

Curriculum Vitae: updated November 14, 2024

I. PERSONAL INFORMATION

Name: **J. Bradley Zuchero, Ph.D.**
Current Position: Assistant Professor, Department of Neurosurgery
Covert-Matera Families Endowed Faculty Scholar
Current Affiliation: Stanford University School of Medicine

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II. EDUCATIONAL BACKGROUND

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Vassar College, Poughkeepsie, NY	B.A.	05/2002	Biology
University of California, San Francisco, CA	Ph.D.	12/2009	Biochemistry & Cell Biology
Stanford University, Stanford, CA	Postdoctoral	12/2016	Neurobiology

III. PROFESSIONAL APPOINTMENTS

7/2021-12/2025 Assistant Professor, Department of Neurosurgery, Stanford University (reappointed)
1/2017-6/2021 Assistant Professor, Department of Neurosurgery, Stanford University

IV. HONORS AND AWARDS

2023 Covert-Matera Families Endowed Faculty Scholar Award, Stanford Maternal & Child Health Research Institute
2020 Koret Early Career Award, Stanford University
2019 Beckman Young Investigator Award, The Arnold and Mabel Beckman Foundation
2018 McKnight Scholar Award, The McKnight Endowment Fund for Neuroscience
2018 Harry Weaver Neuroscience Scholar Award, National Multiple Sclerosis Society
2018 Finalist, Rita Allen Foundation Scholars Program
2014 Career Transition Award, National Multiple Sclerosis Society
2014 Discovery Research Award, Myelin Repair Foundation
2012 Pioneer Award, Myelin Repair Foundation
2011-2014 Life Sciences Research Foundation postdoctoral fellowship
2011 Postdoctoral Fellowship, National Multiple Sclerosis Society (*declined*)
2010-2011 Fellowship, Developmental & Neonatal Biology Training Program, Stanford University
2009 Robert Day Allen Fellowship, Marine Biological Laboratory, Woods Hole, MA
2005-2009 Predoctoral Fellowship, American Heart Association
2004-2005 Genentech Fellowship, University of California, San Francisco
2002 Virginia Swinburne Brownell Prize for excellent work in biology, Vassar College
2002 Phi Beta Kappa, Vassar College

V. SCHOLARLY PUBLICATIONS

A. Peer-Reviewed Original Research:

1. Markusson S, Raasakka A, Schröder M, Sograte-Idrissi S, Rahimi AM, Asadpour O, Körner H, Lodygin D, Eichel-Vogel MA, Chowdhury R, Sutinen A, Muruganandam G, Iyer M, Cooper MH, Weigel MK, Ambiel N, Werner HB, **Zuchero JB***, Opazo F, Kursula P. Nanobodies against the myelin enzyme CNPase as tools for structural and functional studies. *Journal of Neurochemistry*, accepted 11/2024. *Contributed oligodendrocyte expertise and reagents, Mentored authors Raasakka A, Iyer M, Cooper MH, Weigel MK, and Ambiel N.
2. Kantarci H, Elvira PD, Thottumkara AP, O'Connell EM, Iyer M, Donovan LJ, Dugan MQ, Ambiel N, Granados A, Zeng H, Saw NL, Brosius Lutz A, Sloan SA, Gray EE, Tran KV, Vichare A, Yeh AK, Münch AE, Huber M, Agrawal A, Morri M, Zhong H, Shamloo M, Anderson TA, Tawfik VL, Du Bois J*, **Zuchero JB*†** (2024). Schwann cell-secreted PGE2 promotes sensory neuron excitability during development. *Cell* 187, 4690-4712.e30. PMID: 39142281. (Cover article). *Co-corresponding authors. †Lead Contact.
3. O'Shaughnessy EC, Lam M, Ryken SE, Wiesner T, Lukasik K, **Zuchero JB***, Leterrier C, Adalsteinsson D, Gupton SL (2024). pHusion - a robust and versatile toolset for automated detection and analysis of exocytosis. *J. Cell Sci.* 137, jcs261828. PMID: 38690758. *Contributed oligodendrocyte expertise and reagents, Supervised 2nd author Mable Lam.
4. Vepřek NA, Cooper MH, Laprell L, Yang EJ, Folkerts S, Bao R, Boczkowska M, Palmer NJ, Dominguez R, Oertner TG, Pon LA, **Zuchero JB**, Trauner DH (2024). Optical Control of G-Actin with a Photoswitchable Latrunculin. *J. Am. Chem. Soc.* 146, 8895–8903. PMID: 38511265. *Contributed oligodendrocyte expertise and reagents, Supervised 2nd author Madeline Cooper.
5. Iram T•, Garcia MA, Amand J, Kaur A, Atkins M, Iyer M, Lam M, Ambiel N, Jorgens DM, Keller A, Wyss-Coray T, Kern F, **Zuchero JB•** (2024). SRF transcriptionally regulates the oligodendrocyte cytoskeleton during CNS myelination. *Proc. Natl. Acad. Sci.* 121, e2307250121. PMID: 38511265. (Cover article). •Co-corresponding authors.
6. Iyer M, Kantarci H, Ambiel N, Novak SW, Andrade LR, Lam M, Münch AE, Yu X, Khakh BS, Manor US & **Zuchero JB•** (2024). Oligodendrocyte calcium signaling promotes actin-dependent myelin sheath extension. *Nature Communications* 2024; 15(1):265. PMID: 38177161. •Corresponding author.
7. Anderson TA, Pacharinsak C, Vilches-Moure J, Kantarci H, **Zuchero JB***, Butts-Pauly K, Yeomans D. (2023). Focused ultrasound-induced inhibition of peripheral nerve fibers in an animal model of acute pain. *Reg Anesth Pain Med.* 2023 Sep;48(9):462-470. PMID: 36822815. *Supervised co-author Husniye Kantarci.
8. Lam M, Takeo K, Almeida RG, Cooper MH, Wu K, Iyer M, Kantarci H, **Zuchero JB•** (2022). CNS myelination requires VAMP2/3-mediated membrane expansion in oligodendrocytes. *Nature Communications* 2022;13(1):5583. PMID: 36151203. •Corresponding author
9. Tan D, Konduri S, Ertunc ME, Zhang P, Wang J, Chang T, Pinto AM, Rocha A, Donaldson C, Vaughan J, Ludwig RG, Willey E, Iyer M, Gray PC, Maher P, Allen NJ, **Zuchero JB***, Dillin A, Mori MA, Kohama SG, Siegel D, & Saghatelian A. (2022). A class of anti-inflammatory lipids decrease with aging in the central nervous system. *Nature Chem Biol*, 1–11. 10.1038/s41589-022-01165-6. *Contributed oligodendrocyte expertise and reagents. Supervised co-author Manasi Iyer.
10. Iram T, Kern F, Kaur A, Myneni S, Morningstar AR, Shin H, Garcia MA, Yerra L, Palovics R, Yang AC, Hahn O, Lu N, Shuken SR, Haney MS, Lehallier B, Iyer M, Luo J, Zetterberg H, Keller A, **Zuchero JB***, & Wyss-Coray T. (2022). Young CSF restores oligodendrogenesis and memory in aged mice via Fgf17. *Nature* 605, 509–515. PMID: 35545674. *Participated extensively in conception and design of study,

