

JAEDA COUTINHO-BUDD, PH.D.

University of Vermont

104 Marsh Life Science, Department of Biology

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Email: Jaeda.Coutinho-Budd@uvm.edu Phone: (802) 656-4086**EDUCATION**

- 2012** **Ph.D.** The University of North Carolina at Chapel Hill (Neurobiology)
Advisors: Franck Polleux, Ph.D. and Mark Zylka, Ph.D.
- 2006** **B.A.** Oberlin College (Neuroscience, *High Honors*)

PROFESSIONAL EXPERIENCE

- 08/2018-Present** **Assistant Professor** University of Vermont, Department of Biology
- 07/2012-08/2018** **Postdoctoral Fellow** University of Massachusetts Medical School at Worcester
Advisor: Marc Freeman, Ph.D. (Neurobiology)
- 07/2007-05/2012** **Graduate Student**, University of North Carolina at Chapel Hill
Advisors: Franck Polleux, Ph.D. and Mark Zylka, Ph.D.
- 05/2006-06/2007** **Laboratory Technician**, The University of Vermont (Anatomy and Neurobiology)
Advisor: Cynthia Forehand, Ph.D.
- 08/2005-05/2006** **Honors Research Student**, Oberlin College (Neuroscience)
Advisor: Lynne Bianchi, Ph.D.
- 2005** **Winter Research Intern** (*January*)
Summer Research Fellow (*June-August*)
The University of Vermont (Anatomy and Neurobiology)
Advisor: Cynthia Forehand, Ph.D.
- 2004** **Winter Research Assistant** (January), Harvard University (Psychology)
Advisor: Daniel Wegner, Ph.D.

TEACHING POSITIONS

- FALL 2015, '17** **Course Instructor**, *Communicating Neuroscience: Learning By Doing*, graduate level. University of Massachusetts Medical School.
- FALL 2013, '15, '17** **Lecturer**, *Molecular and Cellular Basis of Neural Development*, graduate level. University of Massachusetts Medical School. Director: Marc Freeman, Ph.D.
- FALL 2016** **Lecturer**, *Neuronal Function and Neurodegenerative Disease*, graduate level. University of Massachusetts Medical School. Director: Larry Hayward, M.D., Ph.D.
- FALL 2011** **Teaching Assistant**, One-week *Neurobiology* molecular biology workshop, graduate level. The University of North Carolina at Chapel Hill. Course Director: Jay Brenman, Ph.D.
- SPRING 2007** **Teaching Assistant**, *Neuroanatomy* lecture and lab, undergraduate level. University of Vermont. Course Director: Cynthia Forehand, Ph.D.

MENTORSHIP

- 2018-2019** Sarah Johnson, UVM Undergraduate Research Student (Biology, CAS)
- 2018-2019** Zoë Paige, UVM Undergraduate Research Student (Neuroscience, CAS)
- 2018-2019** Grace Ross, UVM Undergraduate Research Student (Biology, CAS)
- 2018-2019** Toby Lanser, UVM Undergraduate Research Student (MMG, CALS)

OTHER POSITIONS AND ACTIVITIES

- 2018-PRESENT** **Graduate Affairs Committee**, Department of Biology, The University of Vermont
- 2011-2012** **Undergraduate Research Liaison**, The University of North Carolina at Chapel Hill. Director: Donna Bickford, Ph.D.
- 2010-2012** **Student Representation Committee Member**, The University of North Carolina at Chapel Hill. Directors: William Snider, M.D., and Aldo Rustioni, M.D.
- 2008-2011** **Pierre Morell Research Day Committee Member**, The University of North Carolina at Chapel Hill.

PEER REVIEW

- 2018** **Journal Referee:** *Neuron*, *Communications Biology*

ACADEMIC AND PROFESSIONAL HONORS

- 2016** **Faculty Award for Outstanding Contribution to Curricular Development** (University of Massachusetts Medical School)
- 2016** **Visiting Scientist at the HHMI Janelia Advanced Imaging Center** (Lattice Light-Sheet Microscope)
- 2012** **St. Jude National Graduate Student Symposium** (Invited Participant)
- 2006** **Graduated with high honors in Neuroscience, Oberlin College**

