

## CURRICULUM VITAE

Martha Ruth Chase Bhattacharya, Ph.D.

## CURRENT TITLE

Associate Professor of Neuroscience and BIO5 Institute, University of Arizona

## EDUCATION

- |      |                                                                                                                                 |
|------|---------------------------------------------------------------------------------------------------------------------------------|
| 2000 | A.B., Harvard University, <i>Magna Cum Laude</i><br>Major field: Biochemical Sciences<br>Research Mentor: Douglas Melton, Ph.D. |
| 2007 | PhD, University of California, San Francisco<br>Major Field: Cell Biology, Neuroscience<br>Advisor: David Julius, Ph.D.         |

## CHRONOLOGY OF EMPLOYMENT (Last 15 Years)

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| 2008-2014 | Postdoctoral Fellow, Department of Developmental Biology, Washington University in St. Louis School of Medicine<br>Research: molecular mechanisms of axon degeneration and synapse maintenance<br>Mentor: Aaron DiAntonio, MD/PhD                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2014-2016 | Assistant Professor (tenure-track), Basic Sciences, St. Louis College of Pharmacy (now University of Health Sciences and Pharmacy)<br>Field: Biological Sciences<br>Research: axon degeneration mechanisms in <i>Drosophila</i> and mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 2017-2023 | Assistant Professor (tenure-track), Department of Neuroscience, University of Arizona; Joint Appointments with Departments of Neurology, BIO5 Institute, and Graduate Interdisciplinary Program in Neuroscience                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 2022-2024 | Faculty Director, Vertically Integrated Projects (VIP) Program ( <i>leadership role</i> ) <ul style="list-style-type: none"> <li>• Facilitate growth of campus-wide undergraduate research opportunities within curricula (CURE courses and multi-semester CUREs)</li> <li>• Lead strategy, budget requests, and administration team meetings</li> <li>• Present regularly at university-wide events that seek to build undergraduate research capacity on the UA campus</li> <li>• Recruit new VIP Team leads, evaluate Internal Funding Applications</li> <li>• Supervise 1 full-time staff person and 1 work-study student employee</li> <li>• Stepped down for sabbatical in Fall 2024</li> </ul> |
| 2023-     | Associate Professor with tenure, Department of Neuroscience, University of Arizona                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## HONORS AND AWARDS (last 5 years)

- |            |                                                                                                                                  |
|------------|----------------------------------------------------------------------------------------------------------------------------------|
| 2020, 2021 | Awardee, Herbst Foundation and Dean's Innovation and Education Award, College of Science, University of Arizona (award, renewal) |
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|      |                                                                                                                                                                 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021 | Distinguished Early-Career Teaching Award, College of Science, University of Arizona (one awardee per year across 20 departments)                               |
| 2022 | Winner of the Five Star Faculty Award, a student nominated teaching and mentoring award, University of Arizona (one awardee per year for the entire university) |
| 2023 | National Science Foundation CAREER award (please also see funding section)                                                                                      |

## PUBLICATIONS (chronological)

**Key:** °undergraduate mentee, °°graduate student mentee, underlined: postdoctoral mentee, #post-baccalaureate trainee; @corresponding author; \*equal author contributions; \*work done as a graduate student

1. Li R, **Chase M**, Jung SK, Smith PJ, @Loeken MR. Hypoxic stress in diabetic pregnancy contributes to impaired embryo gene expression and defective development by inducing oxidative stress. *Am J Physiol Endocrinol Metab*. 2005 Oct;289(4):E591-9. PubMed PMID: [15928021](#).
2. \***Bhattacharya MR**, \*Bautista DM, Wu K, Haeberle H, Lumpkin EA, @Julius D. \*Radial stretch reveals distinct populations of mechanosensitive mammalian somatosensory neurons. *Proc Natl Acad Sci U S A*. 2008 Dec 16;105(50):20015-20. PubMed PMID: [19060212](#); PubMed Central PMCID: [PMC2604979](#).
3. **Bhattacharya MRC**, Gerdtz J, Naylor SA, #Royse EX, °Ebstein SY, Sasaki Y, Milbrandt J, @DiAntonio A. A model of toxic neuropathy in *Drosophila* reveals a role for MORN4 in promoting axonal degeneration. *J Neurosci*. 2012 Apr 11;32(15):5054-61. PubMed PMID: [22496551](#); PubMed Central PMCID: [PMC3336743](#).

