**1) PERSONAL INFORMATION:**

Stephanie L. Gupton, Ph.D.

8814 Drew Lane, Chapel Hill NC 27516

(919)-360-0868

**2) EDUCATION:**

* Ph.D., The Scripps Research Institute, La Jolla, CA, 2006, Macromolecular, Cellular, and Structural Biology under Clare Waterman, Ph.D.
* Physiology Course, Marine Biological Laboratories, Woods Hole, MA, 2004, directed by Timothy Mitchison, Ph.D. and Ronald Vale, Ph.D.
* B.S., North Carolina State University, Raleigh, NC, 2001, Biological Sciences, research with Nina Strömgren Allen, Ph.D.
* B.S., North Carolina State University, Raleigh, NC, 2001, Botany
* Marine Models in Biological Research, Marine Biological Laboratories, Woods Hole, MA, 2000, directed by Michael Tytell, Ph.D. and Carole Browne, Ph.D.

**3) PROFESSIONAL EXPERIENCE:**

* Associate Professor, Department of Cell Biology and Physiology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC. April 2017-present
* Assistant Professor, Department of Cell Biology and Physiology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC. April 2011-2017 (previously known as the Department of Cell and Developmental Biology)
* Visiting Assistant Professor, Department of Cell and Developmental Biology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC. March 2011-April 2011
* Postdoctoral Training at Massachusetts Institute of Technology, September 2006- March 2011, Cellular and Molecular Neuroscience under Frank B. Gertler, Ph.D.
* Graduate Training at Scripps Research Institute, August 2001-August 2006, Macromolecular, Structural and Cellular Biology under Clare M. Waterman, Ph.D.
* Undergraduate training at North Carolina State University in Botany under Nina S. Allen, Ph.D.

**AFFILIATIONS:**

* American Society for Biochemistry and Molecular Biology 2021-pressent
* International Society for NeuroChemistry 2020-present
* UNC Center for Developmental Disabilities 2019-Present
* American Heart Association 2018-present
* Faculty 1000, 2018-present
* Society for Neuroscience, 2013-present
* UNC Neuroscience Center, 2011-present
* UNC Lineberger Comprehensive Cancer Center, 2011-present
* American Society of Cell Biology, 2000-present

**4) HONORS AND AWARDS:**

* NINDS Landis Award for Outstanding Mentorship (Nominee 2021)
* Scialog Fellow (2018-2021)
* Jefferson-Pilot Fellowship Award in Academic Medicine (2016)
* North Carolina State University, College of Agriculture and Life Sciences Outstanding Young Alumnus (2016)
* ASCB/Gibco Emerging Leader Finalist (2016)
* UNC Outstanding Postdoc Mentor Award (2016)
* Pierre Morell UNC Neurobiology Curriculum Mentor of the Year (2016)
* UNC Jr. Faculty Development Award (2016)
* ASCB/Gibco Emerging Leader Semifinalist (2015)
* MIT Koch Institute Image Award (2011)
* Merck/MIT senior postdoctoral fellowship (2010-2011)
* Postdoctoral travel award for the Annual Meeting of the American Society for Cell Biology (2009)
* Fellow, Jane Coffin Childs Memorial Fund for Medical Research (2006-2009)
* Howard Hughes Medical Institute Predoctoral Fellowship (2001-2006)
* Merton R. Bernfield Memorial Award from the American Society for Cell Biology (2005)
* Keystone Symposia award to attend Symposia on Cell Migration and Invasion (2003)
* Predoctoral travel award for the Annual Meeting of the American Society for Cell Biology (2003)
* Bachelor of Science, *Magna cum laude*, Valedictorian, North Carolina State University (2001)
* Outstanding Plant Biology Major, North Carolina State University (2001)
* Phi Beta Kappa Honorary Society (2001)
* Phi Kappa Phi Honorary Society (2000)
* Sigma Xi Grant-in-Aid for Research (2000)
* Larry A. Whitford Award for Outstanding Botany Undergraduate, North Carolina State University (1999)
* Dean’s List, North Carolina State University (1997-2001)

**5) BIBLIOGRAPHY and Products of Scholarship:**

**Book Chapters (5)**

**\*Corresponding author**

1. Ho, C.T. and **S.L. Gupton**\*. (**2021**) Establishing and Maintaining Neuronal Morphology. 3rd edition. Elsevier. August 2021. Edited by Joseph Jez.
2. Menon, S. and **Gupton, S. L.\*** (**2016**) The Building Blocks of a Functioning Brain: Cytoskeletal Dynamics in Neuronal Development. *International Review of Cell and Molecular Biology.* Elsevier Academic Press. Vol. 322. Chapter 3:183-246.
3. Winkle, C. C. and **Gupton, S. L.\*** (**2016**) The Ins and Outs of Neural Connectivity Membrane Trafficking in Neuronal Development. *International Review of Cell and Molecular Biology.* Elsevier Academic Press. Vol. 322. Chapter 4:247-280.
4. Dent, E. W., **Gupton, S. L.** & Gertler, F. B. (**2011**) The Growth Cone Cytoskeleton in Axon Outgrowth and Guidance. *Cold Spring Harbor Perspectives on Biology* 3,a001800–a001800.
5. **Gupton, S. L.** and Waterman, C.M. (**2006)** “Live-Cell Fluorescent Speckle Microscopy of Actin Cytoskeleton Dynamics and Their Perturbation by Drug Perfusion.” *Cell Biology, a Laboratory Handbook*. Julio E. Celis. 4th Ed. San Diego, CA. 137-151.

