

LESLEY A. COLGAN, Ph.D.

Max Planck Florida Institute for Neuroscience
1 Max Planck Way
Jupiter, FL 33458
lesley.colgan@mpfi.org (412) 908-3294

Education

PhD	Neuroscience	University of Pittsburgh, Pittsburgh, PA thesis advisor: Dr. Edwin Levitan	2009
BS	MCD Biology	Yale University, New Haven, CT thesis advisor: Dr. Amy Arnsten	2002

Positions

Postdoctoral Fellow	Dr. Ryohei Yasuda, Neuronal Signal Transduction Max Planck Florida Institute for Neuroscience, Jupiter, FL	2012 - present
Postdoctoral Fellow	Dr. Edwin Levitan, Department of Pharmacology University of Pittsburgh School of Medicine, Pittsburgh, PA	2009 - 2011

Funding and Awards

NIH F32MH101954	NRSA Individual Postdoctoral Fellowship Spatiotemporal dynamics of isozyme-specific PKC activity during plasticity	2013 - 2014
NIH T32NS007433	NRSA Institutional Predoctoral Training Program Predoctoral training in basic neuroscience, University of Pittsburgh	2003 - 2004
MPFI Leadership Award		2018
Travel Award, Cold Spring Harbor Laboratory course		2004
Nicholas Adamo scholar athlete award, Silliman College, Yale University		2002
Research Experience for Undergraduates NSF Scholarship: University of Kentucky		2000

Publications

- 1) **Colgan LA**, Hu M, Misler JR, Parra-Bueno P, Moran CM, Lietges M, Yasuda R. PKC α integrates spatiotemporally distinct Ca²⁺ and autocrine BDNF signaling to facilitate synaptic plasticity. *Nature Neuroscience*. 2018. <http://dx.doi.org/10.1038/s41593-018-0184-3>
*News and Views <http://dx.doi.org/10.1038/s41593-018-0190-5>
*Faculty 1000 <http://dx.doi.org/10.3410/f.733642316.793548949>
- 2) Rzuczek SG, **Colgan LA**, Nakai Y, Cameron MD, Furling D, Yasuda R, Disney MD. Precise small-molecule recognition of a toxic CUG RNA repeat expansion. *Nature Chemical Biology*. 2017. <http://dx.doi.org/10.1038/nchembio.2251>
- 3) Xie K, **Colgan LA**, Dao MT, Muntean BS, Sutton LP, Orlandi, Boye SL, Boye SE, Shih CC, Li Y, Xu B, Smith RG, Yasuda R, Martemyanov KA. NF1 Is a Direct G Protein Effector Essential for Opioid Signaling to Ras in the Striatum. *Current Biology*. 2016. <http://dx.doi.org/10.1016/j.cub.2016.09.010>
- 4) **Colgan LA**, Yasuda R. Plasticity of dendritic spines: subcompartmentalization of signaling. *Annual Review Physiol*. 2014. Review. <http://dx.doi.org/10.1146/annurev-physiol-021113-170400>
- 5) **Colgan LA**, Cavolo SL, Commons, KG, Levitan ES. Action potential-independent and pharmacologically unique vesicular serotonin release from dendrites. *Journal of Neuroscience*. 2012. <http://dx.doi.org/10.1523/JNEUROSCI.0020-12.2012>
- 6) **Colgan LA**, Putzier I, Levitan ES. Activity-dependent vesicular monoamine transporter-mediated depletion of the nucleus supports somatic release by serotonin neurons. *Journal of Neuroscience*. 2009. <http://dx.doi.org/10.1523/JNEUROSCI.4210-09.2009>
- 7) Ramos BP, **Colgan LA**, Nou E, Arnsten AF. Beta2 adrenergic agonist, clenbuterol, enhances working memory performance in aging animals. *Neurobiology of Aging*. 2008. <http://dx.doi.org/10.1016/j.neurobiolaging.2007.02.003>
- 8) **Colgan L**, Liu H, Huang SY, Liu YJ. Dileucine motif is sufficient for internalization and synaptic vesicle targeting of vesicular acetylcholine transporter. *Traffic*. 2007. <https://doi.org/10.1111/j.1600-0854.2007.00555.x>
- 9) Smith R, Chung H, Rundquist S, Maat-Schieman ML, **Colgan L**, Englund E, Liu YJ, Roos RA, Faull RL, Brundin P, Li JY. Cholinergic neuronal defect without cell loss in Huntington's disease. *Human Molecular Genetics*. 2006. <https://doi.org/10.1093/hmg/ddl252>
- 10) Ramos BP, **Colgan L**, Nou E, Ovadia S, Wilson SR, Arnsten AF. The beta-1 adrenergic antagonist, betaxolol, improves working memory performance in rats and monkeys. *Biological Psychiatry*. 2005. <https://doi.org/10.1016/j.biopsych.2005.05.022>