*Publications since independence:*

4. @**Bhattacharya MRC**, Geisler S, Pittman SK, Doan RA, Weihl CC, Milbrandt J, DiAntonio A. TMEM184b Promotes Axon Degeneration and Neuromuscular Junction Maintenance. *J Neurosci*. 2016 Apr 27;36(17):4681-9. PubMed PMID: [27122027](#); PubMed Central PMCID: [PMC4846669](#).
5. @**Bhattacharya, MRC**. A Chemotherapy-Induced Peripheral Neuropathy Model in *Drosophila melanogaster*. *Methods Mol Biol*. 2020; 2143:301-310. Pubmed PMID: [32524489](#).
6. \*#Cho TS, \*Beigaité E, \*#Klein NE, Sweeney ST, @**Bhattacharya MRC**. The Putative *Drosophila* TMEM184B Ortholog Tmep Ensures Proper Locomotion by Restraining Ectopic Firing at the Neuromuscular Junction. *Mol Neurobiol*. 2022 Feb 2. Pubmed PMID: [35107803](#).

This work was featured by [UA News](#) and also in a radio segment on KTAR 92.3 in Phoenix.

7. °°Larsen EG, #Cho TS, McBride ML, Feng J, Manivannan B, Madura C, #Klein NE, °°Wright EB, Wickstead ES, °Garcia-Verdugo HD, #Jarvis C, Khanna R, Hu H, Largent-Milnes TM, @**Bhattacharya MRC**. TMEM184B is necessary for IL-31-induced itch. *PAIN*. 2022 May 1;163(5):e642-e653. Pubmed PMID: [34629389](#).

This work was chosen as the Editor's Choice Article for the journal issue, and we were highlighted in a [Video Abstract](#) available on their website. It was also featured as a Editor's Pick for Paper of the Week on [Pain Research Forum](#).

8. **@Bhattacharya MRC**. A nerve-wracking buzz: lessons from Drosophila models of peripheral neuropathy and axon degeneration. Review. *Frontiers in Aging Neuroscience* 2023 Aug 8<sup>th</sup>. 8:15:1166146. Pubmed PMID: [3764471](https://pubmed.ncbi.nlm.nih.gov/3764471/).
  9. <sup>++</sup>Larsen EG, <sup>++</sup>Wright EB, °Coloma-Roessle CM, °Hart HR, **@Bhattacharya MRC**. Transmembrane protein 184B (TMEM184B) promotes expression of synaptic gene networks in the mouse hippocampus. *BMC Genomics* 2023: Sept 20. 24(1): 559. Pubmed PMID: [37730546](https://pubmed.ncbi.nlm.nih.gov/37730546/)
  10. Cimetta A, Friesen R, Davis S, **@Bhattacharya M**. Neuroscience Vertically Integrated Projects Benefit STEM Student Self-Efficacy and Identity. *Scholarship and Practice of Undergraduate Research (SPUR)*. 2025: 8 (3). <https://doi.org/10.18833/spur/8/3/4>
- This study was featured by the UA College of Science. [Neuroscience VIP course strengthens STEM identity, boosts student success.](#)
11. °°Wright EB, °°Larsen EG, Padilla-Rodriguez M, Langlais P, **@Bhattacharya MRC**. Transmembrane protein 184B (TMEM184B) modulates endolysosomal acidification via the vesicular proton pump. *J Cell Science*. 2025 Aug 1;138(15). doi: <https://doi.org/10.1242/jcs.263908>
  12. \*Chapman K, \*\*°Yahiku ZA, \*Ullah F, Kodiparthi SV, Kellaris G, Corriea SP, Stodberg T, Sofokleous C, Marinakis NM, Fryssira H, Tsoutsou E, Traeger-Synodinos J, Accogli A, Salpiero V, Striano S, Berger SI, Pond KW, Sirimulla S, @Davis EE, **@Bhattacharya MRC**. Pathogenic variants in TMEM184B cause a neurodevelopmental syndrome associated with alteration of metabolic signaling. *Am J Hum Genetics (AJHG)*. 2025: Aug 28. doi: <https://doi.org/10.1016/j.ajhg.2025.08.004>

