

SUPRAJA VARADARAJAN

EDUCATION

University of California Los Angeles, CA

Ph.D. Neuroscience

June 2017

New Jersey Institute of Technology, Newark, NJ

M.S. Biomedical Engineering

2008

Visvesvaraya Technological University, Bangalore, India

B.E. Biotechnology Engineering, First-class with Distinction

2006

RESEARCH EXPERIENCE

Postdoctoral Fellow

July 2017 – Present

Advisor: Andrew D. Huberman, Ph.D.

Department of Neurobiology, Stanford University

Leveraging developmental guidance cues to promote visual circuit regeneration

Graduate Student

2010-2017

Advisor: Samantha J. Butler, Ph.D.

Interdepartmental Neuroscience Program, University of California, Los Angeles

Redefining the role of netrin1 as an axon guidance cue in the developing spinal cord

Staff Research Associate II

2008 – 2010

Advisor: Aileen J. Anderson, Ph.D.

Department of Anatomy & Neurobiology,

Christopher and Dana Reeve Foundation Core Facility, University of California, Irvine

Investigating axonal regeneration in spinal cord injury models using biomaterial scaffolds

Research Assistant

2007

Advisor: Mesut Sahin, Ph.D.

Department of Biomedical Engineering, New Jersey Institute of Technology

Building multichannel electrodes for micro-stimulation of the motor cortex and cerebellum

Research Intern

2006

Advisor: G. V. Krishnamurthy, Ph.D.

Department of Microbiology, Veterinary College, Bangalore, India

Development and maintenance of cell lines and fibroblast cultures

ACADEMIC AND PROFESSIONAL HONORS

Samuel Eiduson Student Lecture Award	2017
Dissertation Year Fellowship, University of California Los Angeles	2016 - 2017
Phi-Beta Kappa Alumni International Scholarship Award	2016
Brain Research Institute/Semel Institute Neuroscience Travel Award	2016
Graduate Division Travel Award, University of California Los Angeles	2015
Qualcomm Innovation Fellowship Finalist, Qualcomm, San Diego	2013
Provost Fellowship, New Jersey Institute of Technology	2006-2007

PUBLICATIONS

Varadarajan, S.G. and Huberman, A.D., 2017. Uniformity from Diversity: Vast-range light sensing in a single neuron type. **Cell** (Preview) 171: 738-740

Varadarajan, S.G., Kong, J.H., Phan, K.D., Kao, T.-J., Panaitof, S.C., Cardin, J., Eltzchig, H., Kania, A., Novitch, B.G. and Butler, S.J., 2017. Netrin1 produced by neural progenitors, not floor plate cells, is required for axon guidance in the spinal cord. **Neuron** 94: 790–799

Recommended on F1000 Prime

Featured in Biomedical Picture of the Day

Varadarajan, S.G. and Butler, S.J., 2017. Netrin1 establishes multiple boundaries for axon growth in the developing spinal cord. **Developmental Biology** 430: 177-187

Yamauchi, K., **Varadarajan, S.G.**, Li, J.E., and Butler, S.J., 2013. Type Ib BMP receptors mediate the rate of commissural axon extension through inhibition of cofilin activity. **Development** 140: 333-342

TEACHING EXPERIENCE

Teaching Assistant, University of Southern California	Los Angeles, CA
Human Physiology, Biological Sciences	Fall 2011

Teaching Assistant, University of Southern California	Los Angeles, CA
Cell Biology and Physiology, Biological Sciences	Spring 2012

Teaching Assistant, New Jersey Institute of Technology	Newark, NJ
Elementary Science Outreach Program at the Center for Pre-College Programs	2007 - 2008

Teaching Assistant, New Jersey Institute of Technology	Newark, NJ
Management course, Center for Pre-College Programs	Summers 2007, 2008

PRESENTATIONS

Platform Presentations

1. “Redefining the role of netrin1 as an axon guidance cue in the developing spinal cord”, 25th Samuel Eiduson Student Lecture, University of California Los Angeles, May 2017.
2. “Netrin1 establishes multiple boundaries to locally guide axons in the developing spinal cord”, Axon and dendrite development Nanosymposium, Society for Neuroscience, San Diego, November 2016.
3. “Netrin1 establishes multiple boundaries to locally guide axons in the developing spinal cord”, Axon guidance, Synapse Formation & Regeneration Meeting, Cold Spring Harbor Labs, September 2016.
4. “Netrin1 establishes short-range axon guidance boundaries in the developing spinal cord”, Synapse to Circuit Seminar Club, University of California Los Angeles, May 2016.
5. “Design and analysis of dynamic neural circuits within Microfluidic systems”, Qualcomm Innovation Fellowship Finalists presentation. San Diego, March 2013.
6. “BMP signal modulation in commissural axons”, Neurobiology Seminar, University of Southern California, Los Angeles, October 2011.
7. “Exploring the regulation of BMP signaling from cell body to growth cone”, Neurobiology Retreat, University of Southern California, Los Angeles, May 2011.
8. “Compartmentalization of neurons using a Campenot chamber”, Neurobiology Seminar, University of Southern California, Los Angeles, February 2011.

Poster Presentation

1. “Netrin1 mediates an extensive axon growth boundary in the developing spinal cord”, 12th Annual Stem Cell Conference, University of California Los Angeles, February 2016.
2. “Netrin1 mediates an extensive axon growth boundary in the developing spinal cord”, Axons: from Cell Biology to Pathology, Keystone Symposia, NM. January 2016.
3. “Netrin1 present in the ventricular zone defines a repulsive boundary in the developing spinal cord”, 27th Annual Brain Research Institute’s Neuroscience Poster Session, University of California Los Angeles, November 2015.
4. “Netrin1 present in the ventricular zone defines a repulsive boundary in the developing spinal

cord”, 9th Annual Neural Microcircuits Training Program Symposium, University of California Los Angeles, May 2015.

5. “Netrin1 present in the ventricular zone defines a repulsive boundary in the developing spinal cord”, 11th Stem Cell Conference, University of California Los Angeles, February 2015.
6. “Netrin1 present in the ventricular zone defines a repulsive boundary in the developing spinal cord”, 26th Annual Brain Research Institute’s Neuroscience Poster Session, University of California Los Angeles, November 2014.
7. “Netrin1 present in the ventricular zone defines a repulsive boundary in the developing spinal cord”, Axon Guidance, Synapse formation and Regeneration, Cold Spring Harbor Laboratory Meeting, NY, September 2014.
8. “Netrin1 in the ventricular zone defines a repulsive boundary”, 8th Annual Neural Microcircuits Training Program Symposium, University of California Los Angeles, May 2014.
9. “Netrin1 in the ventricular zone defines a repulsive boundary”, Broad Stem Cell Research Center Meeting. Asilomar, CA, April 2014.
10. “Netrin1 in the ventricular zone defines a repulsive boundary”, 10th Stem Cell Symposium University of California Los Angeles, February 2014.
11. “The role of BMPs in modulating the response of commissural axons to Netrin1”, Neuroscience Graduate Student Symposium, University of Southern California, January 2012.