**Mridu Kapur**

PhD., Neurosciences, Stanford University

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**EDUCATION**

STANFORD UNIVERSITY, Stanford, CA, USA 2006-2013

*Degree: PhD. in Neurosciences*

Faculty Advisor: Dr. Yanmin Yang, Department of Neurology and Neurological Sciences

Coursework GPA: 4.0 out of 4.0

AMHERST COLLEGE, Amherst, MA, USA 2002-2006

*Degrees: Bachelor of Arts in Neurosciences*

*Bachelor of Arts in French*

Summa cum laude with distinction

Coursework GPA: 3.98 out of 4.0

**RESEARCH EXPERIENCE**

**Postdoctoral Research** 2013-Present

*Lab of Susan Ackerman, The Jackson Laboratory*

**Graduate Research** 2007-2013

*Lab of Yanmin Yang, Department of Neurology, Stanford University, Stanford, CA, USA*

Investigated the role of the neuronal spectraplakin BPAG1n4 in retrograde axonal transport.

**Laboratory Rotations** 2006-2007

*Neurosciences Program, Stanford University, Stanford, CA, USA*

Lab of Ron Kopito: Investigated the cytoplasmic penetration and behavior of polyglutamine aggregates in mammalian cells.

Lab of Shaul Hestrin: Investigated cortical microcircuits using simultaneous whole-cell patch clamp recordings and calcium imaging in acute slices.

**Senior Honors Thesis** 2005-2006

*Lab of Patrick Williamson, Amherst College, Amherst, MA, USA*

Characterized the Drs2 and Cdc50 families of phospholipid translocases in yeast using a flow cytometer assay of transport.

**Undergraduate Research Fellow** Summer 2005

*Lab of David Corey, Harvard Medical School, Boston, MA, USA*

Expressed and characterized tetracysteine tagged TRPA1 in a heterologous system.

**Research Assistant/Mellon Academic Intern** 2003-2004

*Lab of John-Paul Baird, Amherst College, Amherst, MA, USA*

Carried out pilot studies on the effect of Neuropeptide Y delivery to the lateral parabrachial nucleus on feeding behavior in rats.

**Kaufmann Fellow** Summer 2004

*Lab of Adrian Harwood, University College London, London, UK*

Developed expression and knockout constructs to investigate the role of inositol biosynthetic genes in lithium sensitivity in *Dictyostelium discoideum*.

**Howard Hughes Research Fellow, Neural Plasticity** Summer 2003

*Lab of Steve George, Amherst College, Amherst, Ma, USA*

Investigated the role of the sodium-calcium exchange in supernormality and the depolarizing afterpotential in *Lumbricus terrestris* using intracellular recordings.

**TEACHING AND MENTORING EXPERIENCE**

**Mentoring of undergraduate research projects**

Human Biology Research Exploration program (HB-REX) 2010-2012

*Lab of Yanmin Yang, Department of Neurology, Stanford University, Stanford, CA, USA*

Mentored and supervised summer research projects of Stanford University undergraduates in the Human Biology program (2 students).

Stanford Summer Research Program (SSRP) 2007-2008

*Lab of Yanmin Yang, Department of Neurology, Stanford University, Stanford, CA, USA*

Mentored and supervised research by visiting undergraduate students (2 students).

**Teaching Experience**

Teaching assistant: Intracellular Trafficking and Molecular Motors 2008-2013

*Stanford University, Stanford, CA, USA*

Designed and led lab sessions for the spring quarter freshman course.

Teaching assistant: Molecular and Cellular Neurobiology Fall 2008

*Stanford University, Stanford, CA, USA*

Led small group sections in critical discussions of neurobiology research papers and review of concepts covered in class. Wrote exams and evaluated student performance.