## OTHER SCHOLARSHIP

### Patent Applications

PCT Application July 29, 2021. International Application Number: PCT/ WO2021/151059. **Bhattacharya, Martha** and Largent-Milnes, Tally. Compounds and Methods for Treating or Reducing Pruritus. Application No. 62/965,556. Provisional Patent UA20-111, UNIA 20.01. Filing date January 24, 2020. U.S. Patent Application 17794939, filing date July 22, 2022.

PCT Application August 29<sup>th</sup>, 2025. Application No.: 63/872,659. Provisional Patent UA25-224 (UA26-030). Bhattacharya MRC, Bachtke K, Penton C. Molecular sensor for detection of mitochondrial trans-cellular transfer.

## AWARDED GRANTS AND CONTRACTS (chronological order, independent funding only)

### Federal

Title: Defining TMEM184b-Controlled Pathways in Nerve Terminal Maintenance and Axon Degeneration. Source: NIH, National Institute for Neurological Disorders and Stroke (NIH R01 NS105680) (PA-16-160)

Role: PI

Percent Effort: 35% academic year, 83% summer

Co-PIs: none

Total Amount: \$1,783,858; Direct: \$1,162,122; Indirect: \$621,736

Award Period: 7/1/2018-4/30/2023 (no-cost extension through 4/30/2024)

Purpose: This award supports the primary directions of my lab to investigate the molecular mechanism by which TMEM184B controls axon degeneration and synaptic maintenance in both *Drosophila* and mouse. Supported data for 6 published papers. ***This award has been renewed (see below).***

Title: Defining TMEM184b-Controlled Pathways in Nerve Terminal Maintenance and Axon Degeneration. Source: NIH, National Institute for Neurological Disorders and Stroke (NIH NS105680-01A1S1) (PA-18-591)

Role: PI

Percent Effort: 15% academic year, 10% summer

Co-PIs: none

Total Amount: \$366,911; Direct: \$240,273; Indirect: \$126,638

Award Period: 9/18/2018-4/30/2019

Purpose: This grant, through the Alzheimer's Disease and Related Dementias Program, investigates the role of TMEM184B in learning and memory. Data included in BMC Genomics publication (2023).

Title: Defining TMEM184b-Controlled Pathways in Nerve Terminal Maintenance and Axon Degeneration. Source: NIH, National Institute for Neurological Disorders and Stroke, Research Supplements to Promote Diversity in Health-Related Research (PA-18-906)

Role: PI, Mentor to Ms. Elizabeth Shelton

Percent Effort: 0% (no salary support; 100% to Ms. Shelton)

Total Amount: \$32,654; Direct: \$21,273; Indirect: \$11,381

Award Period: 6/1/2020-8/31/2021

Purpose: This award supported the summer and academic year research of Ms. Elizabeth Shelton from June-December 2020, and also supported hiring her as a research technician after her December 2020 graduation while she completed graduate school applications.

**(ACTIVE)** Title: Mitochondrial Transcellular Communication in the Nervous System: Mechanisms of Action and Student Training Opportunities.

Source: National Science Foundation CAREER program

Role: PI

Percent Effort: 10% academic year, 30% summer

Total Amount: \$1,100,000; Direct, \$757,794; Indirect, \$342,206

Award Period: 04/01/2023-03/31/2028

Purpose: This grant funds an analysis of the mechanisms of mitochondria transfer between neurons and glia that underlie preservation of neuronal function after injury. In parallel, it funds an expansion of my VIP-CURE course and outreach opportunities in the Tucson area.

**(ACTIVE)** Title: Establishing the Function of TMEM184B in mTORC1 Regulation and Synaptic Maintenance. Source: NIH, National Institute for Neurological Disorders and Stroke (PA-16-160)

Role: PI

Percent Effort: 11% academic year, 33% summer

Co-Is: Dr. Tom Tomasiak (Co-I, 8% effort)

Total Amount: \$2,063,453; Direct: \$1,353,083; Indirect: \$710,368.

