

## *Curriculum Vitae*

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## **EDUCATION**

- Doctor of Philosophy, 2007** (Biology) **Duke University**, Durham, NC, *Certificates in: Developmental & Stem Cell Biology, and Cell & Molecular Biology*
- Bachelor of Science, 2001** (Biomedical Sciences, Chemistry minor) **Averett University**, *Cum Laude*
- Bachelor of Arts, 1996** (English, Sociology minor) **Averett University**, Danville, VA

## **POSITIONS**

- Associate Professor** Department of Biological Sciences  
08/2018 – *Western Michigan University*
- Assistant Professor** Department of Biological Sciences  
08/2013 – 08/2018 *Western Michigan University*
- Postdoctoral Fellow** Dr. Michael Levin, Tufts University  
05/2008 – 08/2013 *Previously: Forsyth Institute, Harvard Medical School  
Biophysical Regulation of Morphology in Planarian Regeneration*
- Graduate Student** Dr. David McClay, Duke University  
07/2001 – 05/2007 *Gene Regulatory Networks and Rho GTPases: Sea Urchin*
- Interim Postdoc** *Endomesodermal Specification and Morphogenesis*  
05/07 – 04/08 (Postdoc: *Calcium Signaling and Sea Urchin Oral/Aboral Specification*)

## **FUNDING**

- 2022- **NSF BIORETS**, National Science Foundation, Senior Personnel, *BIORETS: Research Experiences for Teachers in the Biology of Plants, Animals, Microorganisms, and their Environments* (NSF# 2146882/DBI)
- 2021- **Presidential Innovation Professorship**, Western Michigan University, PI, *Promoting Advances in Quantum Biology Through Interdisciplinary Exchange*
- 2021- **Quantum Biology GRC**. Proposal to establish and fund a new Gordon Research Conference, Co-Applicant, *First Quantum Biology GRC scheduled for March 2023*
- 2021- **NSF RCN**, National Science Foundation, Co-PI, *RCN: Instrumentation for Quantum Biology (I-QuBio)* (NSF# 2105474/MCB)
- 2017- **NSF CAREER**, National Science Foundation, PI, *CAREER: Molecular Mechanisms Regulating Neural Regeneration in Planarians* (NSF# 1652312/IOS)
- 2016-8 **NSF EAGER**, National Science Foundation, Co-PI, *EAGER: Collaborative Research: Some Effects of Weak Electric and Magnetic Fields on Biological Systems* (NSF# 1644384/CBET)
- 2016-7 **Support for Faculty Scholars Award**, Western Michigan University, PI, *Comparative Analysis of Tissue Remodeling During Planarian Regeneration* (SFSA# S2016-015)
- 2014-5 **Faculty Research and Creative Activities Award**, Western Michigan University, PI, *Identifying Calcium Pathways that Control Regeneration of Shape* (FRACAA# W2014-013)
- 2013-4 **Support for Faculty Scholars Award**, Western Michigan University, PI, *Establishing Planaria as a Model for Whole Eye Regeneration* (SFSA# F2013-006)

- 2008-11 NRSA (F32), NIGMS, National Institutes of Health, PI, *Biophysical Regulation of Axial Polarity During Regeneration* (NIH# F32GM083547)
- 2001-3 Training Fellowship, National Institutes of Health, Duke Program in Developmental Biology
- 1997 Student Undergraduate Traineeship Grant, Cystic Fibrosis Foundation (UNC-Chapel Hill)

## **Teaching**

- 2023- BIOS 1610: Molecular and Cellular Biology, Western Michigan University
- 2021- BIOS 5970: Methods and Concepts in Biology, (*Designed/Developed Course*), WMU
- 2021- BIOS 5740: Developmental Biology, Western Michigan University
- 2016- BIOS 5750: Stem Cells and Regeneration, (*Designed/Developed Course*), WMU
- 2023 Pre-GRC Research School on Quantum Biology, *Instructor-Intro to Biology Bootcamp*, Virtual
- 2021 BIOL 458: Stem Cells and Regeneration Biology, (*Guest Lecturer*), University of Nevada-Las Vegas
- 2019-20 BIOS 5260: Molecular Biology Laboratory: Regeneration, (*Designed/Developed Course*), WMU
- 2015-19 BIOS 1610: Molecular and Cellular Biology, Western Michigan University
- 2018 BIOS 6050: Biological Science Colloquium, Western Michigan University
- 2016 BIOL 190/IQS 1: Integrated Quantitative Science (*Guest Lecturer*), University of Richmond
- 2014 BIOS 1500: Molecular and Cellular Biology, Western Michigan University
- 2013 BIOS 5970: Current Topics in Regeneration, (*Designed/Developed Course*), WMU
- 2010 BIO 52: Experiments in Cell Biology (*Guest Lecturer*), Tufts University
- 2009 BIO 52: Experiments in Cell Biology (*Guest Lecturer*), Tufts University
- 2007 BIO 119: Cell and Developmental Biology (*TA*), Duke University
- 2006 BIO 205L: Experiments in Developmental and Molecular Genetics (*TA*), Duke University
- 2003 (2 semesters) BIO 205L: Experiments in Developmental and Molecular Genetics (*TA*), Duke University

## **Awards & Honors**

- 2022 Emerging (Faculty) Scholar Award. Acknowledges WMU faculty that have achieved national recognition and demonstrated outstanding promise, Western Michigan University
- 2021 Presidential Innovation Professorship. Named Professorship awarded by the President, Provost, and Vice President for Research and Innovation, Western Michigan University
- 2021 Darrell R. Latva Biological Sciences Teaching Excellence Award. Department of Biological Sciences, Western Michigan University.
- 2018 Honorary Faculty Fellow (Award). Lee Honors College, Western Michigan University
- 2018 Excellence in Discovery Award. Office of Research & Innovation, Western Michigan Univ.
- 2018 Distinguished Research and Creative Scholarship Award. Office of the Vice President for Research, Western Michigan University
- 2017 NSF CAREER Award. Integrative Organismal Systems, National Science Foundation
- 2017 Faculty Travel Grant. Society for Developmental Biology (SDB) 76<sup>th</sup> Annual Meeting
- 2011 First Prize, Image Award, NIDDK Mechanisms of Organ Repair & Regeneration Meeting
- 2010 Awarded Participant Grant. PASI Short Course: Concepts and Model Organisms in Regenerative Biology, Santiago, Chile (NIH Grant # 1R13HD066961-01)
- 2010 Travel Grant. Society for Developmental Biology (SDB) 69<sup>th</sup> Annual Meeting, jointly with the Japanese Society of Developmental Biologists, Albuquerque, NM
- 2010 Awarded Participant Grant. NIGMS Workshop for Postdocs Transitioning to Independent Positions, NIH (Supported by NIH)
- 2008 Ruth L. Kirschstein National Research Service Award, NIGMS, National Institutes of Health
- 2008 Tuition Award. Ion Channel Physiology Course 2008, Cold Spring Harbor Laboratories
- 2007 Travel Grant. SDB 66<sup>th</sup> Annual Meeting and First Pan American Developmental Biology Congress, Cancun, Mexico
- 2006 Awarded Participant Grant. NIGMS, APS/SDB Professional Skills Course on Writing and

- 2004 Reviewing for Scientific Journals, Englewood, CO (NIGMS Grant # GM073062-01)
- 2004 Graduate Student Symposium Departmental Award. (Biology Department), Duke University
- 2004 Second Place, Student Poster Competition, SDB 63<sup>rd</sup> Annual Meeting
- 2002-3 Travel Grants. Developmental Biology of Sea Urchins, Conferences XIV and XV, Marine Biological Laboratory, Woods Hole, MA
- 2001 Elizabeth and James Bustard Distinguished Scholar Award. Averett College
- 2000- Member, Beta Beta Beta, (Biological Honor Society)
- 1996 American Legion Citizenship Award. American Legion Post 325, Danville, VA |
- 1996 Outstanding Student in English Award. Averett College