analysis and interpretation of data, and critical revision of the manuscript for important intellectual content. Supervised co-authors Miguel Garcia and Manasi Iyer.

11. Lanz TV, Brewer RC, Ho PP, Moon J-S, Jude KM, Fernandez D, Fernandes RA, Gomez AM, Nadj G-S, Bartley CM, Schubert RD, Hawes IA, Vazquez SE, Iyer M, **Zuchero JB***, Teegen B, Dunn JE, Lock CB, Kipp LB, Cotham VC, Ueberheide BM, Aftab BT, Anderson MS, DeRisi JL, Wilson MR, Bashford-Rogers RJM, Platten M, Garcia KC, Steinman L, & Robinson WH. (2022). Clonally expanded B cells in multiple sclerosis bind EBV EBNA1 and GlialCAM. *Nature* 603, 321–327. PMID: 35073561
**Contributed oligodendrocyte expertise and reagents. Supervised co-author Manasi Iyer.*
12. Alfonso FS, Zhou Y, Liu E, McGuire AF, Yang Y, Kantarci H, Li D, Copenhaver E, **Zuchero JB***, Müller H, & Cui B (2020). Label-free optical detection of bioelectric potentials using electrochromic thin films. *Proc Natl Acad Sci USA*. 2020 Jul 6;:202002352. **Contributed novel, unpublished method for purification of sensory neurons used in the article, participated in drafting and critical revision of the manuscript, supervised co-author Husniye Kantarci.*
13. Brosius Lutz A, Chung W-S, Sloan SA, Carson GA, Zhou L, Lovelett E, Posada S, **Zuchero JB***, & Barres BA. (2017). Schwann cells use TAM receptor-mediated phagocytosis in addition to autophagy to clear myelin in a mouse model of nerve injury. *Proc Natl Acad Sci USA* 14, E8072-E8080.
**Participated extensively in conception and design of study, analysis and interpretation of data, and critical revision of the manuscript for important intellectual content.*
14. Harterink M, da Silva ME, Will L, Turan J, Ibrahim A, Lang AE, van Battum EY, Pasterkamp RJ, Kapitein LC, Kudryashov D, Barres BA, Hoogenraad CC•, & **Zuchero JB•*** (2017). DeActs: genetically encoded tools for perturbing the actin cytoskeleton in single cells. *Nature Methods* 14, 479–482.
•Co-corresponding author.
15. **Zuchero JB•**, Fu M-M, Sloan SA, Ibrahim A, Olson A, Zaremba A, Dugas JC, Wienbar S, Caprariello AV, Kantor C, Leonoudakis D, Leonoudakus D, Lariosa-Willingham K, Kronenberg G, Gertz K, Soderling SH, Miller RH, & Barres BA (2015). CNS myelin wrapping is driven by actin disassembly. *Developmental Cell* 34, 152-167. •Corresponding author. (Cover article. Featured in: *Dev. Cell, Faculty of 1000*).
16. Paavola KJ, Sidik H, **Zuchero JB**, Eckart M, & Talbot WS (2014). Type IV collagen is an activating ligand for the adhesion G-protein coupled receptor GPR126. *Science Signaling* 7, ra76.
doi:10.1126/scisignal.2005347.
17. Gibson EM, Purger D, Mount CW, Goldstein AK, Lin GL, Wood LS, Inema I, Miller SE, Bieri G, **Zuchero JB**, Barres BA, Woo PJ, Vogel H, & Monje M. (2014). Neuronal Activity Promotes Oligodendrogenesis and Adaptive Myelination in the Mammalian Brain. *Science* 344, 1252304.
18. Yang N, **Zuchero JB**, Ahlenius H, Marro S, Ng YH, Vierbuchen T, Hawkins JS, Barres BA, & Wernig M (2013). Generation of oligodendroglial cells by direct lineage conversion. *Nature Biotechnology* 31, 434-439.
19. **Zuchero JB**, Belin B, & Mullins RD (2012). Actin Binding to WH2 Domains Regulates Nuclear Import of the Multifunctional Actin Regulator JMY. *Molecular Biology of the Cell* 23, 853–863. (Cover article).
20. Pielage J, Bulat V, **Zuchero JB**, Fetter RD, & Davis GW (2011). Hts/Adducin Controls Synaptic Elaboration and Elimination. *Neuron* 69, 1114-1131.
21. **Zuchero JB**, Coutts A, Quinlan M, La Thangue N, & Mullins RD (2009). p53-cofactor JMY is a Multifunctional Actin Nucleation Factor. *Nature Cell Biology* 11, 451-459. (Cover article. Featured in: *Nature Cell Bio., Nat. Rev. Mol. Cell Bio., Faculty of 1000*).