Award Period: 12/1/2023-11/30/2028

Purpose: This award is the ***competitive renewal*** of my R01 (NIH R01 NS105680). This work funds both investigation of the mechanisms of TMEM184B in mouse, modeling human TMEM184B disruption in *Drosophila*, and identification of its molecular function via biochemical methods.

## **Private Foundation**

Title: Molecular Mechanisms of Peripheral Axonal Degeneration

Source: Muscular Dystrophy Association Development Grant (Postdoc-to-Faculty Transition Award, 255435)

Role: PI

Percent Effort: 100% (year 1 as postdoctoral fellow); 25% (years 2-3 as Assistant Professor)

Total Amount: \$180,000; Direct, \$162,000; Indirect, \$18,000

Award Period: 10/1/2013-9/30/2016

Purpose: This award supported my work on TMEM184B in axon degeneration in the mouse for my last year as a postdoctoral fellow and continued to support my research projects in my first two years as an Assistant Professor. Supported data within two manuscripts (J Neurosci 2016, PAIN 2022).

## **Institutional Funding**

### *Research Funding:*

Title: Cellular Communication Strategies in Aging and Alzheimer's Disease.

Source: BIO5 Team Scholars Grant, University of Arizona

Role: Co-PI (Co-PI Dr. Fei Yin)

Percent Effort: 5%

Total Amount: \$85,000 budget (\$72,000 to Dr. Bhattacharya, \$13,000 to Dr. Yin) (direct costs only)

Award Period: 7/1/2019-6/30/2020.

Purpose: Using bio-orthogonal non-canonical amino acid tagging (BONCAT) to studying neuron-glia communication *in vitro* and *in vivo*.

Title: Optimizing Live Imaging of Acidic Organelles in Acute Mouse Brain Slices

Source: Core Facilities Pilot Program grant (Imaging Core Facilities)

Role: Co-PI (Co-PI Dr. Helena Morrison)

Percent Effort: N/A (core facility usage fees only)

Total Amount: \$2250 (all direct costs)

Award Period: 5/3/2022-5/2/2023.

Purpose: Establishing conditions for mouse acute brain slice live imaging of acidic organelles on the Zeiss NLO/Multiphoton microscope in our core facility.

Title: Profiling Lipid and Metabolic Disruptions Underlying TMEM184B-associated Neurodevelopmental Disorders

Source: BIO5 Accelerate for Success Grant, University of Arizona

Role: Co-PI (Co-PI Dr. John Purdy)

Percent Effort: 5%

Total Amount: \$50,000 budget (\$45,000 to Dr. Bhattacharya, \$5,000 to Dr. Yin) (direct costs only)

Award Period: 8/1/2024-7/30/2025.

Purpose: Using bio-orthogonal non-canonical amino acid tagging (BONCAT) to studying neuron-glia communication *in vitro* and *in vivo*.

### *Education Funding:*

Title: Enhancing a Vertically Integrated Project course in Brain Communication Networks

Source: Arthur L. and Lee G. Herbst Endowment for Innovation, together with College of Science Dean's Innovation and Education Fund.

Role: PI

Percent Effort: N/A

Total Amount: \$3000 (direct costs only)

Award Period: 1/1/2021-12/31/2021

Purpose: Support for new course-based laboratory experience for NSCS students.

Title: Flow Cytometry for a Vertically Integrated Project (VIP) Research Course

Source: Core Facilities Pilot Program grant (Flow Cytometry Shared Resource).

Role: PI

Percent Effort: NA (core facility usage fees only)

Total Amount: \$4500 (direct costs only)

Award Period: 1/1/2021-12/31/2021 (extended into 2022).

Purpose: Support for students in new course-based research experience to learn and apply flow cytometry techniques.

Title: Plasma Membrane Proteomics for a Vertically Integrated Project (VIP) Research Course

Source: Core Facilities Pilot Program grant (Analytical and Biological Mass Spectrometry core).