## **Professional Memberships & Service Activities**

### *Current*

- 2023- **Chair, Quantum Biology Gordon Research Conference** (March 2025)
- 2021- **Director and Founder, WMU's QBite Program** (Quantum Biology Interdisciplinary Trainee Exchange program)
- 2021- **Founding Executive Committee, US Quantum Biology Center** (funded by the Kavli Foundation and the Gordon and Betty Moore Foundation), housed at UCLA
- 2021- WMU Department of Biological Sciences Graduate Policies and Admissions Committee (Chair 2022- )
- 2019 - Member, The Bioelectromagnetics Society (BEMS)
- 2018 - **Review Editor in Evolutionary Developmental Biology**, part of the journals *Frontiers in Cell and Developmental Biology* and *Frontiers in Ecology and Evolution*
- 2017- WMU Lee Honors College Study Abroad and Research/Creative Scholarship Committee
- 2016 - WMU Biological Sciences Departmental Development Committee
- 2004 - Member, The Society for Developmental Biology (SDB)

### *Completed*

- 2023 **Instructor**, Intro to Biology Bootcamp, Pre-GRC Research School on Quantum Biology, Virtual with 200+ International attendees (US, UK, Europe, Japan, India, South Africa)
- 2023 **NSF Ad Hoc Grant Reviewer** (twice), HBCU-EiR (Historically Black Colleges and Universities - Excellence in Research), Directorate for Biological Sciences (BIO)
- 2023 **Advisory Roundtable Participant, Advanced Research and Invention Agency** (ARIA), United Kingdom, (newly established DARPA-like funding agency)
- 2022 **Invited Panelist, National Science Foundation: 2022 NSF Nanoscale Science and Engineering Grantees Conference**, session on "Quantum Biology", Virtual
- 2022 **NIH Grant Panel Reviewer**, National Institute of General Medical Sciences (K99/R00)
- 2021-23 **Vice-Chair, Inaugural Quantum Biology Gordon Research Conference** (March 2023)
- 2021-22 **Member, Search Advisory Committee for VP of Research Innovation**, WMU
- 2021-22 WMU Biological Sciences Departmental Recording Secretary
- 2021 Co-Organizer, Session on "Quantum Biology." Cell Bio Virtual 2021, the joint meeting of the American Society for Cell Biology (ASCB) and European Molecular Biology Organization (EMBO). Virtual
- 2021 **Invited Panelist, National Academy of Sciences: Quantum Concepts for Biological Imaging and Sensing Workshop**, session on "Bioelectromagnetic Fields", Virtual
- 2020-21 WMU Biological Sciences Departmental Advisory Committee (to the Chair)
- 2020 **NSF Ad Hoc Grant Reviewer**, Division of Integrative Organismal Systems (IOS)
- 2019 Chair, session on "Disease, Genetics and Metabolism", Gordon and Betty Moore Foundation Workshop on Spin Physics in Biology, UCLA, Los Angeles, CA.

- 2019 Organizing Chair for “Evolution of Neural Regeneration” (Neuroscience) session, Annual Biomedical Research Conference for Minority Students (ABRCMS 2019), Anaheim, CA.
- 2017 **NSF Grant Panel Reviewer**, Division of Integrative Organismal Systems (IOS)
- 2017-20 WMU Biological Sci. Dept. Graduate Policies and Admissions Committee [Chair 2018-20]
- 2016 **NSF Ad Hoc Grant Reviewer**, Division of Molecular and Cellular Biosciences (MCB)
- 2014-19 Member, Michigan Chapter of the Society for Neuroscience (MiSNF)
- 2014-19 **Participating Faculty, HHMI Grant** to Reform WMU Introductory Biology Instruction
- 2014-18 WMU Councilor for the Michigan Chapter of the Society for Neuroscience
- 2014-16 WMU Biological Sciences Departmental Advisory Committee (to the Chair)
- 2014-15 Biology MA Program Committee, WMU Academic Program Review and Planning
- 2013-14 WMU Biological Sciences Departmental Recording Secretary
- 2006 Graduate Student Representative, Biology Department Faculty Candidate Search Committee
- 2004-5 Member, The American Society for Cell Biology
- 2004 Member, Cell & Molecular Biology Annual Student Symposium Organization Committee
- 2003-7 Co-Founder, Developmental Biology “Young Ones” Seminar Series (student run)
- 2003 Co-Chair, Developmental Biology Program Student Recruitment Visitation Committee
- 2002-3 Member, Biology Graduate Program Steering Committee
- 2002 Member, Cell & Molecular Biology Program Student Recruitment Visitation Committee

### Workshops/Courses

- Sep. 2021 Global Quantum Biology Square Table. UCLA & National Science Foundation, Virtual
- March 2021 National Academies of Science: Quantum Science Concepts in Enhancing Sensing and Imaging Technologies: Applications for Biology—A Workshop, Virtual
- Dec. 2019 Moore Foundation-Sponsored Workshop: Coherent Spin Physics in Biology, UCLA
- Nov. 2010 PASI Short Course: Concepts and Model Organisms in Regenerative Biology, Chile
- March 2010 NIGMS Workshop for Postdocs Transitioning to Independent Positions, NIH, MD
- June 2008 Ion Channel Physiology Course, Cold Spring Harbor Laboratories, NY
- May 2006 APS Professional Skills Course: Writing & Reviewing for Scientific Journals, Denver, CO

### Publications (\* = undergraduate student, \*\* = graduate student, † = authors contributed equally)

- 24. Hack SJ\*\*, **Beane WS**, Tseng K-AS. (2023) Biophysics at the edge of life and death: Radical control of apoptotic mechanisms. *Front in Cell Death*. Sec. Apoptosis (Vol 2). 27 February 2023. DOI: 10.3389/fceld.2023.1147605. View
- 23. Kinsey LJ\*\*, Van Huizen AV\*\*, **Beane WS**. (2023) Weak magnetic fields modulate superoxide to control planarian regeneration. *Front in Physics*. Section: Biophysics. 04 January 2023. Volume 10 – 2022. DOI: 10.3389/fphy.2022.1086809.
- 22. Hack SJ\*\*†, Kinsey LJ\*\*†, **Beane WS**. (2021) An Open Question: Is Non-Ionizing Radiation a Tool for Controlling Apoptosis-Induced Proliferation? *Int. J. Mol. Sci.* 2021 Oct 16;22(20):11159. doi: 10.3390/ijms222011159.
- 21. **Beane WS**, Adams DS, Morokuma J, Levin M. (2019) Live imaging of intracellular pH in planarians using the ratiometric fluorescent dye SNARF-5F-AM. *Biol Methods Protoc.* 2019;4(1):bpz005. DOI: 10.1093/biomethods/bpz005.
- 20. Van Huizen AV\*\*, Morton JM\*, Kinsey LJ\*\*, Von Kannon DG\*\*, Saad MA\*, Birkholz TR\*\*, Czajka JM\*, Cyrus J, Barnes FS, **Beane WS**. (2019) Weak magnetic fields alter stem cell-mediated growth. *Science Advances*, Jan 30;5(1):eaau7201. DOI: 10.1126/sciadv.aau7201.

**(Highlighted by:** Williams, R. (2019) Weak Magnetic Fields Manipulate Regeneration in Worms. *The Scientist*, Jan 30, 2019.)