B. Peer-reviewed Review Articles:

22. Song J, Saglam A, **Zuchero JB**, Buch VP (2024). Translating Molecular Approaches to Oligodendrocyte-Mediated Neurological Circuit Modulation. *Brain Sci.* 2024 Jun 27;14(7):648. doi: 10.3390/brainsci14070648. PMID: 39061389
23. **Zuchero JB** & Barres BA (2015). Glia in mammalian development and disease. *Development* 142, 3805-3809. •Corresponding author.
24. **Zuchero JB** & Barres BA (2013). Intrinsic and extrinsic control of oligodendrocyte development. *Current Opinion in Neurobiology* 23, 914-920. •Corresponding author.

C. Non Peer-Reviewed Articles/Reviews:

25. Cooper MH• & **Zuchero JB**• (2021). Modeling myelin: A toolkit for exploring myelin's mysteries in vitro. *Developmental Cell*, 56, 1215-1217. •Co-corresponding authors
26. Gibson EM, Bennett FC, Gillespie SM, Güler AD, Gutmann DH, Halpern CH, Kucenas SC, Kushida CA, Lemieux M, Liddelow S, Macauley SL, Li Q, Quinn MA, Roberts LW, Saligrama N, Taylor KR, Venkatesh HS, Yalçın B, & **Zuchero JB** (2020). How Support of Early Career Researchers Can Reset Science in the Post-COVID19 World. *Cell* 181, 1445–1449. PMID: PMC7291965.
27. Garcia MA• & **Zuchero JB**• (2019). Anchors Away: Glia-Neuron Adhesion Regulates Myelin Targeting and Growth. *Developmental Cell* 51, 659-661. •Co-corresponding authors
28. Eroglu C, Emery B, Stevens B, Daneman R, Allen NJ, Ullian EM, Zhang Y, **Zuchero JB**, Foo LC, Agalliu D, & Bennett M. (2018). A Tribute to Ben Barres: Remembrances from Barres Lab Members. *Developmental Cell* 44, 415-419.
29. **Zuchero JB**• & Barres BA• (2011). Between the Sheets: A Molecular Sieve Makes Myelin Membranes. *Developmental Cell* 21, 385-386. •Co-corresponding authors.

D. Book chapters:

30. Iyer M & **Zuchero JB**•. Epilepsy: A Comprehensive Textbook. 3rd Edition. Wolters Kluwer; c2023. Chapter 49, Novel Roles of Myelination in Neural Circuit Plasticity and Implications for Epilepsy; p482-494. •Corresponding author.
31. **Zuchero JB**• (2014). Purification and Culture of Dorsal Root Ganglion Neurons. *Cold Spring Harbor Protocols* doi:10.1101/pdb.top073965. •Corresponding author.
32. **Zuchero JB**• (2014). Purification of Dorsal Root Ganglion Neurons from Rat by Immunopanning. *Cold Spring Harbor Protocols* doi:10.1101/pdb.prot074948. *Cover article*. •Corresponding author.
33. Hansen SD, **Zuchero JB**, & Mullins RD (2013). Cytoplasmic Actin: Purification and Single Molecule Assembly Assays. *Methods in Molecular Biology* 1046, 145-170.
34. **Zuchero JB**• (2007). In vitro Actin Assembly Assays and Purification from Acanthamoeba. *Methods in Molecular Biology* 370, 213-226. •Corresponding author.

E. Manuscripts submitted / preprints:

35. Lan T-H, Ambiel N, Lee Y-T, Nonomura T, Zhou Y•, **Zuchero JB**•. A chemogenetic toolkit for inducible actin disassembly in single cells. *In Revision* 11/2024. •Co-corresponding authors.

F. Abstracts not published in other forms:

36. Kantarci, H, Cooper, MH, Munch, A, Garcia, M, & **Zuchero, JB**. Actin Disassembly is a Trigger to Initiate Myelin Wrapping. *Glia in Health and Disease Meeting*, Cold Spring Harbor Labs, NY (2020).

37. Iyer, M, Jones, G, Munch A, Dershowitz, L, & **Zuchero, JB**. IMAGeNs: Genetically-encoded Tools for Determining the Role of Myelin in Brain Circuits. Beckman Symposium, Irvine, CA (2020).

VI. EDITORIAL SERVICE

C. *ad hoc* Reviewer:

2024: *Glia* research article review.
2024: *Molecular Neurodegeneration* research article review.
2024: *Nature Communications* research article review.
2024: *Nature Neuroscience* research article review.
2024: *Nature Neuroscience* review article review.
2023: *Nature Reviews Neuroscience* review article review.
2023: *Cell* research article review.
2023: *Frontiers in Cellular Neuroscience* research article review.
2023: *Cell* research article review.
2023: *Life* research article review.
2023: *Developmental Cell* research article review.
2023: *Nature Communications* research article review.
2022: *Development* research article review.
2022: *J. Cell Biology* research article review.
2022: *JoVE* research article review.
2022: *J. Neuroscience* research article review.
2021: *Cell Reports* research article review.
2021: *Developmental Cell* research article review.
2021: *Nature Neuroscience* research article review.
2021: *PNAS* research article review.
2021: *Neural Development* research article review.
2021: *Biological Reviews* review article review.
2021: *Neuron* research article review.
2020: *J. Neuroscience* research article review.
2020: *Nature Neuroscience* research article review.
2020: *Nature Neuroscience* research article review.
2020: *J. Neuroscience* research article review.
2020: *Seminars in Cell and Developmental Biology* review article review.
2020: *Developmental Cell* research article review.
2020: *STAR Protocols* review article review.
2020: *Developmental Cell* research article review.
2019: *Glia* research article review.
2019: *J. Neuroscience* research article review.
2019: *Nature Communications* research article review.
2019: *Journal of Cell Biology* research article review.
2019: *Journal of Cell Biology* research article review.
2019: *Neuroscience Letters* review article review.
2019: *Glia* review article review.
2019: *Developmental Cell* research article review.
2019: *Neural Development* research article review.
2018: *eLife* research article review.
2018: *Annals of Clinical and Translational Neurology* research article review.
2018: *Nature Neuroscience* research article review.
2018: *Nature Communications* research article review.
2018: *Cell Reports* research article review.
2018: *Science Advances* research article review.
2018: *Nature Neuroscience* research article review.
2018: *Phys. Reviews* review article review.
2017: *Annals of Neurology* research article review.
2017: *Cell Reports* research article review.
2017: *Scientific Reports* research article review.
2017: *Nature Methods* research article review.
2017: *Developmental Cell* research article review.
2017: *eLife* research article review.