FUNDING

- 2018-2019** **OVRP EXPRESS Grant Program** (UVM Internal Competitive Grant)
- 2015-2017** **American Cancer Society Postdoctoral Fellowship** (PF-14-169-01-CSM)
- 2014-2016** **National Institutes of Health Loan Repayment Program** (NCI, Pediatric Extramural)
- 08/2014** **Ruth L. Kirschstein National Research Service Award Individual Postdoctoral Fellowship** (F32NS089203)
- 2010-2012** **Ruth L. Kirschstein National Research Service Award for Individual Predoctoral Fellowship** (F31NS068038)
- 2008-2009** **UNC Developmental Biology Training Program Fellowship** (T32HD046369)

PUBLICATIONS

Colleen McLaughlin, Jahci Perry-Richardson **Jaeda Coutinho-Budd**, and Heather Broihier. Dying neurons utilize innate immune signaling to prime glia for phagocytosis during development. *Dev Cell* (In Press, 2019).

Jaeda Coutinho-Budd. (2018) Adapting to barriers: glial septate junctions stretch to keep up. *Dev Cell* 47, 688-689. Preview.

Sukhee Cho, Allie Muthukumar, Tobias Stork, **Jaeda Coutinho-Budd**, and Marc Freeman. (2018) Focal adhesion molecules regulate astrocyte morphology and glutamate transporters to suppress seizure-like behavior. *PNAS* 115, 11316-11321.

Jaeda Coutinho-Budd, Amy Sheehan, and Marc Freeman. (2017) The secreted neurotrophin Spätzle3 promotes glial morphogenesis and supports neuronal survival and function. *Genes Dev* 31, 2023–2038.

Lukas J. Neukomm, Thomas C. Burdett, Andrew M. Seeds, Stefanie Hampel, **Jaeda C. Coutinho-Budd**, Jonathan E. Farley, Jack Wong, Yonca Karadeniz, Jeannette M. Osterloh, Amy E. Sheehan, and Marc R. Freeman (2017) Axon death pathways converge on Axundead to promote functional and structural axon disassembly. *Neuron* 95, 78-91.

Jaeda Coutinho-Budd, and Marc Freeman. (2013) Probing the enigma: unraveling glial cell biology in invertebrates. *Curr Op in Neurobiol* 23, 1073-1079. (Review)

Jaeda Coutinho-Budd, Samuel B Snider, Brendan J Fitzpatrick, Joseph E Rittiner and Mark J Zylka. (2013) Biological constraints limit the use of rapamycin-inducible FKBP12-Inp54p for depleting PIP2 in dorsal root ganglia neurons. *JNRBM* 12, e13.

David Kokel, Chung Yan Cheung, Robert Mills, **Jaeda Coutinho-Budd**, Liyi Huang, Vincent Setola, Jared Sprague, Shan Jin, Youngnam Jin, Xi-Ping Huang, Giancarlo Bruni, Clifford Woolf, Bryan Roth, Michael Hamblin, Mark Zylka, David Milan & Randall Peterson. (2013) Photochemical activation of TRPA1 channels in neurons and animals. *Nat Chem Biol* 9, 257-263.

Lisa Bank, Lynne Bianchi, Fumi Ebisu, Dov Lerman-Sinkoff, Elizabeth Smiley, Yu-chi Shen, Poornapriya Ramamurthy, Deborah Thompson, Therese Roth, Christine Beck, Matthew Flynn, Ryan Teller, Luming Feng, G. Nicholas Llewellyn, Brandon Holmes, Cyrrene Sharples, **Jaeda Coutinho-Budd**, Stephanie Linn, Andrew Chervenak, David Dolan, Jennifer Benson, Ariane Kanicki, Catherine Martin, Richard Altschuler, Alisa Koch, Ethan Jewett, John Germiller and Kate Barald. (2012) The cytokine, Macrophage Migration Inhibitory Factor (MIF) acts as a neurotrophin for neurons in the developing mammalian and avian inner ears. *Development* 139, 4666-4674.

Jaeda Coutinho-Budd, Vladimir Ghukasyan, Mark Zylka, and Franck Polleux. (2012) The F-BAR domains from srGAP1, srGAP2, and srGAP3 differentially regulate membrane deformation. *J Cell Sci* 125, 3390-3401.