**(Highlighted by:** “This week in *Science*” Feb 1, 2019 issue, <http://science.sciencemag.org/content/363/6426/twis>)

19. Birkholz TR\*\*, Van Huizen AV\*\*, **Beane WS**. (2019) Staying in Shape: Planarians as a Model for Understanding Regenerative Morphology. *Semin Cell Dev Biol*. 2019 Mar;87:105-115. DOI 10.1016/j.semcdb.2018.04.014. Epub 2018 Jul 25. [**Cover Image**]
18. Van Huizen AV\*\*, Tseng AS, **Beane WS**. (2017) Methylisothiazolinone Toxicity and Inhibition of Wound Healing and Regeneration in Planaria. *Aquat Toxicol*. Oct;191:226-235.
17. Birkholz TR\*\*, **Beane WS**. (2017) The Planarian TRPA1 Homolog Mediates Extraocular Behavioral Responses to Near Ultraviolet Light. *J Exp Biol*. Jul 15;220(Pt 14):2616-2625.
16. Morton JM\*†, Saad MA\*†, **Beane WS**. (2017) Surgical Ablation Assay for Studying Eye Regeneration in Planarians. *J Vis Exp*. Apr 14;(122).
15. Deochand ME\*\*, Birkholz TR\*\*, **Beane WS**. (2016) Temporal regulation of planarian eye regeneration. *Regeneration (Oxf)*. Oct 28;3(4):209-221.
14. Schatzberg D, Lawton M, Hadyniak SE, Ross EJ, Carney T, **Beane WS**, Levin M, Bradham CA. (2015) H<sup>+</sup>/K<sup>+</sup> ATPase activity is required for biomineralization in sea urchin embryos. *Dev Biol*. 2015 Oct 15;406(2):259-70.
13. Paskin TR\*\*, Jellies J, Bacher J\*, **Beane WS**. (2014) Planarian phototactic assay reveals differential behavioral responses based on wavelength. *PLoS One*. Dec 10;9(12):e114708.
12. **Beane WS**, Morokuma J, Lemire JM, Levin M. (2013) Bioelectric signaling regulates head and organ size during planarian regeneration. *Development*. Jan;140(2):313-322.  
**(Highlighted by:** the “In this Issue” page)
11. **Beane WS**, Tseng A, Morokuma J, Lemire J, Levin M. (2012) Inhibition of planar cell polarity extends neural growth during regeneration, homeostasis and development. *Stem Cells Dev*. 2012 Aug 10;21(12):2085-94. [**Cover Image**]
10. Lobo D, **Beane WS**, Levin M. (2012) Modeling planarian regeneration: a primer for reverse-engineering the worm. *PLoS Comput Biol*. 8(4) e1002481. (Perspective) [**Cover Image**]
9. **Beane WS**, Morokuma J, Adams DS, Levin M. (2011) A chemical genetics approach reveals H,K-ATPase-mediated membrane voltage is required for planarian head regeneration. *Cell Chemical Biol*. Jan 28;18(1):77-89. Highlighted in *Science Daily*.  
**Preview:** Sater, AK. (2011) A jump-start for planarian head regeneration. *Cell Chemical Biol*. Jan 28;18(1):4-5.
8. Tseng AS, **Beane WS**, Lemire JM, Masi A, Levin M. (2010) Induction of vertebrate regeneration by a transient sodium current. *J Neurosci*. Sep 29;30(39):13192-200. [**Cover Image**]  
**(Highlighted by:** articles in the New York Times, Science News, and msnbc.com)
7. Stevenson CG\* and **Beane WS**. (2010) A low percent ethanol method for immobilizing planarians. *PLoS One*. Dec 14;5(12):e15310.
6. Oviedo NJ and **Beane WS**. (2009) Regeneration: The origin of cancer or a possible cure? *Semin Cell Dev Biol*. Jul;20(5):557-64. (Review)

5. Bradham CA, Foltz KR, **Beane WS**, Arnone MI, Rizzo F, Coffman JA, Mushegian A, Goel M, Morales J, Genevriere A-M, Lapraz F, Robertson AJ, Kelkar H, Loza-Coll M, Townley IK, Raisch M, Roux MM, Lapage T, Gache C, McClay DR, Manning G. (2006) The sea urchin kinome: a first look. *Dev Biol.* Dec 1; 300(1):180-193.
4. Morales J, Mulner-Lorillon O, Cosson B, Morin E, Bellé R, Bradham CA, **Beane WS**, Cormier P. (2006) Translational control genes in the sea urchin genome. *Dev Biol.* Dec 1; 300(1):293-307.
3. **Beane WS**, Voronina E, Wessel GM, McClay DR. (2006) Lineage-specific expansions provide genomic complexity among sea urchin GTPases. *Dev Biol.* Dec 1; 300(1):165-179.
2. **The Sea Urchin Genome Sequencing Consortium**. (2006) The genome of the sea urchin *Strongylocentrotus purpuratus*. *Science*. Nov 10;314(5801):941-952. \*My data is Fig. 4.
1. **Beane WS**, Gross JM, McClay DR. (2006) RhoA regulates initiation of invagination, but not convergent extension, during sea urchin gastrulation. *Dev Biol.* Apr 1;292(1):213-25.

## **Invited Talks**

2023 *Planaria, Regeneration, and Environmental Influences*. Lynn University Biological Sciences Dept. Seminar Series. Virtual.

2023 *More Than Meets the Eye: Planarians as a Model for Eye Regeneration*. 25th Meeting of the International Society for Eye Research (ISER), Gold Coast, Queensland, Australia. Unable to attend due to illness.

2023 *Reactive Oxygen Species (ROS) and Stem Cells*. The Guy Foundation Symposium: Advancing Terrestrial Health: Lessons from Space. Virtual Symposium.

2022 *Quantum Control of Stem Cells*. National Science Foundation (NSF): 2022 NSF Nanoscale Science and Engineering Grantees Conference, session on “Quantum Biology.” Virtual Conference.

2022 *Weak Magnetic Field Manipulation of ROS Signaling During Regeneration*. Session: Emerging potential evidence of quantum phenomena in biology, Quantum Bio BR Summit, Rio de Janeiro, Brazil. Virtual.

2022 *Radical Oxygen Species, Weak Magnetic Fields, and Tissue Growth*. The Guy Foundation 2022 Autumn Series Programme, Quantum Mitochondria. Virtual Series.

2022 *Planarians: A Model for Stem Cells, Regeneration, and Neuroethology*. BIORETS Faculty seminar, funded by a National Foundation of Science grant, Western Michigan University. Virtual.

2022 *Quantum Biology and Stem Cells*. MI Dean’s Meeting (Michigan Council of Colleges of Arts and Sciences). Western Michigan University. Virtual.

2022 *Weak Magnetic Fields: A Tool for Controlling Proliferation*. Quantum Effects in Biological Systems 2022 (QUEBS-2022), Crete, Greece. Unable to attend due to COVID-19.

2022 *A Spin Dynamics Approach to Manipulating Tissue Growth*. Cavendish Quantum Information Seminar Series, Hitachi Cambridge Laboratory and Cavendish Quantum Information Group, Department of Physics, University of Cambridge. Virtual.

2021 *Using Quantum Phenomena to Control ROS-Mediated Stem Cell Proliferation*. Cell Bio Virtual 2021, the joint meeting of the American Society for Cell Biology (ASCB) and European Molecular Biology Organization (EMBO). Virtual Meeting.

2021 *Lessons from Planaria: Separating Wound Healing from Regeneration, and Quantum Control of Stem Cells*. Biomedical Engineering in Regenerative Medicine Seminar, Division of Medical Engineering, Western Michigan University Homer Stryker MD School of Medicine. Virtual

2021 *Using Planaria to Understand Animal Shape*. Grinnell College Biology Dept. Seminar Series. Virtual.

2021 *Of Magnetic Fields and Flatworms*. Biophysical Society (BPS) Virtual Networking Event: Quantum Biology: what it is and opportunities to collaborate.