Preprints:

- 1) Tu X, Yasuda R, Colgan LA. Rac1 is a downstream effector of PKC α in structural synaptic plasticity. *bioRxiv*. 2019. <https://doi.org/10.1101/750372>

Invited Research Talks

University of Virginia, Department of Pharmacology Seminar, Charlottesville, VA Imaging molecular activity during dendritic spine plasticity	2019
JST – MPFI Joint Workshop on Neuroscience and Single Cell Analysis, Jupiter, FL Spatiotemporal activity of PKC isozymes during spine plasticity	2018
Gordon Research Conference: Cell Biology of the Neuron, Waterville, NH Multiple signals converge on PKC alpha to induce plasticity and learning	2016
Max Planck Society Neuroretreat, Bonn, Germany Deciphering the molecular mechanisms of single spine plasticity	2016
Society for Neuroscience Nanosymposium, Chicago, IL Spatiotemporal activity of PKC isozymes during single spine structural plasticity	2015

Teaching

Undergraduate Courses:

Course Instructor: Introduction to Neuroscience Research, co-taught. Florida Atlantic University, Adjunct Faculty, MPFI/FAU Honors Program	Fall, 2019
Teaching Assistant: Introduction to Neurobiology University of Pittsburgh, Department of Neuroscience,	Spring, 2005

Graduate Courses:

Invited Lecturer, Advanced Neuroscience Techniques University of Virginia, Department of Pharmacology	Spring, 2019
--	--------------

Research Mentoring

Mentees (current):

Mariah Calabag, post-bacc fellow	2019-present
Ye Sun, IMPRS graduate student	2017-present
Xun Tu, IMPRS graduate student	2016-present
Jamie Richards, research assistant	2014-present

Mentees (previous):

Heather Holman, post-bacc fellow, current: MUSC, MD/PhD student	2018-2019
Corey Moran, undergraduate, current: University of Florida, graduate student	2013-2015
Mo Hu, research assistant, current: University of California, graduate student	2012-2015
Samantha Cavolo, research specialist, current: Allegheny Health Services	2010-2011

Leadership and Service

Professional:

Max Planck/FAU Honors Program Advisory Committee	2019-present
Founding Chair, Network for Women in Science, MPFI	2017-2018
Founder, Representative, Tri-Institutional Postdoc Seminar Series	2017-present
Mentor, IMPRS postdoc-student mentorship program	2017-present
Treasurer, MPFI postdoctoral association	2016-2019
MPFI neuroscience retreat committee	2013, 2016, 2017
CNUP annual retreat committee	2005, 2006

Scientific Outreach:

Invited speaker, Neuroscience Club, NOVA Southeastern	2019
Brain Bee Judge, MPFI	2019
Science Career Panel, MPFI	2018
Annual Neuroscience Discovery Day, MPFI	2012 - 2019
Mentor, MPFI teacher intern program	2016, 2017, 2019
Lab TV https://www.youtube.com/watch?v=NSCnAWWprhw	2015
Mentor, Girls Leadership Institute and STEAM Academy	2015

Other Service:

Family Readiness Group President, Pennsylvania National Guard	2007 - 2010
AmeriCorps National Service, Columbus area Habitat for Humanity	2002 - 2003

Professional Development

Lab Dynamics, Leadership and management workshop, Science Management Associates	2019
Grant Writing for Success, Grant writing mentors LLC, Scripps Research Institute	2018
Leadership and Management in Science, hfp consulting	2017
Scientific Communication Workshop, Brett Mensh	2016
The Three Laws of Communication, Jean-luc Doumont, Scripps Research Institute	2015
Writing from the Readers Perspective: scientific writing, George Gopen, Duke University	2012
Immunohistochemistry, Immunofluorescence, Live cell imaging course, CSHL	2006
Survival Skills and Ethics Program, University of Pittsburgh	2006

Professional Associations

Society for Neuroscience
American Society for Cell Biology

References

Ryohei Yasuda, PhD

Scientific Director
Neuronal Signal Transduction
Max Planck Florida Institute,
Jupiter, FL
ryohei.yasuda@mpfi.org
561-972-9202

Edwin Levitan, PhD

Professor and Vice Chair, Research
Department of Pharmacology
University of Pittsburgh
Pittsburgh, PA
elevitan@pitt.edu
412-648-9486

Kirill Martemyanov, PhD

Professor and Co-Chair
Department of Neuroscience
The Scripps Research Institute,
Jupiter, Florida 33458
kirill@scripps.edu
561-228-2770