**Refereed Papers/Articles (39)**

**\*Corresponding author**

1. Mutalik, S. P. & **Gupton, S. L.\*** (**2021**) Molecular Sciences Glycosylation in Axonal Guidance. *Int. J. Mol. Sci* **22**, 5143 (2021).
2. Urbina FL, Menon S, Goldfarb D, Major MB, Patrick B, **Gupton SL**\*. (**2021**) TRIM67 Regulates Exocytic Mode and Neuronal Morphogenesis via SNAP47. *Cell Report*s. 34(6): doi:10.1016/j.celrep.2021.108743.
3. Menon S, Goldfarb D, Ho CT, Cloer EW, Boyer NP, Hardie C, Bock AJ, Johnson EC, Anil J, Major MB, **Gupton SL**\*. (**2020**) The TRIM9/TRIM67 neuronal interactome reveals novel activators of morphogenesis. Mol Biol Cell. Dec 30;:mbcE20100622. doi: 10.1091/mbc.E20-10-0622.
4. Menon S, Goldfarb D, Cousins EM, Major MB, **Gupton SL**\*. The ubiquitylome of developing cortical neurons. MicroPubl Biol. 2020 Nov 28;2020. doi: 10.17912/micropub.biology.000333. PubMed PMID: 33274322.
5. Urbina FL, **Gupton S.L**.**\*** SNARE-Mediated Exocytosis in Neuronal Development. (**2020**) *Front Mol Neurosci*. 2020;13:133. Published 2020 Aug 7. doi:10.3389/fnmol.2020.00133
6. McCormick L.E. and **Gupton S.L**.**\*** (**2020**) Mechanistic Advances in Axonal Pathfinding. *Current Opinion in Cell Biology.63:11-19.*
7. Boyer N.P., McCormick L.E., Urbina F.L., **Gupton S.L**.**\*** (**2020**) A pair of E3 ubiquitin ligases compete to regulate axon guidance and filopodial dynamics. *Journal of Cell Biology (1): e201902088.*
8. Guo, J., Otis, J., Lei Xing, Ptacek, T., **Gupton, S.L.**, Anton E.S. (**2019**) Effect of neuronal primary cilia on axonal tract development. *Dev Cell*
9. Lee, H.T., Sharek, L., O’Brien, T., Urbina F.L., **Gupton, S.L.,** Superfine R. Burridge K., Campbell S.L. (**2019**). Vinculin and metavinculin exhibit distinct effects on focal adhesion properties, cell migration, and mechanotransduction. *PLoS One. 14(9):*e0221962.
10. Zeng, J., Wang, Y., Luo, Z., Chang, L., Yoo, J., Yan H. Choi, Y., Xie, X., Deverman, B.E., Gradinaur, V., **Gupton, S.L.**, Zlokovic, B., Zhao, Z., Jung, J.U. (**2019**). TRIM9-mediated resolution of neuroinflammation confers neuroprotection against ischemic stroke in mice. *Cell Reports. 27(2)*: 549-560.
11. Do, L.D. **Gupton, S.L.**, Tanji, K., Brugiere, S. Coute, Y., Quadrio, I. Rogemond, V., Fabien, N. Desestret, V., & Honnorat, J. (**2018**). Trim9 and Trim67 are new targets in paraneoplastic cerebellar degeneration. *Cerebellum. 18(2):* 245-254.
12. Menon, S. and **Gupton, S.L.\*** Recent advances in branching mechanisms underlying neuronal morphogenesis. (2018). ***F1000 Research***. Rev-1779. doi: 10.12688/f1000research.16038.1. eCollection 2018.
13. Boyer, N. P. & **Gupton, S. L.\*** (**2018**). Revisiting Netrin-1: One Who Guides (Axons). *Frontiers in Cellular Neuroscience*, *12:221*, 337.
14. Boyer, N. P., Monkiewicz, C., Menon, S., Moy, S. S., & **Gupton, S. L. \*** (**2018**). Mammalian TRIM67 Functions in Brain Development and Behavior. *eNeuro*, *5*(3), ENEURO.0186–18.2018. **Highlighted in Spotlight in *Developmental Cell* by Denise Montell**
15. **Gupton. S. L.\*** and K. G. Campellone\*. (**2018**) Actin dynamics and function. *Mol Biol Cell.* 29(6):696–697.
16. Urbina, F.L.1, Gomez, M. S., and **S.L. Gupton\***. (**2018**) Spatiotemporal Organization of Exocytosis Emerges During Neuronal Shape Change. *J Cell Biol*. 217(3):1113-1128.

**(Faculty 1000)**

1. Plooster, M., Winkle, C. C., Menon, S. Urbina F., Phend, K., Hanlin, C., Monkiewicz, C., Weinberg, R. and **S.L. Gupton\*** (**2017**) TRIM9-dependent ubiquitination of DCC constrains kinase signaling events during axon branching. *Mol Biol Cell.* 28(18):2374-2385.

**(featured article, Cover Image)**

1. Winkle, C.C., Taylor, K.L. Dent, E.W., Gallo, G., Greif, K. and **Gupton. S. L.\*** (**2016)** The Emerging Role of Membrane Turnover and Organelles in the Regulation of Axon Collateral Branches. *Developmental Neurobiology.* 76(12): 1293-1307.
2. Winkle, C.C., Olsen, R.H.J., Kim, H. Moy S.S., Song J.\*, and **Gupton. S.L.\*** (**2016**) *Trim9* deletion alters the morphogenesis of developing and adult-born hippocampal neurons and impairs spatial learning and memory. *Journal of Neuroscience*. 36(18):4940-4958.

(**Cover Image, featured Journal Club article**)

1. Winkle, C. C., Hanlin, C. C., **Gupton, S. L.\*** (**2016**) Utilizing Combined Methodologies to Define the Role of Plasma Membrane Delivery During Axon Branching and Neuronal Morphogenesis. *J. Vis. Exp.* (109), e53743.
2. Menon S., Boyer N. Winkle C., McClain L., Hanlin C., Dharmendran, P., RothenfußerS., Taylor, A.M., **Gupton, S. L.\*** **2015** TRIM9 is a filopodia off switch during netrin-dependent axon guidance. *Dev Cell*. 35:698–712. **(Cover Image)**

**Highlighted *Developmental Cell* by Thomas Pollard**

1. **Gupton, S. L.\*** and Barzik M**.** (**2015**) Seeing past cellular adaptation. *Cell Systems*. 1:16-17.
2. Taylor, A.M.\*, S. Menon, and **Gupton, S. L.\*** (**2015**) Passive microfluidic chamber for long-term imaging of axon guidance in response to soluble gradients. *Lab on a chip*. 15:2781–2789.
3. Barzik, M., L.M. McClain, **Gupton, S. L.**, and F.B. Gertler. (**2014**) Ena/VASP regulates mDia2-initiated filopodial length, dynamics, and function. *Mol Biol Cell*. 25:2604-2619. (**Cover Image**)
4. Winkle, C. C. McClain, L.M. Valtschanoff, J.G., Park C.S., Maglione, C. and **Gupton, S. L.\*** (**2014**)A novel Netrin-1-sensitive mechanism promotes local SNARE-mediated exocytosis during axon branching. *J Cell Biol* 205**:**217–232. **(featured article, Faculty 1000)**
5. **Gupton, S. L.\***, D. Riquelme, S.K. Hughes-Alford, J. Tadros, S.S. Rudina, R.O. Hynes, D. Lauffenburger, and Gertler, F.B.**\*** (**2012**) Mena binds α5 integrin directly and modulates α5β1 function. *J Cell Biol*. 198:657–676.
6. **Gupton, S. L.**, and Gertler, F.B. (**2010**) Integrin signaling switches the cytoskeletal and exocytic machinery that drives neuritogenesis. *Developmental Cell*. 18:725–736. **(Faculty 1000)**
7. Dent, E.W., Kwiatkowski, A.V., Mebane, L.M., Philippar, U., Barzik, M., Rubinson, D.A., **Gupton, S.**, Van Veen, J.E., Furman, C., Zhang, J., Alberts, A.S., Mori, S., and Gertler, F.B. (**2007**) Filopodia are required for cortical neurite initiation. *Nature Cell Biology*. 9:1347-1359.
8. **Gupton, S. L.** and Gertler, F.B. (**2007**) Filopodia: the fingers that do the walking. *Science STKE 2007*, 400.
9. **Gupton, S. L.**, Eisenmann, K., Alberts, A.S., and Waterman, C.M. (**2007**) mDia2 regulates actin and focal adhesion dynamics and organization in the lamella for efficient epithelial cell migration. *Journal of Cell Science*. 120:3475-3487.
10. **Gupton, S. L.**, and Waterman, C.M. (**2006**) Spatiotemporal feedback between actomyosin and focal-adhesion systems optimizes rapid cell migration. *Cell* 125:1361-1374.

