

## CURRICULUM VITAE

### **J. Bradley Zuchero, Ph.D.**

#### **PRESENT TITLE AND AFFILIATIONS**

Assistant Professor, University Tenure Line  
Department of Neurosurgery  
Stanford University School of Medicine

Faculty Fellow, Stanford ChEM-H  
Member, Stanford Neurosciences Institute  
Member, Stanford Bio-X  
Member, Stanford Child Health Research Institute

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#### **EDUCATION**

- 2010-2016     **Stanford University, CA**  
HHMI Postdoctoral Fellow of the Life Sciences Research Foundation, and  
Career Transition Fellow of the National MS Society  
*Advisor: Ben A. Barres, M.D., Ph.D.* Cellular mechanisms of CNS myelin wrapping
- 2002-2009     **University of California, San Francisco, CA**  
Ph.D. (Biochemistry and Cell Biology)  
*Advisor: R. Dyche Mullins, Ph.D.* Control of actin cytoskeletal assembly
- 1998-2002     **Vassar College, NY**  
B.A. (Biology)

#### **HONORS AND AWARDS**

- 2019           Beckman Young Investigator Award, Arnold & Mabel Beckman Foundation
- 2018           McKnight Scholar Award, McKnight Foundation
- 2018           Harry Weaver Neuroscience Scholar Award, National Multiple Sclerosis Society
- 2018           Research Grant, The Shurl and Kay Curci Foundation
- 2014           Career Transition Fellowship, National Multiple Sclerosis Society
- 2014           Discovery Research Award, Myelin Repair Foundation
- 2012           Pioneer Award, Myelin Repair Foundation
- 2011           HHMI Fellow of the Life Sciences Research Foundation
- 2011           National Multiple Sclerosis Society Postdoctoral Fellowship (*awarded*)
- 2010           Developmental & Neonatal Biology Training Program Fellowship, Stanford
- 2009           Research Award, Robert D. Allen Fellowship Fund, Marine Biological Laboratory
- 2005           American Heart Association Predoctoral Fellowship

2004 Genentech Fellowship, University of California, San Francisco  
2002 Phi Beta Kappa, Vassar College  
2002 Virginia Swinburne Brownell Prize for excellent work in biology, Vassar College  
2000 Harriet Gurnee van Allen Prize for Excellence in Biology, Vassar College

## **LEADERSHIP AND SERVICE**

### Leadership

2018 Session Chair / Discussion Leader, Myelin Gordon Research Seminar, Ventura, CA  
2016 Symposium Co-chair, American Society for Neurochemistry, Denver, CO  
2015 Symposium Co-organizer (with Dr. Ben Barres), Society for Neuroscience, Chicago, IL  
2014 Chair, 2014 Myelin Gordon Research Seminar, Ventura, CA

### Editorial service

2010- Ad hoc reviewer for *Science*, *Neuron*, *Nature Methods*, *Nature Neuroscience*, *Nature Communications*, *Developmental Cell*, *PNAS*, *J. Neuroscience*, *eLife*, *J. Cell Biol*, *Cell Reports*, *Plos Genetics*, *Biochemistry*, *Glia*, *PlosONE*, *Scientific Reports*, *Science Advances*, *Neural Development*, *JoVE*

### Grant review

2018- 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

### Committee service

2017- Committee member, Stanford MSTP Admissions Committee  
2017- Screener and interviewer, Stanford Neurosciences Graduate Program  
2015-2016 Committee member, Stanford Neurosciences Institute Seminar Series

## **TEACHING AND MENTORSHIP**

2019 SCORE Academic Innovation Funds Grant to support development of NBIO224, Stanford Vice Provost for Graduate Education  
2019- Course Director for NBIO224: Glia & Neuroimmunology (2019)  
2018 Instructor, Stanford Intensive Neuroscience (SIN) Program  
2018- Lecturer for NBIO206: The Nervous System, "Development and Function of Glia"  
2017- Guest lecturer for NEPR280: Neuroscience Journal Club and Professional Development Series; DBIO210: Developmental Biology; NBIO224: Glia & Neuroimmunology; ME389: Biomechanical Research Symposium  
2017- Affiliated with and on PhD Thesis Committees for students in Stanford Neurosciences Graduate Program, Stanford Medical Scientist Training Program, Stanford Developmental Biology Program  
2017- Faculty Mentor, Solidarity, Leadership, Inclusion, Diversity Mentorship Program (SoLID) Mentorship Program  
2007-2008 Teaching Assistant, Physiology Course, Marine Biological Laboratory, Woods Hole, MA.

<u>Current Trainees</u>	<u>Position and Honors</u>	<u>Dates mentored</u>
Manasi Iyer	Ph.D. Student, Neurosciences <i>Stanford Graduate Fellowship (SGF) in Science and Engineering</i>	2017-
Husniye Kantarci, Ph.D	Postdoctoral Fellow <i>Berry Postdoctoral Fellowship, 2018-2021</i> <i>Stanford Dean's Postdoctoral Fellowship, 2017-2018</i> <i>Stanford ChEM-H Postdocs at the Interface Fellowship</i>	2017-
Kathryn Wu	M.D., Ph.D. Student, Medical Scientist Training Program	2017-
Miguel Garcia, Ph.D.	Postdoctoral Fellow <i>Wu Tsai Neurosci. Institute Interdisciplinary Scholar, 2018-2020</i> <i>Stanford Dean's Postdoctoral Fellowship (declined)</i>	2018-
Madeline Cooper	M.D., Ph.D. Student, Medical Scientist Training Program	2018-
<u>Past Trainees</u>	<u>Current Position</u>	<u>Dates mentored</u>
Andrew Huang	Undergraduate student, UC Berkeley	2014-2016
Julia Turan	MSc in Science Communication, University of Edinburgh	2013-2014
Sophia Wienbar	PhD student in Neuroscience, Northwestern University	2011-2013