Role: PI

Percent Effort: NA (core facility usage fees only)

Total Amount: \$4500 (direct costs only)

Award Period: 2/15/2021-2/14/2022

Purpose: Support for students in new course-based research experience to learn and apply proteomics to generate new datasets from tissues of interest in *Drosophila*.

Title: Enhancing a Vertically Integrated Project course in Brain Communication Networks

Source: Arthur L. and Lee G. Herbst Endowment for Innovation, together with College of Science Dean's Innovation and Education Fund.

Role: PI

Total Amount: \$3000 (direct costs only)

Award Period: 1/1/2022-12/31/2022

Purpose: Renewal award. Provides additional support for the vertically integrated project course.

Title: Building CURE Courses in Neuroscience.

Source: CURE Institute, Undergraduate Research & Inquiry Collaborative, University of Arizona.

Role: Co-PI (Ulises Ricoy, Co-PI)

Total Amount: \$7000 (direct costs only)

Award Period: 8/1/2021-7/30/2022

Purpose: Launching two course-based undergraduate research experiences in the Neuroscience and Cognitive Science program. Funds for laboratory supplies and work study support/aide.

Title: Building CURE Courses in Neuroscience.

Source: Provost's Investment Fund Award, University of Arizona.

Role: Co-PI (Charles Higgins and Mel Wohlegmth, Co-PIs)

Percent Effort: N/A (funds entirely for course)

Total Amount: \$81,000 (direct costs only; \$42,000 for my VIP course)

Award Period: 12/1/2024-6/30/2025

Purpose: Launching two course-based undergraduate research experiences in the Neuroscience undergraduate program. Funds for new laboratory equipment.

## SERVICE/OUTREACH

### University/Local Service and Outreach

- 2017 - Founder and Instructor, Graduate Fellowship Workshop for Neuroscience and Biological Sciences Students
- Impact: 5 Fellowships, 4 Honorable mentions for U of A student mentees (total of \$690,000 awarded)
  - In Fall 2023 this become a credit-bearing course, NRSC 575
- 2021- Workshop Leader, "Fly Racing!", Arizona STEM Adventure, Southern Arizona Regional Science and Engineering Foundation (SARSEF)
- 2021: Zoom-based outreach, 800 students. Assisted by undergraduates.
  - 2022-2023: In-person event at Pima Community College

### National/International Service and Outreach

- 2018- Peer Reviewer for *Nature Scientific Reports*, *Biological Psychiatry*, *FEBS Letters*, *Brain Research*, *Cellular and Molecular Neurobiology*, *eNeuro*, *eLife*
- 2021-2024 Member, Public Education and Communication Committee, Society for Neuroscience
- 2024-2027 Member, Professional Development Committee, Society for Neuroscience
- 2022-2023 Review Panelist, National Science Foundation, Directorate for Biological Sciences, Division of Integrative Organismal Systems, Neural Systems Cluster (two panels)
- 2022- Invited Instructor, "*Drosophila* Models of Neurodegenerative Disease", Cold Spring Harbor Laboratory Summer Course on *Drosophila* Neurobiology (postponed from initial invitation in 2020). Teach international cohort of students.
- 2022: 2-hr Lecture only
  - 2023-2025: 2.5 hr Lecture and 4 hr Laboratory Teaching.
- 2024 Ad-hoc Member, Cellular and Molecular Neurodegeneration (CMND) Study Section, NIH
- 2025- Member of Independent Review Group, Target ALS Foundation

### Departmental Committees

- 2017-2021 Member, Student Awards Committee
- 2018-2019 Member, Faculty Search Committee (junior faculty search)
- 2019-2020 Member, Head Five-Year Review Committee
- 2021-2022 Chair, Research Strategic Planning Subcommittee for Department
- 2021-2022 Member, Faculty Search Committee (Head search)
- 2022-2023 Co-Chair, Faculty Search Committee (Junior Faculty Search)
- 2023- Co-Chair, Faculty Search Committee (Junior Faculty Search)
- 2025- Member, Curriculum Committee, Neuroscience and Cognitive Science Undergraduate Program
- 2025- Chair, Promotion & Tenure Committee, Department of Neuroscience