**(featured article, Faculty 1000)**

1. **Gupton, S. L.**, Collings, D.A., and Allen, N.S. (**2006**) Endoplasmic reticulum targeted GFP reveals ER organization in tobacco NT-1 cells during cell division. *Plant Physiology and Biochemistry.* 44:95-105.
2. Ponti, A., Matov, A., Adams, M., **Gupton, S.**, Waterman, C.M., and Danuser, G. (**2005**) Periodic patterns of actin turnover in lamellipodia and lamellae of migrating epithelial cells analyzed by Quantitative Fluorescent Speckle Microscopy. *Biophysics Journal*. 89:3456-3469.
3. **Gupton, S. L.**, Anderson, K. L., Kole, T. P., Fischer, R. S., Ponti, A., Hitchcock-DeGregori, S. E., Danuser, G., Fowler, V. M., Wirtz, D., Hanein, D., and Waterman, C. M. (**2005**) Cell migration without a lamellipodium: translation of actin dynamics into cell movement mediated by tropomyosin. *Journal of Cell Biology.* 168:619-631. **(featured article, Faculty 1000)**
4. Adams, M.C., Matov, A., D. Yarar, **Gupton, S. L.**, Danuser, G., and Waterman, C.M. (**2004**) Signal analysis of total internal reflection fluorescent speckle microscopy (TIR-FSM) and wide-field epi-fluorescence FSM of the actin cytoskeleton and focal adhesions in living cells. *Journal of Microscopy*. 216:138-152.
5. Ponti, A., Machacek, M., **Gupton, S. L.**, Waterman, C.M., and Danuser, G. (**2004**) Two distinct actin networks drive the protrusion of migrating cells. *Science*. 305:1782-1786. **(Faculty 1000)**
6. Vallotton, P., **Gupton, S. L.**, Waterman, C.M., and Danuser, G. (**2004**) Simultaneous mapping of filamentous actin flow and turnover in migrating cells by quantitative fluorescent speckle microscopy. *Proceedings of the National Academy of Science U S A*. 101:9660-9665.
7. Adams, M.C., Salmon, W.C., **Gupton, S. L.**, Cohan, C.S., Wittmann, T., Prigozhina, N., and Waterman, C.M. (**2003**) A high-speed multispectral spinning-disk confocal microscope system for fluorescent speckle microscopy of living cells. *Methods*. 29:29-41.
8. **Gupton, S. L.**, Salmon, W.C., and Waterman, C.M. (**2002**) Converging populations of f-actin promote breakage of associated microtubules to spatially regulate microtubule turnover in migrating cells. *Current Biology*. 12:891-899.

**Submitted Papers (3)**

1. Ye, M., S.K. Monroe, S.M. Gay, M.L. Armstrong, D.E. Youngstrom, F.L. Urbina, **S.L. Gupton**, N. Reisdorph, and G.H. Diering. (Submitted) Coordinated regulation of CB1 cannabinoid receptors and anandamide metabolism stabilize network activity during homeostatic scaling down Abbreviated title: Endocannabinoids and Homeostatic Scaling-Down.
2. Plooster, M., Rossi, G. Farrell M., Won H., **Gupton S.L.\*** and P.Brennwald.\* (Submittted) Schiozphrenia-linked protein tSNARE1 regulates endolysosomal trafficking in cortical neurons.
3. Urbina, F.L. and **Gupton S.L.\*** (Submitted) Automated detection and analysis of exocytosis.

**BioRxiv Preprints (9)**

1. Ye, M., S.K. Monroe, S.M. Gay, M.L. Armstrong, D.E. Youngstrom, F.L. Urbina, **S.L. Gupton**, N. Reisdorph, and G.H. Diering. (**2021**) Coordinated regulation of CB1 cannabinoid receptors and anandamide metabolism stabilize network activity during homeostatic scaling down Abbreviated title: Endocannabinoids and Homeostatic Scaling-Down. *bioRxiv*. 2021.05.21.445170. doi:10.1101/2021.05.21.445170.
2. Plooster, M., M.S. Farrell, G. Rossi, H. Won, **S.L. Gupton**\*, and P. Brennwald\*. (**2021**). Schizophrenia-linked protein tSNARE1 regulates endolysosomal trafficking in cortical neurons. *bioRxiv*. 2021.02.09.430442. doi:10.1101/2021.02.09.430442.
3. Menon, S.L., D. Goldfarb, E.M. Cousins M. Ben Major, and **S.L. Gupton**\*.(2020). The Ubiquitylome of developing cortical neurons. *bioRxiv*. 2020.10.02.337782.
4. Menon, S.L., D. Goldfarb, C.T. Ho, E.W. Cloer, N.P. Boyer, C. Hardie, A.J. Bock, E.C. Johnson, J. Anil, M. Major, and **S.L. Gupton**\*. 2020. The TRIM9/TRIM67 neuronal interactome reveals novel activators of morphogenesis. *bioRxiv*. 2020.10.02.323980. doi:10.1101/2020.10.02.323980.
5. Urbina, F.L., Menon S., Goldfarb, D, Major, M.B., Brennwald, P., and **S.L. Gupton\*. (2020)** TRIM67 regulates exocytic mode and neuronal morphogenesis via SNAP47. *BioRxiv 930404;* doi: 10.1101/2020.02.01.930404
6. Boyer N.P., McCormick L.E., Urbina F.L., and **S.L. Gupton\***. (2019) A pair of E3 ubiquitin ligases compete to regulate axon guidance and filopodial dynamics. *BioRxiv* 529222; doi: 10.1101/529222

\*Highlighted in Prelight by Angika Basant

1. Boyer, N.P., Monkiewicz, C., Moy, S.L., and **S.L. Gupton\***. The Class I E3 Ubiquitin Ligase TRIM67 Modulates Brain Development and Behavior. (**2017).** *BioRxiv* doi: 10.1101/241331
2. Urbina, F., Gomez, S. and **Gupton. S. L.\*** (**2017**) Dynamic spatiotemporal organization of exocytosis during cellular shape change. *BioRxiv* doi: 10.1101/185249
3. Plooster, M., Winkle, C. C., Menon, S. Urbina F., Phend, K., Hanlin, C., Monkiewicz, C., Weinberg, R. and **Gupton. S. L.\*** (**2017**) TRIM9-dependent ubiquitination of DCC constrains kinase signaling events during axon branching. *BioRxiv* doi: 10.1101/154666

**Digital and Other Novel Forms of Scholarship (1)**

1. **Gupton, S. L.** and Waterman C.M. (**2004**) “Fluorescent speckle microscopy of the cytoskeleton.” *Virtual Text Special Series: Techniques.* Ergito <[1-3](http://www.ergito.com/main.jsp?bcs=TECH.5)>.

