Hypertensive Rat (SHR)*. Endocrine Society's 97th Annual Meeting. San Diego, CA. March 2015

- D.S. Sharlin**, D. Forrest. *Thyroid Hormone Transporter Expression during Cochlear Development*. Endocrine Society's 91st Annual Meeting. Washington, DC. June 2009
- D.S. Sharlin**, D. Tighe, M. Gilbert, RT. Zoeller. *The Thyroid Hormone Transporter, MCT8, Selectively Responds to Thyroid Hormone Insufficiency in the Developing Rat Brain*. Endocrine Society's 89th Annual Meeting. Toronto, Canada. June 2006
- D. Tighe, **D.S. Sharlin**, RT. Zoeller. *The Effects of PBDEs on Thyroidal Status in the Developing Rat*. Endocrine Society's 89th Annual Meeting. Toronto, Canada. June 2006
- D.S. Sharlin**, D. Tighe, M. Gilbert, RT. Zoeller. *The Effects of Low Dose PTU in Endpoints of TH action in the Developing Brain*. Society of Toxicology's 46th Annual Meeting. Charlotte, NC. March 2007
- M. Gilbert, M. Taylor **D.S. Sharlin**, W. Anderson, D. Ferguson, RT. Zoeller. *Thyroid Hormone Insufficiency and Brain Development – Examining Neurotoxicity at Low Levels of Hormone Disruption*. Society of Toxicology's 46th Annual Meeting. Charlotte, NC. March 2007
- D.S. Sharlin**, R. Bansal, RT. Zoeller. *The mRNA Expression of the Thyroid Hormone Transporter, MCT8, Selectively Responds to Thyroid Hormone Insufficiency in Neurons of the Hippocampus*. Endocrine Society's 88th Annual Meeting. Boston, MA. June 2006
- D.S. Sharlin**, R. Bansal, RT Zoeller. *Polychlorinated Biphenyls Exert Selective Effects on Cellular Composition of White Matter in a Manner Inconsistent with Thyroid Hormone Insufficiency*. The 22nd International Neurotoxicology Conference. Research Triangle Park, NC. September 2005
- D.S. Sharlin**, R. Bansal, RT Zoeller. *PCB Induced Hypothyroxinemia Alters Oligodendrocyte Numbers in Two White Matter Tracts of the Developing Rat Brain*. Society for Toxicology Annual Meeting. New Orleans, LA. March 2005
- D.S. Sharlin**, R. Bansal, C. Herzig, RT Zoeller. *Maternal PCB Exposure Alters Oligodendrocyte development in the Developing Rat Brain*. Gordon Research Conference on Environmental Endocrine Disruptors. Colby-Sawyer College. New London, NH. June 2004
- D.S. Sharlin**, J. Gross, Gerald Nau, T. Hasan. *Photodynamic Destruction of Mycobacteria in a New Animal Model for Localized Infection*. 30th Annual Meeting of the American Society of Photobiology. Quebec City, Canada. July 2002
- I.Rizvi, W. Rice, **D.S. Sharlin**, Tri Dinh, Weiping Yu, T. Hasan. *Targeted Photoimmunotherapy of epidermal Growth Factor Receptor: Mechanistic Parameters Governing Phototoxic Efficiency*. 30th Annual Meeting of the American Society of Photobiology. Quebec City, Canada. July 2002
- B. Ortel, A. Sinha, **D.S. Sharlin**, E. Maytin, T. Hasan. *Order Dependent Enhancement of ALA-PDT by Chemotherapy*. 30th Annual Meeting of the American Society of Photobiology. Quebec City, Canada. July 2002
- B. Ortel, **D.S. Sharlin**, E.V. Maytin, B. Korsharshy, T.Hasan. *Combination of differentiation Therapy and ALA-PDT*. 13th International Congress on Photobiology and 28th Annual Meeting of the American Society of Photobiology. San Francisco, CA. July 2000.
- I.Rizvi, A.C. Moor, B. Ortel, **D.S. Sharlin**, D. O'Donnell, T. Hasan. *Acute and Long Term Effects of Fluence Rate on BPD Based Photodynamic Therapy of Prostate Cancer*. 13th International Congress on Photobiology and 28th Annual Meeting of the American Society of Photobiology. San Francisco, CA. July 2000.