- 2021** *Weak Magnetic Fields: A Quantum Approach to Controlling Stem Cells.* BioEm 2021, Symposium on Weak Magnetic Field Effects and Models, Workshop: Ultraweak and Weak Static, ELF, and RF Field Effects on Biological Systems, Ghent, Belgium. Virtual Meeting. (Given by Luke Kinsey, Ph.D. Candidate)
- 2021** *Controlling Tissue Growth through Quantum Phenomena.* QBBS: Quantum Biology & Biotechnology Symposium 2021, Australia Commonwealth Scientific and Industrial Research Organization (CSIRO), Virtual.
- 2021** *Radicals and Regeneration: A Quantum Approach to Manipulating Stem Cell Activity.* Leverhulme Quantum Biology Doctoral Training Centre (QB-DTC) Seminar Series, University of Surrey, UK. Virtual.
- 2021** *Quantum Control of Stem Cells.* National Academy of Sciences (NAS): Quantum Concepts for Biological Imaging and Sensing Workshop, session on “Bioelectromagnetic Fields.” Virtual Workshop.
- 2020** *Manipulating Quantum Spins to Control Stem Cell Activity.* International Big Quantum in Biospins Meeting. Sponsored by UCLA’s Quantum Biology Tech (QuBiT) Lab. Virtual Meeting.
- 2020** *Weak Magnetic Fields: A Tool for Controlling Proliferation.* Quantum Effects in Biological Systems 2020 (QUEBS-2020), Crete, Greece. Canceled due to COVID-19.
- 2020** *More Than Meets the Eye: Planarians as a Model for Eye Regeneration.* 24th Meeting of the International Society for Eye Research (ISER), Buenos Aires, Argentina. Canceled due to COVID-19.
- 2019** *Controlling Stem Cell Proliferation with Weak Magnetic Fields: A Case for Spin Dynamics and Free Radical Manipulation.* Gordon and Betty Moore Foundation-Sponsored Workshop: “Coherent Spin Physics in Biology,” UCLA, Los Angeles, CA.
- 2019** *A Lot of Nerve! Evolutionary Mechanisms of Neural Regeneration.* Invited Speaker and Co-Chair of Neuroscience Session, Annual Biomedical Research Conference for Minority Students (ABRCMS) 2019, Anaheim, CA.
- 2019** *Probing Conserved Regenerative Pathways: V-ATPase Signaling and Eye Regeneration.* 78<sup>th</sup> Annual Meeting of the Society for Developmental Biology, Boston, MA. (Teaser Talk)
- 2019** *Weak Magnetic Fields and the Regulation of Stem Cell Activity.* Developmental Bioelectricity Satellite Symposia, 78<sup>th</sup> Annual Meeting of the Society for Developmental Biology, Boston, MA.
- 2017** *Understanding Morphogenesis During Planarian Regeneration.* 4th North American Planarian Meeting, Woods Hole, MA (Selected Speaker)
- 2016** *More than Meets the Eye: Photoreception and Eye Regeneration in Planarians.* Grand Valley State University, Biomedical Sciences Department Seminar Series
- 2016** *The Body Electric: How Ion Transport Shapes Tissues During Regeneration.* University of Richmond, Department of Biology Seminar Series
- 2015** *Calcium Signaling and Regenerative Shape.* 3rd North American Planarian Meeting, Chicago, IL. (Selected Speaker)
- 2014** *Membrane Voltage: How Tissues Regain Their Shape During Regeneration.* University of Colorado, Boulder, Department of Electrical, Computer, and Energy Engineering Seminar Series.
- 2014** *Staying in Shape: Membrane Voltage as a Master Regulator of Tissue Shape During Regeneration.* BioEM 2014, the joint annual meeting of BEMS (the Bioelectromagnetics Society) and EBEA (the European Bioelectromagnetics Association), Cape Town, South Africa. (**Plenary Speaker**)
- 2013** *Orchestrating Regeneration: Using Planaria to Understand Animal Shape.* University of Nevada, Las Vegas, School of Life Sciences (Biology) Seminar Series.
- 2012** *Planaria: A Model of Bioelectric Control of Regenerative Shape.* Central Connecticut State University, Developmental Biology (BMS 562) course, Fall.
- 2012** *Orchestrating Regeneration: Uncovering How Cellular Responses are Coordinated.* University of Kentucky, Department of Biology Seminar Series, Fall.

**2012** *Planar Cell Polarity Restricts Neural Growth During Regeneration.* EMBO Conference: The Molecular and Cellular Basis of Regeneration and Tissue Repair, Oxford, England. (Selected Speaker)

**2011** *Keeping Your Head: How Membrane Voltage Drives Anterior Regeneration in Planaria.* Tufts University Biology Seminar Series, Fall.

**2008** *A Role for Calcium Signaling in Oral/Aboral Specification.* Developmental Biology of the Sea Urchin XVIII, Woods Hole, MA.

**2006** *The GTPase RhoA, SoxB1 Clearance, and Endomesodermal Specification.* Developmental Biology of the Sea Urchin XVII, Woods Hole, MA. (Selected Speaker)

**2005** *The Small GTPase RhoA and Gastrulation.* Developmental Biology of the Sea Urchin XVI, Woods Hole, MA. (Selected Speaker)

**2004** *The Small GTPase RhoA is Required for Sea Urchin Gastrulation.* 13<sup>th</sup> Annual Duke University Biological Sciences Graduate Student Symposium. (Awarded Talk)

## **Abstracts**

(2023) - Hack SJ and **Beane WS.** *Planar cell polarity signaling is required to terminate regenerative growth in the planarian Schmidtea mediterranea.* International Society for Regenerative Biology (ISRB) Webinar Series. **\*\*Selected for a talk.**

**2023** Hack SJ and **Beane WS.** *Planar cell polarity signaling is required to terminate new tissue growth in vivo.* National Graduate Student Symposium (NGSS), St. Jude Children's Research Hospital. Memphis, TN.

**2023** Vučković J, Kinsey LJ, Van Huizen AV, and **Beane WS.** *Weak Magnetic Fields Alter ROS-Mediated Signaling During Regeneration.* Quantum Biology Gordon Research Conference: Emerging Methodologies to Investigate Quantum Effects in Biology. Galveston, TX.

**2023** Kinsey LJ, McClenny ZW, and **Beane WS.** *Weak Magnetic Fields Control Stem Cell-Mediated Tissue Growth by Altering Superoxide Levels.* Quantum Biology Gordon Research Conference: Emerging Methodologies to Investigate Quantum Effects in Biology. Galveston, TX. **\*\*Selected for a talk.**

**2023** Hack SJ and **Beane WS.** *The Role of TRPA1 in Planarian Photoreception.* 25th Meeting of the International Society for Eye Research (ISER), Gold Coast, Queensland, Australia. **\*\*Invited talk for Hack.**

**2022** - Qureshi S, Kinsey LJ, and **Beane WS.** *Reactive Oxygen Species Modulate Tissue Growth During Planarian Regeneration.* Joint Society for Developmental Biology (SDB) and Pan-American Society for Evolutionary Developmental Biology (PASEDB) Meeting. Vancouver, Canada.

**2022** - Hack SJ and **Beane WS.** *Planar Cell Polarity: A Stop Signal for Terminating Stem Cell-Mediated Regeneration.* Joint Society for Developmental Biology (SDB) and Pan-American Society for Evolutionary Developmental Biology (PASEDB) Meeting. Vancouver, Canada.

**2022** - Kinsey LJ, Van Huizen AV, Qureshi S, and **Beane WS.** *Targeting Reactive Oxygen Species to Modulate Stem Cell-Mediated Growth: A Developing Approach.* Joint Society for Developmental Biology (SDB) and Pan-American Society for Evolutionary Developmental Biology (PASEDB) Meeting. Vancouver, Canada.

**2022** - Hack SJ and **Beane WS.** *When Enough is Enough: Planar cell polarity signaling is required for terminating regenerative growth.* International Society for Regenerative Biology (ISRB), Around the World Virtual Meeting. **\*\* Selected for a talk.**

**2022** - Hack SJ and **Beane WS.** *Different Cell Death Pathways Regulate Stem Cells During Homeostasis vs Regeneration.* WMU Stryker School of Medicine, Research Day 2022, Kalamazoo, MI. **\*\* Selected for a talk.**

**2021** - Hack SJ and **Beane WS.** *The Planar Cell Polarity Pathway is Required to Terminate Neurogenesis.* Neuroscience 2021, the Society for Neuroscience (SFN) 50<sup>th</sup> Annual Meeting, Virtual Meeting.