**Patents (1)**

1. Gertler, F.B., **S. Gupton,** D. Riquelme, S.K. Hughes-Alford, and M.J. Oudin. 2015. Mena and alpha5 integrin interaction. US Patent App. 14/395,617

**Unpublished Oral Presentations (60)**

**Scheduled (3)**

1. Graduate student invited Speaker, Department of Cell, Developmental, and Regenerative Biology, Mount Sinai's School of Medicine, May 2022 Host: Allison Kann
2. Invited Speaker, Gordon Research Conference: Polarity Signaling, June 2022

Host: Jeremy Nance and Yukiko Yamashita

3. Invited Speaker and Session Chair, Molecular Mechanisms of Neuronal Connectivity at Cold Spring Harbor Laboratories, September 2022

Organizers: Yimin Zou, Kang Shen, Ruediger Klein, Catherin Collins

**Cancelled/Postponed due to COVID19 (3)**

1. Invited Speaker, Department of Biophysics, University of Denver, April 2020 Host: Michelle Knowles
2. Invited Speaker, Gordon Research Conference: *Neural Development*, August 2020

Host: Debby Silver, Claude Desplan

1. Invited Speaker, Gordon Research Conference: Neurotrophic Mechanisms in Health and Disease

Host: Rejji Kuruvilla

**Delivered (57)**

1. Invited speaker, Seminar Series on the Cytoskeleton of Neurons and Glia, July 2021
2. Invited Speaker, German Neuroscience Society Meeting, March 2021, session: “posttranslational modifications of proteins and their role in neuronal development” Host: Victor Tarabykin and Mateusz Ambrozkiewicz
3. Invited Virtual Speaker, Membrane Trafficking Community Virtual Seminar Series November 2020 Hosts: Felix Campelo, Francesca Bottanelli, Ishier Raote
4. Invited Virtual Speaker, Department of Neuroscience, Washington University School of Medicine in St. Lous, November 2020 Host: Michael Nonet
5. Invited Speaker, Society for Neuroscience, SfN Global Connectome, January 2021. Session: “Cell and molecular biology of the neuronal actin cytoskeleton in health and disease” Host: Francesca Bartoloni
6. Invited Speaker, Annual Meeting of the Indian Academy of Neuroscience, XXXVIII. 2020. Symposium III: Cytoskeletal and Membrane Adaptations in Neurons. Host: Arnaub Ghose.
7. Invited Speaker, American Society for Cell Biology Annual Meeting, Minisymposium: *Regulation of Cytoskeletal Dynamics and Transport*, December 2019
8. Invited Speaker, Department of Molecular Biosciences, College of Veterinary Medicine at NC State University, October 2019 Host: Belinda Akpa
9. Invited Speaker, Gordon Research Conference: *Motile and Contractile Systems*, July 2019
10. Invited Speaker and Lecturer, Developing Neural Circuits Course, Okinawa Institute for Science and Technology, August 2019.
11. Invited Speaker MIT, a Symposium honoring Frank Gertler. June 2019
12. Invited Speaker, Watermanfest, a Symposium honoring Clare Waterman and her induction in the National Academy of Sciences. May 2019
13. Invited Speaker, Thematic meeting of the Biophysical Society: *Quantitative aspects of membrane fusion and fission*, May 2019, Padova Italy.
14. Invited Speaker and Session Chair, IUBMB: *Emerging topics in the Neuronal Cytoskeleton*, April 2019
15. Invited Speaker, UNC Cell Biology and Physiology Departmental and Curriculum Retreat, April 2019
16. Invited Speaker, Gordon Research Conference: *Directed Cell Migration*, January 2019
17. Invited Symposium Speaker, Department of Mechanical Engineering, at John Hopkins University, September 2018 Host: Yun Chen
18. Invited Symposium Speaker, Department of Pharmacology and Physiology and Neurosciences, at University of Montreal, April 2018 Host: Louis Eric Trudeau
19. Student Invited Seminar Speaker, Molecular and Cellular Biology, University of Florida, April, 2018 Host: Graduate Students
20. Invited Symposium Speaker, American Society for Cell Biology Annual Meeting, December 2017, Actin Dynamics and Function. **Co-chair**
21. Invited Seminar Speaker, Department of Biology at Drexel University, December 2017 Host: Peter Baas
22. Invited Symposium Speaker, American Society for Cell Biology Local Meeting, Triangle Cytoskeleton Club, September 2017
23. Invited Seminar Speaker, Departments of Biology and Neuroscience at University Madison Wisconsin, September 2017 Host: Tim Gomez
24. Invited Killam Seminar Speaker, Montreal Neurological Institute at McGill University, May 2017 Host: Tim Kennedy
25. Invited Symposium Speaker and Session chair, Emerging Concepts in the Neuronal Cytoskeleton, Puerto Varas, Chile, April 2017
26. Invited Seminar Speaker, Department of Biology at John Hopkins University, March 2017 Host: Rejji Kuruvilla
27. Invited Seminar Speaker, Cell Biology and Physiology Center, National Heart, Lung, and Blood Institute, National Institutes of Health, November 2016 Host: Clare Waterman
28. Invited Seminar Speaker, Cell Biology and Physiology Center, Toledo University, Department of Biological Sciences November 2016 Host: Rafael Garcia Mata
29. Invited Seminar Speaker, Departments of Cell Biology and Neuroscience, University of Virginia, September 2016 Host: Noel Dwyer
30. Invited Seminar Speaker, Center for Neural Repair and Rehabilitation, Temple University School of Medicine, April 2016 Host: Gianluca Gallo
31. Invited Seminar Speaker, Department of Cell Biology, Boston College, March 2016 Host: Laura Ann Lowery
32. Invited Seminar Speaker, Department of Cell Biology and Physiology, UNC School of Medicine, March 2016
33. Invited Seminar Speaker, Department of Pathology & Cell Biology, Columbia, Feb 2016 Hosts: Julie Canman, Ulrich Hengst
34. Invited Seminar Speaker, Department of Biology, UCSD, December 2015 Host: Yimin Zou
35. Speaker, American Society for Cell Biology Annual Meeting, Subgroup Meeting: *Neuronal Cytoskeleton 2.0*, December 2015, **co-chair**
36. Invited Seminar Speaker, Department of Cell Biology, Yale, November 2015 Host: Tom Pollard
37. Invited Seminar Speaker at the Neuroscience Center, University of North Carolina at Chapel Hill, October 2015
38. Invited Alumnus Speaker at the Scripps Research Graduate Student Retreat, September 2015
39. Invited Speaker, Gordon Research Conference: *Motile and Contractile Systems*, July 2015
40. Invited Seminar Speaker, Duke University Developmental Biology Colloquium, March 2015 Host: David Sherwood
41. Invited Seminar Speaker, University of Minnesota, Department of Cell Biology, November 2014 Host: Gant Luxton
42. Invited Speaker, Workshop on Axonal Transport and Neuronal Mechanics at the Mathematics Bioscience Institute at Ohio State University, October 2014
43. Invited Seminar Speaker in the Allen Distinguished Microscopy Seminar Series, North Carolina State University, May 2014 Host: Nina Allen
44. Invited Seminar Speaker, School of Medicine University of Pittsburgh, Department of Cell Biology, October 2013 Host: Adam Kwiatkowski
45. Invited Symposium Speaker, American Society for Cell Biology Annual Meeting, Minisymposium: *Lipid Dynamics and Membrane Organization*, December 2012
46. Invited Seminar Speaker, East Carolina University, Department of Cell Biology and Anatomy, December 2012
47. Invited Speaker, Cold Spring Harbor Conference: *Axon Guidance, Synapse Formation and Regeneration*, September 2012
48. Invited Seminar Speaker at the Neuroscience Center, University of North Carolina at Chapel Hill, March 2012
49. Invited Seminar Speaker at the Department of Biology, University of North Carolina at Chapel Hill, November 2011 Host: Bob Goldstein
50. Invited Seminar Speaker at the Department of Cell and Developmental Biology University of North Carolina at Chapel Hill, April 2010 Host: Vytas Bankaitis
51. Invited Speaker, Gordon Research Conference: *Integrins, Fibronectins, and Related Molecules*, February 2009
52. Invited Speaker, Cold Spring Harbor Conference: *Axon Guidance, Synaptogenesis and Neural Plasticity*, 2008
53. Invited Speaker, MIT Biophysics Seminar Series, April 2008 Host: Mark Bathe
54. Invited Symposium Speaker, American Society for Cell Biology Annual Meeting, Minisymposium: *The Cellular Basis of Morphogenesis*, December 2008
55. Invited Speaker, Gordon Research Conference: *Motile and Contractile Systems*, July 2005
56. Invited Symposium Speaker, Imaging: Integrating Across Disciplines: A symposium in honor of Nina Strömgren Allen, on the occasion of her 70th birthday, September 2005
57. Invited Symposium Speaker, American Society for Cell Biology Annual Meeting, Minisymposium: *Arp2/3 and Formins, Regulators of Actin*, December 2005