2017: *Glia* research article review.
 2017: *JoVE* research article review.
 2018: *Science* research article review.
 2018: *Neural Development* review article review.

B. Other editorial/reviewer service:

2020-2023 Contributing Faculty Member, *Faculty Opinions* (formerly Faculty of 1000 Prime)

VII. RESEARCH FUNDING

C. Current Funding

Source and Grant Number	Grant Title and Role on Project	Project Period Active
NIH R01 NS134829	Does Learning Require Calcium-Dependent Myelin Remodeling? (MPI Zuchero/Hughes; (Zuchero Contact PI)	08/15/2024 – 07/31/2029
Stanford Wu Tsai Neuro Synthetic Neuroscience Grant	First-in-class RNA sensors for studying myelin dynamics and disease (Co-PI with postdoc Noa Katz, Stanford Chemical Engineering)	01/15/2025 – 01/14/2027
Stanford Knight Initiative Catalyst Grant	Myelin, an untapped target for preventing or reversing brain aging (PI)	08/01/2024 – 7/31/2026
National MS Society Research Grant RG-2307-42032	An unexplored pathway for demyelination and remyelination by surviving oligodendrocytes (PI)	04/01/2024 – 03/31/2027
Sanofi iAward	Oligodendrocyte transdifferentiation—a novel neuroinflammatory mechanism in MS (PI)	01/01/2024 – 12/31/2024
NIH Diversity Supplement 3R01 NS119823-04S1	Research Supplement to Promote Diversity in Health-Related Research (Mentor for postbac Eduardo Chaparro Barriera)	01/01/2024 – 12/31/2024
NIH R18 EB03500501	Development of A Focused Ultrasound Device for Noninvasive, Peripheral Nerve Blockade to Manage Acute Pain (Co-I)	09/30/2023 – 09/29/2026
Ludwig Family Foundation Research Grant AW987913	Contribution of myelin dysfunction to AD (PI)	09/01/2023 – 08/31/2025
Faculty Scholar Award, Stanford Maternal & Child Health Research Institute	Mechanisms of myelin tuning during development of the central nervous system (PI)	09/01/2023 – 08/31/2026
NIH R21 NS13199901	New cell biology tools to study myelin development, dynamics, and disease (PI)	07/01/2023 to 06/30/2025
NIH R21 NS1AG084253	Developing a cell-on-chip platform to study oligodendrocyte-neuron interactions in plasticity and neurodegeneration (MPI Schuele/Zuchero)	07/01/2023 to 06/30/2025
Stanford ADRC Developmental Project	Myelin dysfunction in Alzheimer’s disease (PI)	04/01/2023 – 03/31/2025
Seed Grant, Stanford Department of Neurosurgery	The causal effect of myelin remodeling on neuronal circuit dynamics during learning (Co-PI; Zuchero/Buch)	04/01/2023 – 03/31/2025
NIH R01 NS119823	How Does Actin Disassembly Drive Myelin Wrapping? (PI)	09/30/2020 – 08/31/2025
Gift Fund from the Myra Reinhard Family Foundation	Myelin Repair Research (yearly gifts since 2018) (PI)	01/01/2018 – current

B. Prior Funding

Gift Fund from Donna and Jay Petkanics	Lab Research Fund (PI)	11/2023
Gift Fund from Byron and Stephanie Scordelis	Glial Cell Research (PI)	01/2023
NIH R21 NS12353301	How Does 3’ UTR Secondary Structure Program mRNA Transport in Myelination? (PI; original PI Rhijus Das)	08/01/2021 – 12/31/2023
NIH Diversity Supplement R01 NS119823-01S1	Research Supplement to Promote Diversity in Health-Related Research (Mentor for postdoc Miguel Garcia)	09/30/2020 – 06/30/2022

Stanford Wu Tsai Neurosciences Institute Seed Grant	Genetic tools to determine circuit-specific roles of myelination (Lead PI, with I. Soltesz + P. Fordyce)	01/01/2020 – 12/31/2021
Beckman Young Investigator Award, The Arnold and Mabel Beckman Foundation	Elucidating new roles of myelin in plasticity, learning, and disease (PI)	07/01/2019 – 12/31/2023
Harry Weaver Neuroscience Scholar Award, National MS Society	How does the actin cytoskeleton control myelination and remyelination? (PI)	07/01/2018 – 12/31/2023
Stanford Bio-X Interdisciplinary Initiatives Program	Genome-wide screening to reveal the molecular basis of myelination (Lead PI, with M. Bassik)	12/01/2018 – 09/30/2021
McKnight Scholar Award, The McKnight Endowment Fund for Neuroscience	Mechanisms of myelin membrane growth and wrapping (PI)	07/01/2018 – 06/30/2021
Gift Fund from Toray Industries	Glial Cell Biology (PI)	03/01/2018 – 03/15/2019
Career Transition Award, National MS Society	What is the cellular mechanism of CNS myelin wrapping? (PI)	07/01/2014 – 06/30/2019
Research Grant, The Shurl and Kay Curci Foundation	Do Glia Control Neuronal Excitability? (PI)	01/01/2018 – 12/31/2020

C. Pending Funding

Pershing Square Mind Prize	Does myelin dysfunction drive Alzheimer's disease? (PI)	05/01/2025 – 04/30/2028
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VIII. SERVICE AS GRANT REVIEW