### College Committees

2021- Member, Student Scholarship Review Committee, College of Science

### University Committees

2018-2021 Member, Admissions Committee, Neuroscience Graduate Interdisciplinary Program

2019- Member, Microscopy Faculty Research Advisory Committee

2022- Member, Undergraduate Research Task Force (URTF) and Undergraduate Research Alliance

2025- Executive Committee, Neuroscience Graduate Interdisciplinary Program

## **CONFERENCES AND SCHOLARLY PRESENTATIONS**

### Invited Colloquia, Seminars, and Conference Presentations (selected)

#### *International:*

Bhattacharya, M. (March 2022) Synaptic Maintenance and Excitability Control by the Endosomal Membrane Protein TMEM184B. Invited Speaker at the Peripheral Neuropathy Research Center 2022 International Conference, Dong-A College of Medicine, Busan, South Korea (virtual).

#### *National (last 5 years):*

Bhattacharya, M. (October 2020) TMEM184B promotes pruriceptive neuron specification to allow itch sensitivity. Selected speaker at Cold Spring Harbor meeting on Molecular Mechanisms of Neural Connectivity (virtual).

Bhattacharya, M. (October 2021) Motor Neuron Excitability Control by the Endosomal Membrane Protein TMEM184B. Speaker, LiveLikeLou ALS Symposium (virtual).

Bhattacharya, M. (April 2022) VIP-CURE Course in Neuroscience. Presentation followed by Q&A with department faculty. Department of Biology, Kenyon College, Gambier, OH (virtual).

Bhattacharya, M. (October 2022) Connecting the (Cellular) Dots: Roles of TMEM184B in Synaptic Function and Neuronal Resilience. Department of Neurosciences, Case Western Reserve University School of Medicine, Cleveland, OH.

Bhattacharya, M. (May 2023) Connecting the (Cellular) Dots: Roles of TMEM184B in Synaptic Function and Neuronal Resilience. Invited Speaker at Jungers Symposium for Neurodegeneration, Oregon Health Sciences University, Portland, OR.

Bhattacharya, M. (May 2025) Ensuring Neuronal Resilience for a Lifetime: The Role of the Putative Endolysosomal Transporter TMEM184B from Flies to Humans. Invited Seminar Speaker, UC Irving Cell and Developmental Biology, Irvine, CA.

#### *State (last 5 years):*



Bhattacharya, M. (September 2020) Maintaining Neuromuscular Junctions Throughout a Lifetime. Invited Speaker at Arizona Statewide ALS Symposium (virtual).

Bhattacharya M. (December 2024) Ensuring Neuronal Resilience for a Lifetime: Endolysosomal and Mitochondrial Dynamics and the Role of the Putative Transporter TMEM184B. Molecular and Cellular Biology Department Speaker Series, University of Arizona.

Bhattacharya M. (Upcoming November 2025) TMEM184B alters lipid metabolism in human neural progenitors and contributes to a neurodevelopmental syndrome. Invited Speaker, Arizona Regenerative Medicine Symposium. Phoenix, AZ.

#### Submitted Abstracts (poster presentations) (selected)

**Key:** °undergraduate mentee, °°graduate student mentee, underlined: postdoctoral mentee, #post-baccalaureate trainee; \*equal author contributions

*National/International (last 5 years):*

#\*Cho TS, \*Beigaite E, #Klein NE, Sweeney ST, **Bhattacharya MRC** (2021) The *Drosophila* TMEM184B ortholog Tmep restrains ensures proper locomotion by restraining ectopic firing at the neuromuscular junction. Cold Spring Harbor meeting on *Drosophila* Neurobiology.

#\*Cho TS, \*Beigaite E, #Klein NE, Sweeney ST, **Bhattacharya MRC** (2021) The *Drosophila* TMEM184B ortholog Tmep restrains ensures proper locomotion by restraining ectopic firing at the neuromuscular junction. Society for Neuroscience (virtual).