**Outreach and other public speaking engagements (1)**

1. Interviewed on WUNC *The State of Things* to discuss the Ackland Art Exhibit: The Beautiful Brain, Works of Santiago Ramon y Cajal. <https://www.wunc.org/post/beautiful-brain-science-and-art>

**6) GRADUATE TEACHING/TRAINING ACTIVITIES:**

Block Director/Lecturer

* CBPH850: Modern Concepts in Cell Biology, Microscopy Block, 2012-2019 (8-13 students/year, 6 lectures)
* CBPH, Graduate level light microscopy imaging course, planning committee

Lecturer

* CBPH850: Modern Concepts in Cell Biology, Microscopy Block, 2012-present (8-13 students/year, 2-3 lectures)
* CBPH710: Microscopy course, 2020-current, Lecturer (24 students, 1 lecture)
* PHCO745: 2018-current, Lecturer (~14 students, 1 lecture)
* Graduate Grant Writing Course: Reviewer Spring 2017-2019(~9 students, 2 meetings)
* CBPH703: Human diseases: 2017-2018 (~8 graduate students, 1 lecture)
* CBPH850: Advanced Cell Biology- Controversies in Trafficking, 2015-current (~10 graduate students, 4 lectures) (Previously CBIO 893, CBPH893)
* CBPH702: Animal models to study disease: Axon Guidance and Branching in Human Disease 2015-2016 (~15 students, 1 lecture) (Previously Phy702)
* NBIO723: Cytoskeletal dynamics and membrane trafficking during axon guidance, 2015-current (~12 students/ year, 1 lecture)
* Super Cell: graduate student: Polarized Membrane Trafficking, 2014 (~15 students, 1 lecture Course discontinued)
* CBIO 893, graduate students (Controversies in Trafficking) 2011 (~12 Students) (course now CBPH 850
* BIOL395, CHEM395: Undergraduate Research for course credit (7 students, 10 semesters)
* BIOL692: Undergraduate Honors Thesis Research: 1 student
* Cell Motility, Mt. Holyoke College, undergraduate students, cell motility during neurodevelopment 2009 (10 students, 1 lecture)

t32 Membership

* CSIP T32GM133364 (2020-present)
* NBIO T32NS007431 steering committee (2017-2019)
* MiBio T32GM11999 executive committee (2019-present)

One-on-one laboratory training

Undergraduate research training: (25 students, **\*Current lab members**)

1. **\*Harrison Hockenberry**: Undergradute Research 2021-present
2. **\*Mayra Correa-Ramirez:** Undergraduate Work-study: 2018-present
3. Chris Hardie: Undergraduate Research: 2018-2019
4. Emily Wolfgram: Undergraduate Research: 2017-2020 (now PhD student at UCSF)
5. Enaj Furigay: Undergraduate Work-study: 2016-2017, 2018-2020
6. Emma Johnson:Undergraduate Research: 2017-2019
7. Priya Vasan:Undergraduate Research: 2016-2019
8. Thomas “TJ” Turner:Undergraduate Work-study: 2018-2019
9. Josh Cade SPIRE Undergraduate Research: summer 2018
10. Saumil Patel:Undergraduate Work-study: 2017-2018
11. Vong Thoong**:** Undergraduate Work-study: 2018-2018
12. Andrew Bock**:** Undergraduate Research: 2016-2018, Project title: “Validation of novel TRIM67substrates” (currently med student at Duke Unversity)
13. Divya Mahesh**:** Undergraduate Research: 2016-2017
14. Joel Anil:Undergraduate Summer Research: 2016-2017. Project title: “Validation of novel TRIM9substrates”
15. Dave Richard:Undergraduate Work-study: 2016-2017.
16. Caroline Monkiewicz: Undergraduate research Bio395, Fall 2015 - Spring 2016. Project titles: “The role of deubiquitinases in axon branching”, “Neuroanatomical consequences of *Trim67* deletion.”
17. Haejin Song: UNC Undergraduate work study student Fall 2013-Spring 2016 (currently attending a postbaccalaureate program at Meredith College, North Carolina)
18. Jenci Hawthorne: Visiting undergraduate from the University of Richmond, research Summer 2015, Project Title: “Myosin 19 in axon branching”

*\*\*U Richmond Summer**Research Fellow*

1. Maite Ghazaleh: UNC undergraduate work-study student Fall 2014-Spring 2015 (currently attending graduate school at the University of Georgia)
2. Hieu Nguyen: UNC undergraduate research: Fall 2013-Spring- 2015.
3. David Creasman: Visiting undergraduate from Campbell University, Summer 2014, Project title: “The role of the proteosome and lysosomes in axon branching” (attending a graduate school at University of California, Irvine) *\*\*Sure/REU Program*
4. Carey Hanlin: UNC undergraduate research, Fall 2013-Spring 2014.
5. Christopher Maglione: UNC Undergraduate Research: Fall 2013-Spring 2014. Project title: “TRIM9 controls axon branching in vivo”
6. Naucika Desousa, B.S., Biomedical Engineering, NC State, 2013 (currently attending medical school at Wake Forest University, North Carolina) *\*\* Lucas scholarship recipient*
7. Charles Park: UNC Undergraduate Research, April 2011-May 2013, (currently attending a postbaccalaureate program at UNC-Chapel Hill)
8. Kinnari Buch: UNC undergraduate research, November 2011-August 2012. Project title: “Exploring TRIM67 localization and function in cortical neurons.”

*\*\*HHMI Future Scientists and Clinicians Fellow*

Graduate student training (7 students, **\*Current lab members**)

1. \***Kimberly Lukasik:** Graduate student Cell Biology & Physiology, 2021-present
2. **\*Tsung-Yu Ho**: Graduate student Cell Biology & Physiology, 2020-present
3. **\*Laura McCormick**: Graduate student Cell Biology & Physiology, 2018-present

*\*\*supported by NIH/NINDS NRSA F31 NS113381*

1. **\*Melissa Plooster** (50%): Graduate student Cell Biology & Physiology, 2016-present

*\*\*supported by NIH/NIMH F31MH116576, previously by NIH/NIGMS T32 GM119999*

1. Fabio Urbina: Graduate student Cell Biology & Physiology, 2015-2020

Thesis: “Novel automated computer vision analysis reveals novel mechanisms regulating exocytosis in developing neurons.” Defended Nov 17, 2020, completion date Nov 18, 2020.