2024	Ad hoc reviewer, NIH Clinical Neuroimmunology and Brain Tumors Study (CNBT) Section
2023-current	Grant Review Panel, Shurl and Kay Curci Foundation
2023	Review Committee for Wu Tsai Neuro Postdoc Programs 2022-23
2021	Ad hoc reviewer, NIH Molecular Biology of Glia (CMBG) study section
2021	Ad hoc reviewer, Israel's Ministry of Science and Technology
2020	Reviewer, Department of Defense Congressionally Directed Medical Research Program
2020-current	Standing Member, Biomedical Research Committee (B), National MS Society
2018-2020	Member, Pilot Glial Grant Review Committee, National MS Society
2017-	Ad hoc reviewer, ELA International
2013-	Ad hoc reviewer, Wings For Life Spinal Cord Research Foundation

IX. UNIVERSITY ADMINISTRATIVE SERVICE

A. Stanford Affiliations:

Member, Wu Tsai Neurosciences Institute
Member, Bio-X
Faculty Fellow, Stanford ChEM-H
Member, Maternal & Child Health Research Institute (MCHRI)
Neurosciences IDP PhD Program
Stanford MSTP Program
Stanford Biophysics PhD Program

B. University Committee Service:

2024	Grant Reviewer, Stanford Knight Initiative for Brain Resilience Catalyst Grants
2024-	Department Research Space Committee (DRSC), Stanford Neurosurgery Dept.
2022-	Faculty Advisory Committee, Stanford Gene Vector and Virus Core (GVVC)
2022, 2024	Review Committee, Wu Tsai Neurosciences Inst. Interdisciplinary Scholars Award & The Knight Initiative Award Programs

2022	Faculty Search Committee, Neurosurgery (Trauma Faculty Search)
2022, 2023	Grant Reviewer, Neurosurgery Seed Grants
2022-current	Co-organizer, Neurosurgery Research Faculty Talks series
2020-current	Curriculum Committee, Stanford Neurosciences PhD Program, Member.
2020-2023	Stanford MSTP Program, Admissions Application Screener and Interviewer.
2017-current	Stanford Neurosciences PhD Program, Admissions Application Screener and Interviewer.
2019-2020	Wu Tsai Neurosciences Institute/ChEM-H Connect Symposium, Organizing Committee.
2017-	Stanford MSTP Program, Admissions Interviewer.
2016-	Stanford Neurosciences PhD Program, Admissions Interviewer.
2015-2016	Stanford Neurosciences Institute Seminar Series, Committee member.

Chairing Thesis Committees (Stanford):

2024-	Yohan Auguste (E. Gibson), Neurosciences
2023-	Clara Bacmeister (K. Grill-Spector), Neurosciences

Serving on Thesis Committees (Stanford):

2024-	Jerry Cheng (E. Gibson), Neurosciences
2024-	Andrea Navarrete Vargas (W. Talbot), Developmental Biology
2022-	Shawn Dhillon (R. Lewis), Neurosciences
2022-	Weaverly Lee (S. Dixon), Biology
2022-2024	Amelia Farinas (T. Wyss-Coray), Neurosciences
2022-	Tamara Chan (M. Wernig lab), Neurosciences
2022-	Jolie Huang (C. Shatz & K. Andreasson labs), Neurosciences
2021-2024	Keiramarie Robertson (J. Kaltschmidt lab), Neurosciences, graduated 2024
2020-	Alvaro Amorin (N. Gomez-Ospina / M. Portius), MSTP
2020-2021	Kelvin Cho (A. Ting lab), Cancer Biology, graduated 2021
2019-2024	Ved Topkar (R. Das lab), MSTP, graduated 2024
2019-2021	Shawn Gillespie (M. Monje lab), Cancer Biology, graduated 2021
2018-2021	Joy Q. He (I. Weissman lab), MSTP, graduated 2021
2018-2021	Kevin Guttenplan (B. Barres / A. Gitler labs), Neurosciences, graduated 2021
2017-2023	Ellen Bouchard (W. Talbot lab), Developmental Biology

Serving on Qualifying Examination Committees (Stanford):

2024	Junhao Jeremy Xu (K. Shen), Biology
2024	Yohan Auguste (E. Gibson), Neurosciences
2024	Jerry Cheng (E. Gibson), Neurosciences
2024	Suyash Raj (I. Weissman), Stem Cell & Regenerative Medicine
2023	Andrea Navarrete Vargas (W. Talbot), Developmental Biology
2023	Rayyan Jokhai (K. Loh), Developmental Biology
2022	Shawn Dhillon (R. Lewis), Neurosciences
2022	Weaverly Lee (S. Dixon), Biology
2022	Amelia Farinas (T. Wyss-Coray), Neurosciences
2022	Jolie Huang (C. Shatz & K. Andreasson), Neurosciences
2021	Keiramarie Robertson (J. Kaltschmidt), Neurosciences
2020	Alvaro Amorin (N. Gomez-Ospina / M. Portius), MSTP
2019	Ved Topkar (R. Das), MSTP
2017	Ellen Bouchard (W. Talbot), Developmental Biology

Serving as Chair of Thesis Defense Committees (Stanford):

2023	Michael Tran (J. Feldman), Biology (Thesis Defense Chair)
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2022	Jacob Blum (A. Gitler), Neurosciences (Thesis Defense Chair)
2021	Akua Nimarko (L. Williams), Neurosciences (Thesis Defense Chair)
2021	Joy Q. He (I. Weissman), MSTP (Thesis Defense Chair)
2020	Leanna Owen (A. Dunn), Biophysics (Thesis Defense Examiner)
2019	Elizabeth Sypek (G. Scherrer), Neurosciences (Thesis Defense Chair)
2019	Caitlin Taylor (K. Shen), Neurosciences (Thesis Defense Chair)
2018	Lindsay Becker (A. Gitler), Neurosciences (Thesis Defense Chair)
2018	Christopher Mount (M. Monje), MSTP (Thesis Defense Chair)
2018	Grant Lin (M. Monje), MSTP (Thesis Defense Chair)
2018	Olga Cormier (T. Stearns), Biology (Thesis Defense Chair)
2017	Gabriela Suarez-Mier (M. Buckwalter), Neurosciences (Reader, Examiner)