Cécile Charrier, Kaumudi Joshi, **Jaeda Coutinho-Budd**, Ji-Eun Kim, Nelle Lambert, Jacqueline de Marchena Powell, Wei-Lin Jin, Pierre Vanderhaeghen, Anirvan Ghosh, Takayuki Sassa, and Franck Polleux. (2012) Inhibition of srGAP2 function in dendritic spine maturation by its human-specific paralogs. *Cell* 149, 923-35.

Sabrice Guerrier, **Jaeda Coutinho-Budd**, Takayuki Sassa, Aurelie Gresset, Nicole Vincent Jordan, Keng Chen, Wei-lin Jin, Adam Frost, and Franck Polleux. (2009) srGAP2 regulates neuronal migration and morphogenesis through the ability of its F-BAR domain to induce membrane protrusions. *Cell* 138, 990-1004

Jaeda Coutinho-Budd, Elizabeth Ezerman and Cynthia Forehand. (2008) The effect of cAMP signaling on the longitudinal extension of spinal sensory neurons in the chicken embryo. *J. Anat.* 213, 547–554

ABSTRACTS AND PRESENTATIONS

Jaeda Coutinho-Budd. Cellular and molecular mechanisms of neuron-glia interactions at neuronal cell bodies.

A) McGill University Health Centre, Brain Repair and Integrative Neuroscience (BRaIN) Program at The Research Institute (Invited Speaker, November **2018**)

B) University of Vermont, Biobehavioral Cluster, Psych Sci (Invited Speaker, October **2018**).

Jaeda Coutinho-Budd, Amy Sheehan, and Marc Freeman. The secreted neurotrophin Spätzle3 promotes glial morphogenesis and supports neuronal survival and function.

A) Glia in Health and Disease, CSHL, Long Island, NY (Poster, July **2018**)

- B) Drosophila Neurobiology Meeting, CSHL, Long Island, NY (Speaker, October **2017**)
- C) Glial Biology: Functional Interactions Among Glia and Neurons, Gordon Research Conference, Ventura CA (Poster, March **2017**)
- D) Glial Biology in Medicine, Roanoke, VA (Poster, October **2016**)
- E) American Cancer Society Jiler Professors and Fellows Conference, Salt Lake City, UT (Poster, September **2016**)
- F) Brown University Fly Club, Providence, RI (Invited Speaker, August **2016**)
- G) Glial Health and Disease, Cold Spring Harbor Laboratories, Long Island, NY (Speaker, July **2016**)
- H) Neural Development, Gordon Research Conference, Newport, RI (Poster, July **2016**)
- I) HHMI Neurobiology Conference, Janelia Campus, Ashburn, VA (Poster, Oct 2015)
- B) Drosophila Neurobiology Meeting, CSHL, Long Island, NY (Poster, July 2015)

Jaeda Coutinho-Budd, Vladimir Ghukasyan, Mark Zylka, and Franck Polleux. (**2011**) Molecular mechanisms underlying the membrane-deforming properties of the F-BAR domains of three srGAP proteins. EMBO Conference: Cell Biology of the Neuron, Heraklion, Greece (Poster)

Jaeda Coutinho-Budd, Sabrice Guerrier, Takayuki Sassa, Vladimir Ghukasyan, and Franck Polleux (**2010**) The srGAP family members play distinct roles in neural development. Gordon Research Conference: Neural Development, Newport, RI (Poster)

Sabrice Guerrier, **Jaeda Coutinho-Budd**, Takayuki Sassa, Adam Frost, and Franck Polleux. (**2009**) Bending the rules: srGAP2 bends membrane to form outward protrusions and regulate neuronal morphology. The Second International Conference on F-BAR Proteins, Rånäs Slott, Sweden (Speaker)

Sabrice Guerrier, **Jaeda Coutinho-Budd**, Takayuki Sassa, and Franck Polleux. (**2008**) srGAP2 regulates neurite outgrowth through its non-canonical F-BAR domain. Axon Guidance, Synaptogenesis & Neural Plasticity, Cold Spring Harbor, NY (Poster)

Jaeda Coutinho and Cynthia Forehand (**2005**) Spinal sensory afferent growth in the presence of altered cAMP levels in the chicken embryo.

- A) Faculty for Undergraduate Neuroscience Poster Session, Society for Neuroscience, Washington, D.C. (Poster)
- B) Vermont Chapter of the Society for Neuroscience, Stowe, VT (Speaker)