*\*\*supported by NIH/NINDS NRSA F31 NS103586, previously by NIH/NIGMS Diversity supplement & IMSD R25*

1. Nicholas Boyer: PhD candidate in Neurobiology curriculum, UNC 2014-2018

Thesis: “TRIM9 and TRIM67 differentially control growth cone filopodia and axon guidance downstream of netrin”, defended Dec 3, 2018, completion date May 2019

*\*\*supported by NIH/NINDS NRSA F31 NS096823, previously NIH/NINDS T32NS007431*

1. Cortney Winkle: PhD candidate in neurobiology curriculum, UNC 2012-2016

Thesis: “Staying TRIM: How *Trim9*constrains neuronal cell morphology to regulate connectivity”, defended April 22, 2016, completion date May 30, 2016

*\*\*supported by NIH/NINDS F31NS087837*

First year graduate rotation student training (20 students)

* 1. Juliet King
  2. Kimberly Lukasik
  3. Reginald Edwards
  4. Shannon Rhoads
  5. Tsung-Yu Ho
  6. Anna Kim (UNC MSTP)
  7. Laura McCormick
  8. Shenee’ Martin
  9. Danielle Berlin
  10. Jessie Niehaus
  11. Krystal Orlando
  12. Tim Cupp
  13. Fabio Urbina
  14. Reid Olsen
  15. Nick Boyer
  16. Suzanne Nobles
  17. Cortney Winkle
  18. Hailey Brighton
  19. Jorge Martinez
  20. James Shellhammer

Visiting graduate student training (1 student)

1. Lara Albania: 2013 (University of Padua, Italy, lab of Francesco Filippni)

Postdoctoral research training (4 fellows, **\*Current lab members**)

1. **\*Samapda Mutalik, PhD**: 2020-current
2. Dustin Revell, PhD: 2020- 2021
3. Anthony Mangan, PhD: 2017-2019,

*\*\*UNC SPIRE fellow*

1. Shalini Menon, PhD: 2013-2020,

*\*\*postdoctoral fellow of the American Heart Association*

Staff Scientist training and supervision (8 technicians/staff scientists **\*Current lab members**)

1. **\*Charise White, PhD:** 2020-present
2. Chris Hardie: 2019-2020
3. Vong Thoong: 2018-2019
4. Caroline Monkiewicz: 2016-2018 (Regulatory affairs specialist at Merz Pharmaceuticals)
5. Carey Hanlin: 2014-2016 (currently working for an NGO in New York City)
6. Charles Park: 2013-2014 (currently attending a postbaccalaureate program at UNC)
7. Christopher Bott: 2012-2103 (currently attending graduate school at the University of Virginia)
8. Juli Valtschanoff, M.D.: 2011-2012 (Associate Dean, Professor and Chair of Medical Cell Biology at American University of Antigua

Teaching Assistant

* CBPH 706: Grants Writing Class, 2018-present (2 x 2 hour classes per year of assisting students in specific aims/grant writing).
* Medical Student Cell Biology Laboratory 2013: Helped with laboratory section of Cell Biology section for med students lead by Keith Burridge. (20 students)
* Physiology Course at MBL in Woods Hole, MA with Clare Waterman, Ph.D. 2006 (15 students)
* Visualizing Cytoskeletal Dynamics course directed by Vic Small, Ph.D. and the Federation of European Biochemical Society, 2002 (10 students)
* Laboratory section of Plant Biology at NCSU with Udo Blu, Ph.D. 2000 (20 students)

First Year Group Co-Mentor 2012-2016:

* Co-Mentor in First Year Group. Participated in class discussions and mentored students in scientific ethics, rotation selection, poster presentations, and writing sections of the course. (~20 students)

Graduate Student Supervision:

Thesis Committees (**35, \*17 current, 18 completed**):

1. \*Siddhi Shyam Ozarkar (UNC Neurobiology Curriculum, **chair**) 2021-present
2. \*Shannon Rhoads (UNC Neurobiology Curriculum, **chair**) 2021-present
3. \*Pu Zhang (UNC Cell Biology and Physiology) 2021-present
4. \*Pierre-Emmanuel N’Guetta (UNC Cell Biology and Physiology, **chair**) 2020-present
5. \*Gabriella Gentile (UNC Genetics, Molecular Biology Curriculum) 2019-present
6. \*Nisitha Sengottuvel (UNC MSTB, Genetics, Molecular Biology Curriculum, **chair**) 2019-present
7. \*Shenee Martin (UNC Neurobiology Curriculum) 2018-present
8. \*Samuel Honeycutt (UNC Cell Biology and Physiology) 2018-present
9. \*Ian Windham (UNC Cell Biology and Physiology, **chair**) 2018-present
10. \*Stephen Serafin (UNC Cell Biology and Physiology, **chair**) 2018-present
11. \*Abigail Clevland (UNC Cell Biology and Physiology) 2018-present
12. \*Kasey Skinner (UNC Neurobiology Curriculum) 2018-present
13. \*Danielle Berlin (UNC Cell Biology and Physiology, **chair**) 2017-present
14. \*Zayna King (UNC Cell Biology and Physiology) 2017-present
15. \*Carlos Patino Deskovitch (UNC Cell Biology and Physiology) 2017-present
16. \*Jesse Niehaus (UNC Neurobiology Curriculum, **chair**) 2017-present
17. \*Selena Romero (UNC Cell Biology and Physiology, **chair**) 2017-present
18. Megan Agajanian (UNC Pharmacology) 2017-2021
19. Alicia Tagliatela (UNC Cell Biology and Physiology, **chair**) 2016-2020
20. Kendall Lough (UNC Genetics and Molecular Biology) 2014-2020
21. Amanda Raimer (UNC Genetics and Molecular Biology) 2014-2020
22. Katie Veleta (UNC Neurobiology Curriculum) 2015-2019
23. Hyunna (Theresa) Lee (UNC Biophysics and Biochemistry, PhD, 2019) 2019
24. Jennifer Ocasio Adorno (UNC Neurobiology Curriculum, **chair**) 2015-2019
25. Phillippe Duquette (McGill University, Department of Anatomy and Cell Biology) 2018, External examiner
26. Elliot Wyatt (UNC Neurobiology Curriculum, Masters 2019) 2018-2019
27. Maria Bagonis (Harvard University, Biological and Biomedical Sciences, PhD, 2017) 2016-2017
28. Kaleb Naegeli (Duke Pharmacology and Cancer Biology, PhD, 2017) 2013-2017
29. Timothy Cupp (UNC Cell and Developmental Biology, Masters 2016) 2015-2016
30. Kelly Watson (UNC Cell and Developmental Biology, PhD, 2015) 2012-2015
31. Liz Haynes (UNC Cell and Developmental Biology, PhD 2015) 2012-2015
32. Kathryn Trogden (UNC Biology, PhD 2015) 2012-2015
33. Matty Kutys (UNC Cell and Developmental Biology/NIH, PhD 2014), 2012-2014
34. Scott Huock (UNC Cell and Developmental Biology, PhD 2014) 2011-2014
35. Alex Raines (UNC Neurobiology Curriculum, PhD 2012) 2011-2012

Qualifying Exam Committee (**9**):

* + - Cell Biology and Physiology Qualifying Exam Committee (2016)
    - Alicia Tagliatela (UNC Cell and Developmental Biology, 2015)
    - Kelly Gewain (UNC Cell and Developmental Biology, 2014)
    - Jennifer Karin Ocasio Adorno (UNC Neurobiology Curriculum, 2014, **chair**)
    - David Graham (UNC Cell and Developmental Biology, 2014)
    - Suzanne Nobles (UNC Neurobiology Curriculum, 2013)
    - Bomi Oladosu (UNC Neurobiology Curriculum, 2012, **chair**)
    - Hailey Brighton (UNC Cell and Developmental Biology, 2012)
    - Mai Doan (UNC Cell and Developmental Biology, 2011)

**7) GRANTS/FUNDING:**

**Ongoing Research Support:**

R01NS105614 NIH/NINDS (Gupton, PI) 08/01/19-04/30/23

#### Exocytosis for plasma membrane expansion in developing neurons

The major goals of this proposal include defining the mechanisms that regulate the organization, progression, and mode of vesicle fusion with the plasma membrane of developing neurons.