Serving on Thesis Committees and Qualifying Exams—Outside of Stanford:

2020	PhD Thesis Reader/Examiner (anonymous), University of Tasmania, Australia
2020	Qualifying Examiner and Thesis Committee Member, Chris Fekete (A. Nishiyama), University of Connecticut

X. SERVICE TO PROFESSIONAL ORGANIZATIONS

A. Membership:

Society for Neuroscience
 American Society for Cell Biology
 American Society for Neurochemistry

B. Leadership roles:

2018	Session Chair / Discussion Leader, Myelin Gordon Research Seminar, Ventura, CA
2016	Symposium Co-chair, American Society for Neurochemistry, Denver, CO
2015	Symposium Co-chair, Society for Neuroscience, Chicago, IL
2014	Chair, 2014 Myelin Gordon Research Seminar, Ventura, CA

XI. PRESENTATIONS

A. Invited Seminars:

1. **Washington University School of Medicine Brain Immunology and Glia Center Seminar Series**, St. Louis, MO (2025) (invited speaker)
2. **SUNY Upstate Medical University Department of Cell and Developmental Biology Seminar Series**, Syracuse, NY (2025) (invited speaker)
3. **Carnegie Institution for Science Seminar Series**, Johns Hopkins University, Baltimore, MD (2024) (invited speaker)
4. **Cytoskeleton in Neurons and Glia Seminar Series**, online international webinar series (2024) (invited speaker)
5. **UCSF Neuroimmunology & Glial Biology Seminar Series**, San Francisco, CA (2024) (invited speaker)
6. **Glia Club Seminar Series**, online international webinar series (2024) (invited speaker)
7. **University of Bergen, Norway, BBB Departmental Seminar**, Bergen, Norway (2023) (invited speaker)
8. **University of Pennsylvania, CHOP Dev. Biology Group**, Philadelphia, PA (2023) (invited speaker)
9. **University of Alberta, NMHI Seminar Series**, Edmonton, Canada (2022) (invited speaker)
10. **UNC-Chapel Hill, Neuroscience Center Seminar**, Chapel Hill, NC (2022) (invited speaker)
11. **Johns Hopkins University, Department of Cell Biology Seminar**, Baltimore, MD (2022) (invited speaker).
12. **The University at Buffalo, Neuroscience Seminar Series**, Buffalo, NY (2022) (invited speaker)

13. **University of Oregon, Institute of Molecular Biology Seminar**, Eugene, OR (2020) (invited speaker).
14. **Paris Brain and Spine Institute (ICM), Sorbonne University/Hôpital Pitié Salpêtrière**. Paris, France (2019) (invited speaker).
15. **University of California, San Diego, Depts. of Cell and Developmental Biology and Neurobiology Joint-Seminar**, San Diego, CA (2016) (faculty job talk).
16. **National Institute of Neurological Disorders and Stroke (NINDS) Seminar**, Bethesda, MD (2016) (faculty job talk).
17. **University of California, San Diego, Dept. of Cellular and Molecular Medicine Seminar**, San Diego, CA (2016) (faculty job talk).
18. **UW-Madison, Department of Neuroscience Seminar**, Madison, WI (2016) (faculty job talk).
19. **University of Utah, Biology Department Seminar**, Salt Lake City, UT (2016) (faculty job talk).
20. **Washington University School of Medicine, Dept. of Neuroscience Seminar**, St. Louis, MO (2016) (faculty job talk).
21. **University of California, San Francisco, Cardiovascular Research Institute Seminar**, San Francisco, CA (2016) (faculty job talk).
22. **University of Chicago, Dept. of Molecular Genetics & Cell Biology/Grossman Institute Seminar**, Chicago, IL (2016) (faculty job talk).
23. **Johns Hopkins University, Dept. of Biology Seminar**, Baltimore, MD (2016) (faculty job talk).
24. **University of California, Santa Cruz, Dept. of Molecular, Cellular and Developmental Biology Seminar**, Santa Cruz, CA (2016) (faculty job talk).
25. **NYU School of Medicine, Neuroscience Institute Seminar**, New York, NY (2016) (faculty job talk).
26. **Virginia Tech Carilion Research Institute, Seminar**, Roanoke, VA (2016) (faculty job talk).
27. **Denali Therapeutics, Seminar**, South San Francisco, CA (2016) (invited speaker).
28. **University of Pennsylvania, Department of Physiology Seminar**, Philadelphia, PA (2015) (faculty job talk).
29. **UCSF Neuroimmunology Research Talks**, San Francisco, CA (2014) (invited speaker).
30. **Emory University School of Medicine, Dept. Cell Biology**, Atlanta, GA (2013) (invited speaker).