- 2021** - Hack SJ and **Beane WS**. *The Terminator: The Planar Cell Polarity Pathway is Back to Halt Tissue Growth*. Society for Developmental Biology (SDB) 80<sup>th</sup> Annual Meeting, Virtual Meeting.
- 2021** - Kinsey LJ, Van Huizen AV, and **Beane WS**. *Manipulation of Stem Cells and Tissue Growth: An Approach in the Quantum*. Society for Developmental Biology (SDB) 80<sup>th</sup> Annual Meeting, Virtual Meeting.
- 2021** - Hack SJ and **Beane WS**. *Knowing When to Quit: The Planar Cell Polarity (PCP) Pathway and Regeneration*. 2021 Flatworm Fridays Seminar Series. Virtual series.
- 2021** - Hack SJ and **Beane WS**. *Adult Tissue Regeneration as a Model for Understanding the Control of New Growth*. 2021 Midwest Women in Science Conference, Virtual.
- 2021** - Van Huizen AV, Kinsey LJ, Greene J, and **Beane WS**. *Reactive Oxygen Species Signaling: A Therapeutic Target for Wound Healing and Regeneration*. 2021 Wound Healing Society (WHS) Annual meeting. Virtual Meeting. **\*\* Selected for a talk.**
- 2020** - Kinsey LJ, Van Huizen AV, and **Beane WS**. *Weak Magnetic Fields: a Tool to Manipulate ROS-Mediated Stem Cell Proliferation and Growth*. 22<sup>nd</sup> International Conference on Oxidative Stress Reduction, Redox Homeostasis and Antioxidants (Redox World Congress). Virtual Meeting. **\*\* Selected for a talk.**
- 2019** - Birkholz TR, Kha CX, Tseng AS, and **Beane WS**. *Probing Conserved Regenerative Pathways: V-ATPase Signaling and Eye Regeneration*. Society for Developmental Biology (SDB) 78<sup>th</sup> Annual Meeting, Boston, MA.
- 2019** - Kinsey LJ, Van Huizen AV, Saad MA, and **Beane WS**. *Reactive Oxygen Species (ROS) Signaling Regulates Stem Cell Activity During Planarian Regeneration*. Society for Developmental Biology (SDB) 78<sup>th</sup> Annual Meeting, Boston, MA.
- 2019** - Van Huizen AV, Kinsey LJ, Barnes F, and **Beane WS**. *Weak Magnetic Fields as a Modulator of In Vivo Stem Cell Proliferation*. Society for Developmental Biology (SDB) 78<sup>th</sup> Annual Meeting, Boston, MA.
- 2019** - **Beane WS**, Van Huizen AV, Kinsey LJ, and Barnes F. *Non-linear Effects on Stem Cell-Mediated Regeneration Following Weak Magnetic Field (WMF) Exposure*. BioEM 2019, the joint annual meeting of BEMS (the Bioelectromagnetics Society) and EBEA (the European Bioelectromagnetics Association), Montpellier, France.
- 2019** - Birkholz TR, Kha CX, **Beane WS**, and Tseng AS. *Bioelectrical Signaling Regulates Eye Regeneration*. BioEM 2019, Montpellier, France.
- 2019** - Van Huizen AV, Kinsey LJ, Barnes F, and **Beane WS**. *Manipulation of Weak Magnetic Fields Alters Stem Cell Proliferation During Regeneration*. BioEM 2019, Montpellier, France.
- 2019** – **Student Flash Talk**: Van Huizen AV, Kinsey LJ, Barnes F, and **Beane WS**. *Manipulation of Weak Magnetic Fields Alters Stem Cell Proliferation During Regeneration*. BioEM 2019, Montpellier, France.
- 2019** - Barnes F, Gurhan H, Kandala S, and **Beane WS**. *Effects of Weak Static Magnetic Fields on ROS Concentrations and the Growth Rates of Cancer Cells and Planarians*. 21st International Conference on Oxidative Stress Reduction, Redox Homeostasis and Antioxidants (Redox World Congress), Paris, France.
- 2018** - Van Huizen AV, Kinsey LJ, Von Kannon D, and **Beane WS**. *Weak Magnetic Fields Affect Blastema Growth Via Changes in ROS-Mediated Signaling*. 2018 International Planarian Meeting, Madison, WI.
- 2018** - Birkholz TR, Kha CX, Tseng AS, and **Beane WS**. *Conserved Mechanisms that Regulate Eye Repair and Regeneration*. Gordon Research Conference, 2018 Visual Systems Development, Lucca (Barga), Italy.
- 2018** - Birkholz TR, Kha CX, **Beane WS**, and Tseng AS. *Identification of a Conserved Biophysical Mechanism for Productive Eye Repair*. Association for Research in Vision and Ophthalmology (ARVO) 2018 Annual Meeting, Honolulu, HI. **Investig. Ophthalmol. Vis. Sci. 59 (9), 324-324.**

- 2017** - Saad MA, Kinsey LJ, Morton JM, Barnes F, and **Beane WS**. *Inhibition of Reactive Oxygen Species by Weak Magnetic Fields Blocks Blastema Growth*. 4<sup>th</sup> North American Planarian Meeting, Woods Hole, MA.
- 2017** - Von Kannon D, Watson G, **Beane WS**. *Disruption of Planar Cell Polarity Leads to Neural Hyperplasia in Planarians*. 4<sup>th</sup> North American Planarian Meeting, Woods Hole, MA.
- 2017** - Van Huizen AV\*\*, Tseng AS, **Beane WS**. *The Biocide Methylisothiazolinone Inhibits Planarian Wound Healing and Regeneration*. 4<sup>th</sup> North American Planarian Meeting, Woods Hole, MA. \*\* **Selected for a talk**.
- 2017** - Birkholz TR and **Beane WS**. *Planarian Extraocular Responses to Near UV Light are Mediated by TRPA1*. Society for Developmental Biology (SDB) 76<sup>th</sup> Annual Meeting, Minneapolis, MN.
- 2017** - Van Huizen AV, Tseng AS, **Beane WS**. *Methylisothiazolinone Inhibition of Wound Healing in Regenerating Planaria*. Society for Developmental Biology (SDB) 76<sup>th</sup> Annual Meeting, Minneapolis, MN.
- 2017** - Von Kannon D, Birkholz TR, **Beane WS**. *Using Planaria To Understand Neural Regeneration*. Society for Developmental Biology (SDB) 76<sup>th</sup> Annual Meeting, Minneapolis, MN.
- 2017** - Morton JM, Kinsey L, Czajka J, Cyrus J, Barnes F, and **Beane WS**. *Weak Magnetic Field Manipulation Disrupts Planarian Regeneration by Blocking Accumulation of Reactive Oxygen Species*. BioEM 2017, the joint annual meeting of BEMS (the Bioelectromagnetics Society) and EBEA (the European Bioelectromagnetics Association), Hangzhou, China.
- 2017** - Birkholz TR and **Beane WS**. *Near UV Light Responses are Mediated by TRPA1 in Planarians*. 48<sup>th</sup> Annual meeting of the Michigan Chapter of the Society for Neuroscience, Ann Arbor, MI.
- 2017** - Van Huizen AV, Tseng AS, **Beane WS**. *Neuromuscular and Sensory Impairments Following Methylisothiazolinone Exposure in Regenerating Planaria*. 48<sup>th</sup> Annual meeting of the Michigan Chapter of the Society for Neuroscience, Ann Arbor, MI.
- 2016** - Birkholz TR, Deochand ME, **Beane WS**. *Planaria as a Model for Optic Nerve and Photoreceptor Regeneration*. Gordon Research Conference, 2016 Visual Systems Development, West Dover, VT.
- 2016** - Morton JM, Czajka J, Cyrus J, Barnes F, and **Beane WS**. *Weak Magnetic Field Manipulation Disrupts Regenerative Outgrowth in Planaria*. BioEM 2016, the joint annual meeting of BEMS (the Bioelectromagnetics Society) and EBEA (the European Bioelectromagnetics Association), Ghent, Belgium.
- 2016** - **Beane WS** and Deochand ME. *The Temporal Regulation of Optic Nerve and Photoreceptor Regeneration*. 47<sup>th</sup> Annual meeting of the Michigan Chapter of the Society for Neuroscience, East Lansing, MI.
- 2016** - Birkholz TR and **Beane WS**. *Planarian Photophobic Behavior is Mediated by Both Ocular and Dermal Phototransduction*. 47<sup>th</sup> Annual meeting, Michigan Chapter of the Society for Neuroscience, East Lansing, MI.
- 2015** - Paskin TR, Jellies J, Bacher J, **Beane WS**. *Planarian "Vision": A Combination of Ocular and Dermal Phototransduction*. 3<sup>rd</sup> North American Planarian Meeting, Chicago, IL.
- 2015** - Deochand ME, Duong KN, **Beane WS**. *Novel Eye Ablation Assay Reveals Eye Regenerative Program*. 46<sup>th</sup> Annual meeting of the Michigan Chapter of the Society for Neuroscience, Mt. Pleasant, MI.
- 2014** - Deochand ME, Duong KN, **Beane WS**. *Novel Eye Ablation Assay Reveals Static Eye Regeneration Program*. 52<sup>nd</sup> Annual Midwest Society for Developmental Biology Meeting, St. Louis, MO.
- 2014** - Paskin TR, Jellies J, Bacher J, **Beane WS**. *Planarian Phototaxis is Wavelength-Specific and Hierarchical*. 52<sup>nd</sup> Annual Midwest Society for Developmental Biology Meeting, St. Louis, MO.
- 2014** - Tseng AS, **Beane WS**, Levin M. *Sodium Currents are Required for Vertebrate Appendage Regeneration*. BioEM 2014, the joint annual meeting of BEMS (the Bioelectromagnetics Society) and EBEA (the European Bioelectromagnetics Association), Cape Town, South Africa.