Teaching assistant: Biochemistry Spring 2006

*Amherst College, Amherst, MA, USA*

Teaching assistant: Molecular Biology Fall 2005

*Amherst College, Amherst, MA, USA*

Teaching assistant: Fundamental Principles of Chemistry Fall 2003

*Amherst College, Amherst, MA, USA*

**FELLOWSHIPS**

Stanford Graduate Fellowship in Science and Engineering 2006-2009

Mellon Fellowship for undergraduate research, Amherst College 2004

Kaufmann Fellowship for undergraduate research, Amherst College 2004

Howard Hughes Undergraduate Research Fellowship 2003

**HONORS AND AWARDS**

James Olds Memorial Neuroscience Award for undergraduate thesis research 2006

Phi Beta Kappa National Academic Award Society 2006

Sigma Xi Scientific Research Society 2006

National Biology Award, India 2002

**AFFILIATIONS**

Associate Faculty Member, F1000 2008-present

Student Member, American Society for Cell Biology 2012-present

Student Member, Society for Neuroscience 2006-2008

**PEER REVIEW**

Primary reviewer, PloS One (x4) 2012

Post-publication peer review, Faculty of 1000 2008-Present

**PUBLICATIONS**

**Research Papers**

**M. Kapur,** M.T. Maloney, W. Wang, X. Chen, I. Millan, T. Mooney, J.Yang and Y. Yang. 2014. An Sx-IP motif interaction at the microtubule plus end is important for processive retrograde axonal transport. *Cell Mol Life Sci.* Epub ahead of print.

**M. Kapur**, W. Wang, M.T. Maloney, I. Millan, V.F. Lundin, T.-A. Tran, and Y. Yang. 2012. Calcium tips the balance: a microtubule plus end to lattice binding switch operates in the carboxyl terminus of BPAG1n4. *EMBO reports*. 13:1021–9.

Stone, A., C. Chau, C. Eaton, E. Foran, **M. Kapur**, E. Prevatt, N. Belkin, D. Kerr, T. Kohlin, and P. Williamson. 2012. Biochemical Characterization of P4-ATPase Mutations Identified in Patients with Progressive Familial Intrahepatic Cholestasis. *J. Biol. Chem*. 287(49):41139-51

Wang, W., V.F. Lundin, I. Millan, A. Zeng, X. Chen, J. Yang, E. Allen, N. Chen, G. Bach, A. Hsu, M.T. Maloney, **M. Kapur**, and Y. Yang. 2012. Nemitin, a novel map8/map1s interacting protein with wd40 repeats. *PloS one*. 7:e33094.

King, J., M. Keim, R. Teo, K.E. Weening, **M. Kapur**, K. McQuillan, J. Ryves, B. Rogers, E. Dalton, R.S.B. Williams, and A.J. Harwood. 2010. Genetic control of lithium sensitivity and regulation of inositol biosynthetic genes. *PloS one*. 5:e11151.

**Conference Submissions**

**Kapur, M**., M.T. Maloney, W.Wang and Y.Yang. (2012)  A calcium regulated protein interaction at the microtubule plus end plays an important role in retrograde axonal transport. *American Society for Cell Biology, Annual Meeting.*

**Kapur, M**. and Y.Yang. (2009) BPAG1n4: A coordinator of axonal transport. *Stanford Institute for Neuro-innovation and Translational Neurosciences, Annual Retreat.*

Teo, R., J.King, J.V. Reddy, O.Peters, M.Keim, **M.Kapur**, O.Hoeller, E.Dalton, W.J.Ryves and A.J. Harwood. (2008) Lithium inhibits PIP3 signalling during cell chemotaxis. *UK Phosphoinositide Meeting, Biochemical Society.*

Williamson,P., C. Chau, C. Eaton, E. Foran, **M. Kapur**, J. Paterson, D. Daleke, M. Halleck, R.A. Schlegel. (2007) Membrane Asymmetry and Trans-Membrane (Flip-Flop) Motion: P-Type ATPases that Transport Phospholipid. *Biophysical Society, Annual Meeting.*

**REFERENCES**

Dr. Yanmin Yang

*Principal Investigator and Dissertation Advisor*

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Dr. Kang Shen

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Dr. Ron Kopito

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