B. National and Regional Meetings:

31. **Race to Erase MS Symposium**, Los Angeles, CA (2024) (invited speaker)
32. **American Society for Neurochemistry Conference**, Portland, OR (2024) (invited speaker)
33. **Wu Tsai Neuroscience Institute Retreat**, Santa Cruz, CA (2024) (invited speaker)
34. **7th Annual Selected Topics in Neuroplastic & Reconstructive Surgery: An International Symposium**, Miami, FL (2022) (invited speaker)
35. **McKnight Endowment Fund for Neuroscience Conference**, Aspen, CO (2022) (invited speaker).
36. **Society for Neuroscience Annual Meeting**, Chicago, IL (2019) (invited speaker).
37. **National Multiple Sclerosis Society Golden Circle**, Houston, TX (2019) (Keynote speaker).
38. **SfN Wonder: Exploring the Human Mind**, Palo Alto, CA (2019) (invited speaker).
39. **Celebrating the Life & Legacy of Ben Barres**, Society for Neuroscience Satellite Meeting, San Diego, CA (2018) (organizer and speaker).
40. **Nu Rho Psi National Honor Society in Neuroscience Members Meeting**, San Diego, CA (2018) (Keynote speaker).
41. **6th Meeting of the National Multiple Sclerosis Society**, Denver, CO (2017) (invited speaker).
42. **American Society for Cell Biology Annual Meeting**, San Francisco, CA (2016) (invited speaker).
43. **American Society for Neurochemistry Annual Meeting**, Denver, CO (2016) (symposium co-chair and speaker).
44. **California MS Research Forum, UCSF**, San Francisco, CA (2015) (invited speaker).
45. **University of California, Santa Cruz Neuro Club**, Santa Cruz, CA (2015) (invited speaker).
46. **Gordon Research Conference: Myelin**, Ventura, CA (2014) (invited speaker and session co-organizer).
47. **Society for Neuroscience Annual Meeting**, San Diego, CA (2013) (invited speaker).
48. **Nancy Davis Symposium, Erase MS**, Los Angeles, CA (2013) (invited speaker).

49. **American Society for Cell Biology Annual Meeting**, San Francisco, CA (2008) (invited speaker).
50. **American Society for Cell Biology Annual Meeting**, Washington, DC (2007) (invited speaker).
51. **Drosophila Research Conference**, Washington, DC (2001) (invited speaker).

C. International Meetings:

52. **16th Göttingen Meeting of the German Neuroscience Society**, Göttingen, Germany (2025) (invited speaker).
53. **15th Biennial ISN Satellite Meeting on Myelin Biology**, Baião, Portugal (2023) (invited speaker).
54. **Neurodegeneration Keystone Meeting (Z4-2023)**, Whistler, Canada (2023) (speaker)
55. **Gordon Research Conference: Myelin**. Barga, Italy (2022) (invited speaker).
56. **XV European Meeting on Glial Cells in Health and Disease**. Marseille, France (2021) (invited speaker).
57. **Gordon Research Seminar: Myelin**. Barga, Italy (2012) (invited speaker).

XII. TEACHING

Major Teaching Responsibilities (Stanford):

- | | |
|--------------|--|
| 2018-current | NEPR299: Stanford Intensive Neurosciences, Instructor (developed and taught lab modules in 2018, 2021, 2023, and 2024) |
| 2023-current | NEPR212: Responsible Conduct of Neuroscience Research Discussion, Discussion Leader |
| 2021-2023 | NEPR280: Neuroscience Journal Club and Professional Development Series, Instructor |
| 2021 | BIOS200: Foundations in Experimental Biology, Discussion Leader |
| 2019 | NBIO224: Glia & Neuroimmunology (developed and taught new course)
(Received SCORE Academic Innovation Funds Grant from VPGE to support development) |

Major Teaching Responsibilities (External):

- | | |
|----------------|---|
| 2023, '24, '25 | Faculty Instructor, Neurobiology: Mechanisms and Advanced Approaches summer course, Marine Biological Laboratory, Woods Hole (<i>course directors: Michael Hoppa, Rebecca Piskorowski, Ricardo Araneda</i>) |
|----------------|---|

Other Teaching Responsibilities (Stanford):

- | | |
|--------------|---|
| 2024 | NSUR249: Experimental Immersion in Neuroscience, Guest Lecturer/Lab Host |
| 2024 | NSUR239: NeuroTech Training Seminar, Guest Lecturer |
| 2018 | NEPR299: Stanford Intensive Neurosciences, Guest Lecturer |
| 2018-current | DBIO210: Developmental Biology, Guest Lecturer |
| 2018 | NEPR 280: Neuroscience Journal Club and Professional Development Series, Panelist |
| 2018-current | NBIO206: The Nervous System, Guest Lecturer |
| 2017 | ME389: Biomechanical Research Symposium, Guest Lecturer |
| 2017 | NBIO224: Glia & Neuroimmunology Mini Course, Guest Lecturer |

Other Teaching/Mentoring:

- | | |
|------|---|
| 2020 | Faculty Reviewer for Pre-Quals Rigor, Neurosciences PhD Program (J. Doyle) |
| 2019 | Faculty Mentor, BIOS242: Stanford Biosciences Grant Writing Academy Proposal Bootcamp |
| 2019 | Faculty Reviewer for Pre-Quals Rigor, Neurosciences PhD Program (B. Robinson) |
| 2018 | Faculty Mentor, BIOS242: Stanford Biosciences Grant Writing Academy Proposal Bootcamp |
| 2018 | Faculty Sponsor/Speaker, Neuroscience Research and Relaxation Happy Hour |
| 2017 | Faculty Speaker, Stanford Neurosciences IDP First Year Faculty Talks |
| 2017 | Faculty Speaker, Stanford EXPLORE Lecture Series (for High School Students) |
| 2017 | Faculty Speaker, Stanford ChEM-H Coffee & Mechanobiology seminar series |

2016 Faculty Mentor, Stanford Neurosciences IDP first year students Genetics course
2016 Faculty Panelist, Stanford Neurosciences Retreat Careers Panel
2007-2008 Teaching Assistant, Physiology Course, Marine Biological Laboratory, Woods Hole, MA

XIII. TRAINEES

Postdoctoral Scholars:

Eva Carvalho (PhD, Universidade do Porto), 2024-current

Duc Huynh (PhD, Duke University), 2024-current

Mable Lam (PhD, UCSF), 2020-current. NIH NINDS K99 Fellow, National MS Society Career Transition Award, Helen Hay Whitney Fellow, Stanford ADRC REC Scholars Award, Stanford Jump Start Award for Excellence in Research, Best Poster Award (Myelin Gordon Research Conference 2022), Wu Tsai Neurosciences Institute Interdisciplinary Scholar, Stanford Vision T32 Fellow

Graham Jones (PhD, U. Michigan), 2019-2024. Stanford Epilepsy T32 Fellow. (Current: Scientist at Septerna)