- 2014** - Deochand ME, Duong, KN, **Beane WS**. *A Closer Look at Eye Regeneration: Establishing a Planarian Eye Ablation Assay*. Annual meeting of the Michigan Chapter of the Society for Neuroscience, Kalamazoo, MI.
- 2014** - Paskin TR, Jellies J, Bacher J, **Beane WS**. *Planarians Exhibit Differential Behavioral Responses To Individual Wavelengths of Light*. 45<sup>th</sup> Annual meeting of the Michigan Chapter of the Society for Neuroscience, Kalamazoo, MI.
- 2012** - **Beane WS**, Tseng AS, Morokuma J, Lemire JM, Levin, M. *Planar Cell Polarity Restricts Regenerative Neural Growth*. Keystone: Mechanisms of Whole Organ Regeneration. Breckenridge, CO.
- 2012** - Tseng AS, **Beane WS**, Lemire JM, Masi A, Levin M. *Sodium Currents Mediated by NaV are Necessary to Initiate Vertebrate Appendage Regeneration*. Keystone: Mechanisms of Whole Organ Regeneration. CO.
- 2011** - **Beane WS**, Morokuma J, Adams DS, Levin, M. *Membrane Voltage Regulates Anterior Polarity During Planarian Regeneration*. Mechanisms of Organ Repair and Regeneration (NIDDK), Ellicott City, MD.
- 2010** - **Beane WS**, Morokuma J, Adams DS, Levin, M. *Membrane Voltage Regulates Anterior Polarity During Planarian Regeneration*. 5<sup>th</sup> International Meeting of the Latin American Society for Developmental Biology (LASDB), Santa Cruz, Chile.
- 2010** - **Beane WS**, Morokuma J, Levin M. *H,K-ATPase-mediated ion transport regulates anterior patterning in regenerating planaria*. Society for Developmental Biology (SDB) 69<sup>th</sup> Annual Meeting. *Dev Biol.* **344(1):522**.
- 2010** - Tseng AS, **Beane WS**, Lemire JM, et al. *NaV-mediated sodium transport is required for vertebrate appendage regeneration*. SDB 69<sup>th</sup> Annual Meeting. *Dev Biol.* **344(1):519**.
- 2009** - **Beane WS**, Morokuma J, Adams DS, Levin, M. *H,K-ATPase-Mediated Ion Transport Regulates Anterior Patterning in Regenerating Planaria*, Universidad Internacional de Andalucía Workshop: Mechanisms of Organ Regeneration in Model Systems, Baeza, Spain.
- 2009** - **Beane WS**, Oviedo NJ, Adams DS, Levin M. *H,K-ATPase-mediated Ion Transport Regulates Anterior Patterning in Regenerating Planaria*, 16<sup>th</sup> International Society of Developmental Biologists Congress. *Mech Dev.* **Aug; 126 (Sup. 1): pp. S294-S295**.
- 2008** - McClay DR, Croce JC, Wu SY, **Beane WS**, Walton KD. *Gene Regulatory Networks Governing Morphogenesis*. SDB 67<sup>th</sup> Annual Meeting. *Dev Biol.* **319(2):477**.
- 2007** - **Beane WS**, Walker MA, Jung D, Herman, L, Koff JL, Bradham CA, McClay DR. *Patterning the Sea Urchin Skeleton: A Role for Calcium Signaling*. SDB 66<sup>th</sup> Annual Meeting and First Pan American Congress (3<sup>rd</sup> LASDB Annual Meeting). *Dev Biol.* **306(1):400**.
- 2007** - **Beane WS**, Bradham, CA, McClay DR. *Patterning the Sea Urchin Skeleton: A Role for Calcium Signaling*. Southeast Regional Meeting of the Society for Developmental Biology.
- 2006** - **Beane WS**, McClay DR. *Clearing the Way: The Small GTPase RhoA and Endomesodermal Specification*. SDB 65<sup>th</sup> Annual Meeting. *Dev Biol.* **295(1):411-412**.
- 2005** - **Beane WS**, Gross JM, McClay DR. *RhoA Triggers Endoderm Invagination During Sea Urchin Gastrulation*. SDB 64<sup>th</sup> Annual Meeting. *Dev Biol.* **283(2):628**.
- 2004** - **Beane WS**, Gross JM, McClay DR. *The Small GTPase RhoA is Essential for Gastrulation in the Sea Urchin*. American Society for Cell Biology, 44<sup>th</sup> Annual Meeting. *Mol Biol Cell* **15:459A**.
- 2004** - **Beane WS**, Gross JM, McClay DR. *The Small GTPase RhoA is Essential for Gastrulation in the Sea Urchin*. SDB 63<sup>rd</sup> Annual Meeting. *Dev Biol.* **271(2):607**.