## INVITED TALKS

2019	Society for Neuroscience, Minisymposium, "Myelin Degeneration and Remyelination in Health and Disease," Chicago, IL
2019	SfN Wonder: Exploring the Human Mind, Bay Area Society for Neuroscience Youth, Palo Alto, CA (invited speaker). <i>Blog coverage:</i> <a href="https://doctorinprogress.com/2019/04/28/sfn-wonder-2019/">https://doctorinprogress.com/2019/04/28/sfn-wonder-2019/</a>
2019	Research Seminar, Brain and Spine Institute, ICM. Paris, France
2018	Celebrating the Life & Legacy of Ben Barres, Society for Neuroscience Satellite Meeting (organizer and speaker)
2018	Keynote Lecture, Nu Rho Psi National Honor Society in Neuroscience Members Meeting, San Diego, CA
2017	6th Meeting of the National Multiple Sclerosis Society, Platform Presentation, Denver, CO
2016	American Society for Cell Biology, Minisymposium. San Francisco, CA
2016	American Society for Neurochemistry, Symposium (symposium co-chair). Denver, CO
2015	California MS Research Forum, UCSF. San Francisco, CA
2015	University of California, Santa Cruz Neuro Club. Santa Cruz, CA
2014	Gordon Research Conference: Myelin (session co-organizer). Ventura, CA
2014	UCSF Neuroimmunology Research Talks. San Francisco, CA
2013	Society for Neuroscience, Nanosymposium. San Diego, CA
2013	Research Seminar, Emory University School of Medicine, Dept. Cell Biology. Atlanta, GA
2013	Nancy Davis Symposium, Erase MS. Los Angeles, CA
2012	Gordon Research Seminar: Myelin. Lucca, Italy
2008	American Society for Cell Biology, Minisymposium. San Francisco, CA
2007	American Society for Cell Biology, Minisymposium. Washington, D.C.

## REFERENCES

- Gary K. Steinberg, M.D. Ph.D. Department Chair  
(650) 723-5575 [cerebral@stanford.edu](mailto:cerebral@stanford.edu)
- Dyche Mullins, Ph.D. Ph.D. Thesis Advisor  
(415) 502-4838 [dyche@mullinslab.ucsf.edu](mailto:dyche@mullinslab.ucsf.edu)
- Ben A. Barres, M.D., Ph.D. Postdoctoral Advisor Letter available from Ms. Ann Crevelt:  
[acrevelt@stanford.edu](mailto:acrevelt@stanford.edu)

## PUBLICATIONS

### Peer reviewed

1. Brosius Lutz, A.,... **Zuchero, JB**, and Barres, B.A. (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 U S A** 14, E8072-E8080.
2. Harterink, M. ... 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.
3. **Zuchero, JB**• and Barres, BA. (2015) [Glia in mammalian development and disease.](#) **Development** 142, 3805-3809. •Corresponding author.
4. **Zuchero, JB**•, Fu, MM, Sloan, SA, Ibrahim, A,... Soderling, SH, Miller, RH, and 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.*
5. Paavola, KJ, Sidik, H, **Zuchero, JB**, Eckart, M, and 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.
6. Gibson, EM, Purger, D, Mount, CW, Goldstein, AK, Lin, GL, Wood, LS, Inema, I, Miller, SE, Bieri, G, **Zuchero, JB**,... and Monje, M (2014) [Neuronal Activity Promotes Oligodendrogenesis and Adaptive Myelination in the Mammalian Brain.](#) **Science** 344, 1252304.
7. **Zuchero, JB**• and Barres, BA (2013) [Intrinsic and extrinsic control of oligodendrocyte development.](#) **Current Opinion in Neurobiology** 23, 914-920. •Corresponding author.
8. Yang, N, **Zuchero, JB**, Ahlenius, H, Marro, S, Ng, YH, Vierbuchen, T, Hawkins, JS, Barres, BA, and Wernig, M (2013) [Generation of oligodendroglial cells by direct lineage conversion.](#) **Nature Biotechnology** 31, 434-439.
9. **Zuchero, JB**, Belin, B, and 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.*
10. Pielage, J, Bulat, V, **Zuchero, JB**, Fetter, RD, and Davis, GW (2011) [Hts/Adducin Controls Synaptic Elaboration and Elimination.](#) **Neuron** 69, 1114-1131.
11. **Zuchero, JB**, Coutts, A, Quinlan, M, La Thangue, N, and 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.*

### Commentaries and chapters (not peer reviewed)

1. 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.
2. **Zuchero, JB**• (2014) [Purification and Culture of Dorsal Root Ganglion Neurons](#). **Cold Spring Harbor Protocols** doi:10.1101/pdb.top073965. •Corresponding author.
3. **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.
4. Hansen, SD, **Zuchero, JB**, and Mullins, RD (2013) [Cytoplasmic Actin: Purification and Single Molecule Assembly Assays](#). **Methods in Molecular Biology** 1046, 145-170.
5. **Zuchero, JB**• and Barres, BA• (2011) [Between the Sheets: A Molecular Sieve Makes Myelin Membranes](#). **Developmental Cell** 21, 385-386. •Co-corresponding authors.
6. **Zuchero, JB**• (2007) [In vitro Actin Assembly Assays and Purification from Acanthamoeba](#). **Methods in Molecular Biology** 370, 213-226. •Corresponding author.