°°Larsen EG, #Cho TS, McBride ML, Feng J, Manivannan B, Madura C, #Klein NE, °°Wright EB, Wickstead ES, °Garcia-Verdugo HD, #Jarvis C, Khanna R, Hu H, Largent-Milnes TM, **Bhattacharya MRC**. (2021) TMEM184B is necessary for IL-31-induced itch. Society for Neuroscience (virtual).

°Roessle C, °°Larsen EG, Wickstead ES, **Bhattacharya MRC** (2022) TMEM184B Reduction Causes Swelling in Mouse NMJ via Interactions with Endolysosomal Pathway. LiveLikeLou ALS Research Conference, Phoenix, AZ.

Davis SM, Friesen R, Cimetta A, **Bhattacharya MRC**. Enhancing student self-efficacy and research participation through a vertically integrated project (VIP) course on neuron-glia communication in neurodegenerative diseases. (2022) Theme J poster (Neuroscience Education), Society for Neuroscience conference, San Diego, CA.

Powell A, **Bhattacharya MRC** (2023) Deploying optogenetic acidification of synaptic vesicles and lysosomes to mitigate neurodegeneration in *Drosophila*. Presented at Cold Spring Harbor Conference on *Drosophila* Neurobiology, Cold Spring Harbor, NY.

°°Wright EB, °°Larsen EG, Roessle CM, °°Yahiku Z, and **Bhattacharya MRC** (2024). TMEM184B Promotes Endosomal Acidification and mTORC1 Activation Through Interactions with the V-ATPase. Poster at Gordon Research Conference on Cell Biology of the Neuron, Waterville Valley, NH.

°°Yahiku Z, Ullah F, Stodberg T, Chapman K, Davis EE, **Bhattacharya MRC** (2024) TMEM184B human variants cause neurodevelopmental disruptions and seizures via alteration of metabolic signaling. Poster at Society for Neuroscience conference, Chicago IL.

### Statewide and University (last 5 years)

#Cho TS, °°Wright EB, °Hart H, **Bhattacharya MRC** (2020) Effect of Tmem184b on hippocampal gene expression and learning and memory in Alzheimer's model mice. Arizona Alzheimer's Consortium Scientific Conference. June 2020. *Abstract accepted, but conference was cancelled.*

°Roessle CM, Wickstead ES, **Bhattacharya MRC** (2022) Dose Dependent Effects of TMEM184B on Neuromuscular Junction Structure. Undergraduate Biology Research Program (UBRP) Scientific Symposium.

°Roessle CM, Wickstead ES, **Bhattacharya MRC** (2023) Dose Dependent Effects of TMEM184B on Neuromuscular Junction Structure. Neuroscience and Cognitive Science Student Poster Session, University of Arizona.

°Becker RS, **Bhattacharya MRC**. Optimization of Drosophila Learning Assays to Evaluate Alzheimer's Disease (2023). Neuroscience and Cognitive Science Student Poster Session, University of Arizona.

°°Wright EB, °°Larsen EG, °Coloma-Roessle CM, °Hart HR, **Bhattacharya MRC** (2023). Transmembrane protein 184B (TMEM184B) promotes expression of synaptic gene networks in the mouse hippocampus. Presented at the Arizona Alzheimer's Consortium Scientific Conference, Phoenix, AZ.

°Luna Ahumada G, °Ghosh A, °Sharpe S, °°Bachtle K, **Bhattacharya MRC** (2024) Exploring Mitochondrial Transcellular Transfer in *D. melanogaster* as a Response to Neuronal Injury. Presented at the Undergraduate Biology Research Program Conference, University of Arizona.

°Luna Ahumada G, °Ghosh A, °Sharpe S, °°Bachtle K, **Bhattacharya MRC** (2024) Exploring Mitochondrial Transcellular Transfer in *D. melanogaster* as a Response to Neuronal Injury. Presented at the Arizona Imaging and Microanalysis Society (AIMS) Conference.

°Ghosh A, °Luna Ahumada GI, °Sharpe S, °°Bachtle K, **Bhattacharya MRC**. (2025) Mobilizing Mitochondria: Investigating Glia-Neuron Mitochondrial Transcellular Transport After Injury in *Drosophila Melanogaster*. Arizona Alzheimer's Consortium Scientific Conference.