**Outreach**

- 2023 Visit to Vicksburg High School to assist with implementation of planarian-based curriculum  
 2023 Training to University of Nevada, Las Vegas to jumpstart their Quantum Biology research  
 2022 “How Flatworms Regenerate” research lab visit by Mattawan High School AP Biology class  
 2022 STEM Practicum, Coloma High School, Neural Regeneration  
 2022 BIORETS research experience for Vicksburg High School instructor (developed curricula)  
 2021- Established QBITE (Quantum Biology Interdisciplinary Trainee Exchange) program (founder)  
 2021- Established Gordon Research Conference on Quantum Biology (founding co-vice chair)  
 2021 Biophysical Society Virtual Networking Event on Quantum Biology (co-organizer)  
 2019 STEM Practicum, Gobles High School, Neural Regeneration  
 2017 STEM Practicum, Gobles High School, Neural Regeneration  
 2017 STEM Practicum, Schoolcraft High School, Neural Regeneration  
 2016 STEM Practicum, Gobles High School, Neural Regeneration (canceled due to weather)  
 2016 Outreach to help establish planarian regeneration model system at University of Richmond  
 2015 STEM Practicum, Gobles High School, Neural Regeneration

**Mentoring****Graduate Students (WMU)**

- 2022-** **Jana Vučković**, *Masters Graduate Student*, Western Michigan University  
 Fulbright Fellowship (Serbia) 2022-24
- 2022-** **Rae Daun Miller**, *Masters Graduate Student*, Western Michigan University
- 2019-** **Samantha Hack**, *Doctoral Graduate Student*, Western Michigan University  
 Tuition Award, MBL Frontiers in Stem Cells & Regeneration course, 2021  
 WMU Graduate College Graduate Student Research Grant 2022 (Spring)  
 WMU Graduate College Graduate Student Travel Award, 2022 (Fall)  
**Invited Participant St. Jude Children’s Research Hospital National Graduate Student Symposium**  
**WMU BIOS Graduate Research and Creative Scholar (Ph.D.) Award 2023**  
**Nominated: BIOS All-University Graduate Research and Creative Scholar Award 2023**
- 2018-** **Luke Kinsey**, *Doctoral Graduate Student*, Western Michigan University  
 Received National SDB Travel Award, 2019  
**WMU Departmental Graduate Teaching Effectiveness Award 2021**  
**Western Michigan University All-University Graduate Teaching Effectiveness Award 2022**  
 WMU Graduate College Graduate Student Travel Award, 2022
- 2018-23** Allison Witucki, *Doctoral Graduate Student*, Mallinson Institute for Science  
 Education, Western Michigan University, together with Dr. David Rudge  
Subsequently: Lake Michigan University, Distance Education Manager  
**WMU MISE Graduate Teaching Effectiveness Award 2017**  
**Western Michigan University All University Graduate Teaching Effectiveness Award 2018**  
**WMU MISE Graduate Research and Creative Scholar (Ph.D.) Award 2023**  
**Nominated: WMU All-University Graduate Research and Creative Scholar Award 2023**
- 2016-21** Alanna Van Huizen *Doctoral Graduate Student*, Western Michigan University  
Subsequently: Postdoc, St. Jude Children’s Research Hospital, McKinney-Freeman Lab  
 Received National SDB Travel Award, 2017  
**Distinguished Graduate Student in Biological Sciences 2018**  
**WMU BIOS Graduate Research and Creative Scholar (Ph.D.) Award 2019**  
 Best Poster Award, WMU Research and Creative Activities Poster and Performance Day 2019  
 Received BioEM 2019 Graduate Student Travel Award, 2019  
 Received National SDB Travel Award, 2019  
 Second Place, Best Poster Competition, BioEM 2019, Montpellier, France  
**Received National American Dissertation Fellowship from American Association of**  
**University Women (AAUW) for 2020-21.**
- 2016-18** Donald Von Kannon, *Masters Graduate Student*, Western Michigan University  
 Received National SDB Travel Award, 2017
- 2014-18** Taylor Paskin Birkholz, *Doctoral Graduate Student*, Western Michigan University  
Subsequently: Tenure-Track Faculty, Biology, Kalamazoo Valley Community College

Received Midwest Regional SDB Travel Award, 2014  
 Best Poster Award, WMU Poster Day, 2016  
**WMU Distinguished Graduate Student in Biological Sciences 2017**  
 Received National SDB Travel Award, 2017  
 WMU Graduate College Graduate Student Travel Award, 2018  
 Association for Research in Vision and Ophthalmology Travel Award, 2018  
**WMU BIOS Graduate Teaching Effectiveness Award 2018**

**2013-16** Michelle Deochand, *Masters Graduate Student*, Western Michigan University  
**University Fellowship Award Recipient (Graduate Doctoral Assistantship)**  
 Received Midwest Regional SDB Travel Award, 2014

**Undergraduate Students (WMU) (Current Students in Bold)**

**2022-** Zachary McClenny, Member Lee Honors College, WMU  
**2022-** Pooja Acharya, WMU  
**2022-** Caitlin Nolff, Member Lee Honors College, WMU  
**2022-** Kay L Bansemmer, Member Lee Honors College, WMU  
**2021-** Isabela Giorgetti de Carvalho, WMU  
**2021-** Saad Qureshi, (summers at WMU), University of Michigan  
**2021-22** Jade Cervantes, Member Lee Honors College, WMU  
**2020-21** Jacob Ownby, WMU (subsequently Pfizer)  
**2019-20** Jacqueline Greene, Member Lee Honors College, WMU (subsequently NAMSA)  
 WMU OVPR Undergraduate Research Excellence Award Spring 2020  
**2019-20** Nik Nur Sabrina Binti Nik Azli, WMU  
 WMU OVPR Undergraduate Research Excellence Award Summer 2020  
**2018-21** Sarah Gaffan, Member Lee Honors College, WMU  
 Lee Honors College Research and Creative Activities Award Summer 2019  
**2018-21** Tashifa Fayyaz, Member Lee Honors College, WMU (subsequently MSU Med School)  
**Merze Tate Endowed Medallion Scholar, WMU's most prestigious merit-based scholarship**  
**Jensen Chemistry Scholarship Award, WMU Chemistry Department Spring 2019**  
**WMU Distinguished Senior in Biomedical Sciences Award 2021**  
**2017-20** Yarielis Rosario, WMU (subsequently Eurofins)  
 WMU OVPR Undergraduate Research Excellence Award Spring 2018  
**WMU Frank Hinds Zoology Award 2019**  
 WMU OVPR Undergraduate Research Excellence Award Spring 2020  
**2017-19** Emily Bolhuis, Member Lee Honors College, WMU  
 WMU OVPR Undergraduate Research Excellence Award Fall 2017  
 WMU CAS Undergraduate Research and Creative Award Spring 2018  
**2017-19** Breanna Varker, WMU  
 WMU OVPR Undergraduate Research Excellence Award Fall 2017  
 WMU CAS Undergraduate Research and Creative Award 2018  
**2016-19** Allison Watson, WMU  
**2016-19** Marwa Saad, Member Lee Honors College, WMU (subsequently PhD Rockefeller)  
 WMU CAS Undergraduate Research and Creative Award 2016  
 WMU OVPR Undergraduate Research Excellence Award Spring 2017  
 Lee Honors College Research and Creative Activities Award 2018 & 2019  
**WMU Presidential Scholar for Biological Sciences (University-Wide Honor) 2019**  
**WMU Presidential Scholar for Chemistry (University-Wide Honor) 2019**  
**Lee Honors College "Discovery Driven" Pillar Award Spring 2019**  
**2016-18** Gabrielle Watson, Member Lee Honors College, WMU (subsequently Zoetis)  
 WMU CAS Undergraduate Research and Creative Award 2016  
 Lee Honors College Research and Creative Activities Award 2017 & 2018  
 WMU OVPR Undergraduate Research Excellence Award Summer & Fall 2017  
**WMU Distinguished Senior in Biomedical Sciences Award 2018**  
**2016-18** Luke Kinsey, Member Lee Honors College, WMU (subsequently Ph.D WMU)  
 WMU CAS Undergraduate Research and Creative Award 2016  
 Lee Honors College Research and Creative Activities Award 2018  
**2015-8** Marcos Santiago, Member Lee Honors College, WMU  
 WMU CAS Undergraduate Research and Creative Award 2015, 2017  
 WMU OVPR Undergraduate Research Excellence Award Summer 2017