40% effort

R35GM135160 NIH/NIGMS (Gupton, PI) 01/01/20-12/31/25

#### Coordinated Cytoskeletal dynamics and membrane remodeling in Cellular Shape Change

The proposal focuses on how TRIM9 and TRIM67 regulate the membrane trafficking, cytoskeletal dynamics, and cellular shape change and motility of developing neurons and migrating melanoma cells. 51% effort

UNC Core Facilities Pilot Program (McCormick and Gupton, PI) 2020

*Optimization and application of TMTpro for multiplexed, quantitative proteomics to study TRIM9 and TRIM67 function in synaptic regulation*

The proposals uses novel quantitative proteomic approaches to compare the proteome of the postsynaptic densitybetween wildtype and knockout littermates.

**Pending Research Support:**

S10D030300 NIH/NIGMS (Gupton, PI) 02/01/21-1/31/22

#### Super Resolution STED Microscopy at UNC

This shared equipment grant requests funds for a Leica Tau STED scope for the Hooker Imaging Core No effort

S10D030300-A1 NIH/NIGMS (Gupton, PI) 02/01/22-1/31/23

#### Super Resolution STED Microscopy at UNC

This shared equipment grant requests funds for a Leica Tau STED scope for the Hooker Imaging Core No effort

R35GM135160 02S2 NIH/NIGMS/NIA (Gupton, PI) 07/01/21-11/30/20

#### Administrative Equipment Supplement for GM135160

This supplement requests funds to repair our TIRF microscope No effort

R21NS1115024 NIH/NINDS (Gupton, PI) 09/01/21-08/31/23

*Netrin Glycosylation Influences Chemotaxis and Haptotaxis*

The goal of this study is to test the role of netrin chemotaxis and haptotaxis in vitro and in vivo. 10% effort

R01NS105614S1 NIH/NINDS (Gupton, PI) 09/01/21-08/30/22

AI/MI Administrative supplement to support collaboration

**Completed Research Support:**

R35GM135160 01S1 NIH/NIGMS/NIA (Gupton, PI) 06/23/20-12/31/20

#### Investigation of TRIM9 in Cell Shape Change in the Aging Brain

The proposal defines whether TRIM9 is involved in Alzheimer’s disease in human patients and the PS19 mouse model. 7.6% effort

R35GM135160 01S2 NIH/NIGMS/NIA (Gupton, PI) 07/01/20-12/31/20

#### Administrative Equipment Supplement for GM135160

This supplement requests funds for Keyence automated microscope No effort

R01GM054712 NIH/NIGMS (Brennwald, PI,Gupton co-PI) 09/01/16-08/31/20

*Polarized Exocytosis: Rhos, Rabs, Tethers and SNAREs*

My contributions to this proposal are to help determine how mutations and variations in tSNARE1, which are associated with schizophrenia, affect membrane trafficking and morphogenesis in developing neurons 0% effort

R21NS104530 NIH/NINDS (Juan Song, PI) 09/01/18-08/31/20

*Role of TRIM9 in regulating neurogenesis-associated hippocampal functions*

The goal of this study is to unequivocally determine how altered maturation and integration of adult-born neurons mediated by cell-autonomous TRIM9 deletion affects hippocampal microcircuit plasticity and impacts hippocampal-dependent behaviors. 10% effort

19-0017 Mizutani Foundation for Glycoscience (Gupton, PI) 4/1/19-3/31/20

*Netrin-1 Glycosylation Distinguishes Chemotaxis and Haptotaxis*

The goal of this proposal is to develop a novel mouse harboring netrin glycosylation mutant to test the role of netrin chemotaxis and haptotaxis in vivo. 0.6 Calendar Months

R01GM108970 NIH/NIGMS (Gupton, PI) 01/01/14-12/31/19

*Trim9 coordinates membrane trafficking and cytoskeletal dynamics*

In this proposal we focus on the spatial and temporal regulation of axonal responses to netrin and how TRIM9 regulates cytoskeletal dynamics and membrane trafficking to affect shape changes of developing neurons *in vitro* and *in vivo*. 30% effort

UNC SOM Emerging Challenges in Biomedical Research (Neher, Gupton, PI) 2019

*New insights into insulin-responsive LPL trafficking*

My role in this proposal is to assist in high resolution TIRF imaging of LPL exocytosis in adipocytes.

R21MH109653 NIH/NIMH (Gupton, PI) 05/15/16-04/30/19

*Identification of ubiquitylated substrates of Trim9 and Trim67*

In this proposal we perform unbiased quantitative proteomic screens to identify neuronal proteins in close proximity that are differentially ubiquitylated in the absence of TRIM9 and/or TRIM67.

25% effort

R01GM108970 NIH/NIGMS (Gupton, PI) 09/08/2017

*Trim9 coordinates membrane trafficking and cytoskeletal dynamics*

This was an administrative supplement from NIGMS to upgrade our TIRF microscope

0% effort

R01GM108970 NIH/NIGMS (Gupton, PI) 06/15/15-06/14/17

*Trim9 coordinates membrane trafficking and cytoskeletal dynamics*

This was an administrative diversity supplement from NIGMS to support Mr. Fabio Urbina’s graduate studies in my lab. The supplement supports Mr. Urbina under the co-mentorship of myself and Dr. Shawn Gomez (UNC, Biomedical Engineering) 0% effort

UNC Junior Faculty Development Award (Gupton, PI) 01/01/16-12/31/16

*Identification of Interacting Partners of Trim9 and Trim67*

In this proposal we perform an unbiased quantitative proteomic screen to identify neuronal proteins in close proximity to TRIM9 and TRIM67. 0% effort

Pilot Project UNC University Research Council (Gupton, PI) 05/01/14-04/31/16

*Design and Application of a Novel Axon Guidance Microfluidic Device*

In this proposal we design and develop a PDMS-based microfluidic device to study axon guidance in a gradient of extracellular guidance cues in dissociated neurons. $5,000 total direct, 0% effort

**Mentored Support:**

*NSF GFRP (Emily Wolfgram) 09/01/2020-08/31/2022*

\*Emily wrote this proposal as an undergraduate in my lab, based on her independent project in my lab, but is now a NSF fellow in a graduate program at UCSF.