Miguel Garcia (PhD, Stanford University), 2018-2022. Wu Tsai Neurosciences Institute Interdisciplinary Scholar, Stanford Dean's Fellow, NIH/NINDS Diversity Supplement Awardee. (Current: Scientist-II at Addition Therapeutics)

Husniye Kantarci (PhD, Texas A&M), 2017-2024. Stanford Berry Fellow, Stanford Dean's Fellow, Gordon Research Seminar Travel Award, Stanford Jump Start Award for Excellence in Research, Stanford ChEM-H Postdocs at the Interface Postdoctoral Fellowship (Current: Assistant Professor at UT-Austin, Dept. of Neuroscience)

Graduate Students:

Cal Bridges, PhD student (Neurosciences), 2024-current

Lauren Duan, MSTP student (Biophysics), 2023-current. NIH T32 MSTP Training Grant

Emma O'Connell, PhD student (Neurosciences), co-mentored with Prof. Marius Wernig, 2022-current. Cui Scholar

Maya Weigel, PhD student (Stem Cell & Regenerative Medicine), 2021-current. 2024 Women's Olympic Marathon Trials – 20th place

Madeline Cooper, MSTP student (Biophysics), 2019-current. Lavidge and McKinley Interdisciplinary Fellow, Stanford Bio-X

Kathryn Wu, MSTP student (Neurosciences), 2018-current. David L. Sze and Kathleen Donohue Interdisciplinary Fellow-Stanford Wu Tsai Neurosciences Institute, T32 Institutional National Research Service Award, finalist for Paul and Daisy Soros Fellowship for New Americans

Manasi Iyer, PhD, PhD student (Neurosciences), 2017-2023. Regina Casper Stanford Graduate Fellowship in Science & Engineering Fellow (Current: postdoc at UCSF, Kheirbek lab).

Post-Baccalaureates:

Eduardo Chaparro Barriera, Stanford REACH Post-Baccalaureate Scholar, 2023-2024. NINDS Diversity Supplement awardee. (Current: Incoming PhD student, Stanford Biophysics program).

Undergraduate Students:

Puja Chopade, Stanford undergraduate student, 2024-current. Bio-X Undergraduate Summer Institute Scholar. Poster Award, Stanford Bio-X Interdisciplinary Initiatives Seed Grants Program Poster Session.

VanKhan Tran, Stanford undergraduate student, 2020-current. Max Planck Summer Internship Program

Chase Swinton, Stanford undergraduate student, 2020-2021, Wu Tsai Neurosciences Institute
Neuroscience Research Opportunity (NeURO) Fellow

Emily Gardner, Stanford undergraduate student, 2019

Cameron Andrews, Stanford undergraduate student, 2015

Julia Turan, Stanford undergraduate student, 2013-2014

Sophia Wienbar, PhD, undergraduate student, 2011-2013 (now a neuroscience postdoc at Harvard)

Visiting Scholars:

Arne Raasakka, PhD. Visiting Postdoctoral Fellow, 2022-2023. Mobility Grant (University of Bergen, Norway)

Koji Takeo, PhD. Visiting Scholar, 2018-2020 (Scientist at Toray Industries, Japan)

Graduate Rotation Students:

Jerry Chung, Rotation Student (Neurosciences), 2023

Abigail Rogers, Rotation Student (Biology), 2023

Lauren Koepke, Rotation Student (Stem Cell Biol), 2022

Wendy Trieu, Rotation Student (Biology), 2022

Christina Lee, Rotation Student (Biophysics), 2021

Alex Adams, Rotation Student (Biology), 2019

Janelle Doyle, Rotation Student (Neurosciences), 2018

Lori Dershowitz, Rotation Student (MSTP), 2018

Victoria Hernandez, Rotation Student (Neurosciences), 2017

Ellen Bouchard, Rotation Student (Developmental Biology), 2017

High School Students:

VanKhan Tran, High School Student (now masters student at Stanford), 2018-2020

Aditi Vichare, High School Student (now undergraduate at UCLA), 2018-2019

Ashley Yeh, High School Student, 2018-2019

Andrew Huang, High School Student (Computer Science degree, UC-Berkeley), 2014-2016

Co-mentorships for Postdocs outside of my Lab:

Aybike Saglam (V. Buch Lab, Stanford), 2023-2024. Co-mentor for Stanford Dean's Fellowship

Franziska Auer (D. Schoppik Lab, NYU), 2023-current. Co-mentor for National MS Society Career Transition Award & K99 (awarded)

Daniela Rojo (E. Gibson Lab, Stanford), 2021-current. Co-mentor for several internal and external fellowships

Zhijuan Cao (G. Steinberg Lab, Stanford), 2021. Co-mentor for K99 and AHA applications

Erin Gray (J. Du Bois Lab, Stanford), 2017-2019. Co-mentor for several internal fellowships

XIV. CONTRIBUTIONS TO DIVERSITY / ADVOCACY / OUTREACH

2024

Guest Speaker, Global Youth Medical Alliance online webinar

2024 Guest Speaker, Stanford Neuroscience Journal Club (mentoring high-school students in the critical analysis of a scientific paper and encouraging participants to consider a career in the Neurosciences).

2024 NIH Research Supplement to Promote Diversity in Health-Related Research (Eduardo Chaparro Barriera)

2023-2024 Faculty Mentor, REACH (Racial Equity to Advance a Community of Health) Post-Baccalaureate Research Program

2022-2023 Mentor, The Harris Neuroscience Internship (goal: to introduce high school girls and historically marginalized communities to careers in neuroscience)

2021, 2022 Research Mentor and Guest Lecturer for Wu Tsai Neurosciences Institute Neuroscience Research Opportunity (NeURO) Program

2020-2022 NIH Research Supplement to Promote Diversity in Health-Related Research (Miguel Garcia, PhD)

2017-2022 Faculty Mentor, Solidarity, Leadership, Inclusion, Diversity Mentorship Program (SoLID)