- 2016** Megan Rees, WMU  
**2016-7** Adam Sweeris (Dept of Electrical Engineering), WMU  
**2015-7** Jacob Morton, Member Lee Honors College, WMU (subsequently WMed)  
**WMU Distinguished Senior in Biomedical Sciences Award 2015**  
 Lee Honors College Research and Creative Activities Award 2015  
**2015-6** Brooklin Trudell, WMU  
**2015-6** Rachel Gullicksen, WMU  
**2014-7** Marine Bolliet, Member Lee Honors College, WMU (subsequently WMed)  
**Haenicke Presidential Endowed Medallion Scholar**, WMU's most prestigious merit-based scholarship  
 WMU CAS Undergraduate Research and Creative Award 2016  
 Lee Honors College Research and Creative Activities Scholarships 2014, 2016  
 WMU OVPR Undergraduate Research Excellence Award Spring 2017  
**WMU Presidential Scholar for Biological Sciences (University-Wide Honor) 2017**  
**Best Thesis Presentation Award, Lee Honors College, 2017**  
**2014-5** Jordan Czajka, WMU (subsequently Butler University School of Medicine)  
**2013-6** Jessica Bacher, Member Lee Honors College, WMU (Subsequently Octapharma Plasma, Inc)  
 WMU CAS Undergraduate Research and Creative Award 2015  
 Lee Honors College Research and Creative Activities Scholarship 2015  
**2013-5** Khoa Duong, WMU  
 WMU CAS Undergraduate Research and Creative Award 2015  
**2013-4** Kylie Dennis, Member Lee Honors College, WMU  
**Presidential Endowed Medallion Scholar**, WMU's most prestigious merit-based scholarship

**High School Students** (Current Students in Bold)

- 2022-** **Emaad Qureshi**, Kalamazoo Area Mathematics and Science Center (KAMSC)  
**2019-20** Saad Qureshi, Kalamazoo Area Mathematics and Science Center (KAMSC),  
 Graduated Spring 2020 (subsequently University of Michigan undergraduate).  
**1<sup>st</sup> place in the 2020 Southwest Michigan Science and Engineering Fair**

**High School Biology Instructors**

- 2022** Liz Ratashak, Science Teacher, Vicksburg High School, Vicksburg, MI

**Chair, WMU Lee Honors College Thesis Committees** (Active Committees in Bold)

- Tashifa Fayyaz, *Comparative Analyses of the Feeding Strategies of Phagocata morgani, Phagocata gracilis, Schmidtea mediterranea and Dugesia japonica* (Graduated 2021)  
 Jacqueline Greene, *The Role of Reactive Oxygen Species in Planarian Wound Closure*  
 (Graduated 2020, subsequently employed at North American Science Associates (NAMSA))  
 Emily Bolhuis, *Analyses of the Feeding Strategies of D. japonica and S. mediterranea Planaria*  
 (Graduated 2019)  
 Marwa Saad, *Mechanisms of Reactive Oxygen Species Signaling During Planarian Regeneration*  
**Winner, Discovery Driven Pillar Award** (Graduated 2019, subsequently Ph.D. student Rockefeller University)  
 Luke Kinsey, *Effects of Magnetic Field Strength on Reactive Oxygen Species Accumulation*  
 (Graduated 2018, subsequently WMU Graduate School, Biological Sciences, Ph.D.)  
 Marcos Santiago, *The Role of Reactive Oxygen Species in Blastema Formation* (Graduated 2018)  
 Marine Bolliet, *A Comparative Analysis of Regeneration Among Various Planarian Species*  
**Winner, Best Thesis Presentation Award** (Graduated 2017, then WMU Stryker School of Medicine)  
 Jacob Morton, *The Role of Weak Magnetic Fields in Tissue Regeneration*  
 (Graduated 2016, subsequently WMU Stryker School of Medicine)  
 Gabrielle Watson, *Understanding Neuronal Interactions in Planarians*  
 (Graduated 2016, subsequently employed by Eurofins/Zoetis)  
 Jessica Bacher, *Investigating Ocular and Dermal Phototransduction in Planarian Flatworms*  
 (Graduated 2016, subsequently employed by Octapharma biotech company)

**Member, Thesis Committees** (Active Committees in Bold)

- Peter Karabinis** (Ph.D., Quantitative and Systems Biology, University of California, Merced)  
**Jacob Mastenbrook** (M.S., Biological Sciences, WMU)

**Elannah Venhaus** (M.S., Biological Sciences, WMU)  
**Shelby Gould** (Ph.D., Biological Sciences, WMU)  
**John Rozofsky** (Ph.D., Biological Sciences, WMU)  
**Bethany Kohl** (M.S., Biological Sciences, WMU)  
Makayla Long (M.S., Biological Sciences, WMU, Graduated 2021)  
Sahithi Kandala (Ph.D., Electrical Engineering, University of Colorado, Boulder, Graduated 2021)  
Elizabeth Ketchum (Ph.D., Biological Sciences, WMU, Graduated 2022)  
Joshua Paris (M.S., Biological Sciences, WMU, Graduated 2021)  
Hakki Gurhan, (Ph.D., Electrical Engineering, University of Colorado, Boulder, Graduated 2020)  
Mamoon Ali (M.S., Biological Sciences, WMU, Graduated 2020)  
Tetiana Petrachkova (Ph.D., Biological Sciences, WMU, Graduated 2020)  
Albert Lam (M.S., Biological Sciences, WMU, Graduated 2020)  
Paige Blinkiewicz (Undergraduate Honors Thesis, Biological Sciences, WMU, Graduated Dec 2019)  
Cynthia Cooley-Themm (Ph.D., Bio. Sciences, WMU, Graduated 2018, *next: Hope College faculty*)  
Natasha Schiller (Ph.D., Bio. Sciences, WMU, Graduated 2018, *next: Wingate University faculty*)  
Natalie Hamilton (Undergraduate Honors Thesis, Biological Sciences, WMU, Graduated 2017)  
James Hentig (Undergraduate Honors Thesis, WMU, Graduated 2016, *next: Ph.D. Notre Dame U*)  
Chesela Bagley (M.S., Biological Sciences, WMU, Graduated 2016)  
Darcy Trimpe (Ph.D., Biological Sciences, WMU, Graduated 2016)

### **Students Mentored Prior to WMU**

#### Undergraduate Independent Study Students:

Elizabeth Tkachenko (Tufts), 2012-13, subsequently U. Mass Medical School  
Maxim Kachalov (Tufts), Fall 2011  
Linda Le (Tufts), Summer-Fall 2010  
Claire Stevenson (Tufts), 2009-10; subsequently Ph.D. student University of Chicago  
Sofija Degesys (Duke), Spring 2008; subsequently Peace Corp  
Bert Maidment III (Duke), 2006-7; subsequently Medical Student, University of Maryland  
Jean L. Koff (Duke), 2005-6; subsequently Emory University Medical School  
Melissa A. Walker (Duke), Spring-Summer 2003; subsequently MD/PhD Student, Columbia U.  
Lauren Herman (Duke), Summer 2005; subsequently Medical Student, U. of Illinois at Chicago  
(Kenneth) David Gray (Duke), Spring 2004

#### Graduate Rotation Students:

Fallon Schuler (Tufts), Spring-Sum 2012; Ph.D. Student, Developmental Biology Program  
Gilbert Lee, IV (Duke), Fall 2007; Ph.D. Student, Duke Cell & Molecular Biology Program  
Dawoon Jung (Duke), Winter 2004-5; Ph.D. Student, Duke Toxicology Program  
Daniel Mace (Duke), Fall 2004; Ph.D. Student, Duke Comp. Bio. & Bioinformatics Program  
Mark Vignola (Duke), Spring 2004; Graduate Student, Duke Cell & Molecular Bio. Program

**Reviewer** For National Science Foundation, National Institutes of Health, *PLoS Genetics*, *Cell Reports*, *PLoS One*, *Developmental Biology*, *Physical Biology*, *Biology Letters*, *Scientific Reports*, *Development Genes and Evolution*, *Bioelectricity*, and others.