*F31NS113381 (*Laura McCormick) 08/01/2019-07/31/2022

VASP ubiquitination regulates actin dynamics in dendritic spines

*F31MH116576 (*Melissa Plooster) 09/15/2018-09/14/2021

Determining the localization and function of schizophrenia-linked protein tsnare1b

*F31NS103587 (*Fabio Urbina) 06/15/2017-06/14/2020

TRIM67 as a novel regulator of exocytosis in developing neurons

*F31NS096823 (*Nicholas Boyer) 03/15/2016-12/31/2019

TRIM67 regulateas growth cone filopodia during netrin dependent axon guidance

*F31NS087837 (*Cortney Winkle) 09/29/2014-09/28/2017

TRIM9 controls signaling downstream of netrin in axon branching and guidance

14POST20450085 (Shalini Menon, PhD) 07/01/2014-06/30/2016

Tripartite-Motif E3 Ubiquitin Ligase, TRIM67 and its Role in Neural Stem Cell Development

**8) PROFESSIONAL SERVICE:**

To discipline:

* + - ASCB Council: 2020-2023
      * CEO search committee, 2021-present
      * Chair of ASCB Diversity, Equity, and Inclusion Taskforce, 2020-2021
      * Selection Committee for Inclusivity Prize, 2021
* NIH study section: Synapses, Cytoskeleton and Trafficking Study Section (SYN) *member,* October 2020-June 2024
  + - Editorial:
    - *PLoS Genetics (guest editor 2020)*
    - *Cytoskeleton 2019-*
    - *Molecular and Cellular Neuroscience 2018-*
    - *Open Biology 2017-*
    - Refereeing of manuscripts 2011-ongoing:

*eLife, Neuron, Developmental Cell, PNAS, Journal of Cell Biology, Journal of Neuroscience,* *Molecular Biology of the Cell, PLoS Genetics, PLoS Biology, Journal of Clinical Investigation, Journal of Biological Chemistry, Biophysics, Development, Cell Reports, Scientific Reports, PLoS Biology, Neuroscience, Frontiers in Neuroscience, Frontiers in Molecular Neuroscience, Frontiers in Cell and Developmental Biology, Royal Chemistry Society, ACS Neuro, Cytoskeleton, JoVE, Cell and Molecular Neuroscience, Developmental Neurobiology, eNeuro, nanomedicine*, *BMC Cell Biology, iScience, Trends in Biological Sciences, Molecular Neurobiology, Cerebral Cortex,*

* Grant Review:
* NIH study section: Synapses, Cytoskeleton and Trafficking Study Section (SYN) *standing member 2020-2024*
* NIH study section: Neurodevelopment, Synaptic Plasticity and Neurogdengeration panel (F03A) Nov 2019
* NIH study section: Bioengineering Sciences and Technologies (ZRG1 BST-R 02) *ad hoc,* Feb 2019
* NIH study section: Cellular and Molecular Neuroscience (ZRG1 MDCN-T 02) *ad hoc,* Dec 2018
* NIH study section: Synapses, Cytoskeleton and Trafficking Study Section (SYN) *ad hoc,* Feb 2018
* NSERC: Discovery Grant Proposal, Natural Sciences and Engineering Research Council of Canada
* NIH study section: Drug Discovery and Probes for the Nervous System (ZRG1 MDCN-B 04 S) *ad hoc,* Nov 2016
* NSF *ad hoc,* 2016
* NIH study section: Synapses, Cytoskeleton and Trafficking Study Section (SYN) *ad hoc,* Feb 2016
* NIH study section: Neurodifferentiation, Plasticity, Repair and Rhythmicity (NDPR) *ad hoc*, June 2015
* UK SBS Grants, *ad hoc,* 2013
* Meeting Organization and Chairing:
* Session chair: “Molecular Mechanisms of Neuronal Connectivity” at Cold Spring Harbor Laboratories, September 2022
* Meeting Co-director/Organizer: “Emerging Concepts in the Neuronal Cytoskeleton” focused meeting of IUBMB/EMBO, Santa Clara, Chile (April 2022)
* Session Co-chair: “Cytoskeletal Dynamics, Mechanics, and Cell Motility” ASCB/EMBO Annual Meeting (December 2017*)*
* Session Chair: “Motile and Contractile Systems” Gordon Research Conference (July 2017)
* Session Chair: “Emerging Concepts in the Neuronal Cytoskeleton” focused meeting if IBUMB, Puerto Varas, Chile (April 2017)
* Co-chair“Neuronal Cell Biology: Cytoskeleton and Trafficking” Special Interest Subgroup at the annual meeting of the American Society for Cell Biology (ASCB, 2016)
* Co-chair“Neuronal Cytoskeleton 2.0: A Complex Interplay of Cytoarchitecture and Dynamics” Special Interest Subgroup at the annual meeting of the American Society for Cell Biology (ASCB, 2015)
* Faculty 1000 (2018-present)

Within the University of North Carolina at Chapel Hill:

* + - Hooker Imaging Core Faculty Advisor: 2019-present
    - Committee to select internal nominee for Rita Allen Foundation: 2019
    - Committee to select internal nominee for Brain Research Foundation: 2019
    - Hooker Imaging Core Steering Committee: 2018-2019
    - Grading BIO695 honors thesis: 2018- 2020
    - Jr. Faculty Mentoring:
      * Katie Baldwin (2021-present)
      * Robert Dowen (2019-present)
      * Sarah Cohen (2018-present)
      * Informal grant review (Jimena Guidice, Graham Diering)
    - LCME Medical School Accreditation Committee: 2018
    - Committee to select internal nominee for Searle, Pew, Mallincrodkt: 2018, Rita Allen Foundation 2019
    - Established and **co-chair** a cross-campus “UNC Trafficking Super Group” with Dr. Saskia Neher, Biochemistry and Biophysics 2015-2020.
    - Admissions Committee for UNC Biological and Biomedical Science Program (BBSP), member: 2011-2015, member, **chair** 2016-present
    - Admissions subcommittee for BBSP, 2011-2014, 2016-present
    - BBSP poster scoring 2012-2018
    - NBIO Student Mentoring and Oversight Committee, 2012-2019, 2018-2019 **chair**
    - BBSP graduate student grade appeal Committee, 2016
    - Integrative Program for Biological and Genome Sciences (iBGs) Faculty Search Committee, 2015-2016
    - CBP Seminar Series Committee, 2012-2016, **chair** 2014-2016
    - Cell Biology and Physiology (CBP) Faculty Search Committees: Research Assistant Professor, 2014-2015
    - Neurobiology Curriculum (NBIO) Taskforce on PI Conduct, 2014
    - CBP Faculty Search Committee, 2013-2014
    - Cell and Developmental Biology Graduate Studies Committee, 2012-2014

**9) Commitment to Diversity, Equity, and Inclusion in Science and the Academy**

I am committed to improving the diversity of the scientific community at large, and to increasing equity and inclusion in my lab, the classroom, my department and university, and the scientific societies of which I am a member. Below I include examples of my efforts in these arenas, as well as training opportunities I have participated in to better educate myself. Diversity, Equity, and Inclusion are three independent and important components of this. For brevity these are abbreviated as DEI below, but this does not indicate that each component is not individually and independently critical.

* UNC Department of Cell Biology, DEI Advisory Committee 2020-present
  + Chair of Faculty/Postdoc Search sub-committee
* ASCB DEI Action Taskforce, **\*Chair** 2020-present
* Townhall attendance:
  + ASCB September 2020
  + UNC CBP July 2020
* Trainings, discussions, meetings
  + Respect All Training (Jan 2021)
  + SFN Live chat
  + UNC Race, Racism, and Racial Equity (R3) symposia
  + TIBBS: Dismantling Racism in Academia (2 sessions, 2020)
  + Implicit Bias Training (August 2020)
  + White Identity Awareness Group (2021, six 1.5 hour sessions)
* Lab:
  + We host a DEI slack channel with regular discussion and posting of material
* UNC Biological and Biomedical Science Program (PhD program)
  + Chair the Molecular and Basic Science Admission Committee, where we prioritize diversity, equity, and inclusion in application review, interviews, and acceptance.