

KAKOLI PARAI

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EXPERIENCE

STANFORD UNIVERSITY

Postdoctoral Scientist (Department of Pediatrics)

Palo Alto, CA
Jan 2008 - Present

- Designing and conducting experiments *in vivo* in neonatal pulmonary disease models
- Mentor – Dr. Richard Bland, Professor of Pediatrics, Stanford University, CA

EVANSTON NORTHWESTERN HEALTHCARE

Postdoctoral Fellow (Molecular and Cellular Biology)

Evanston, IL
Aug 2005 – Aug 2007

- Prepared research proposal and received NIH Postdoctoral Fellowship, Grant #1F32HL086216-01
- Planned, designed, and executed all smooth muscle related experiments; also performed other molecular and cellular experiments to test hypothesis
- Mentor – Dr. J.-P. Jin, Chief of Molecular Cardiology, Northwestern University, IL
- Experience in
 - SDS-PAGE, Western blot, Mutagenesis, Southern and Northern blot, RT-PCR
 - Mammalian cell culture and transfection techniques, isolating primary cell cultures, cell proliferation and migration assays
 - Cre-loxP strategy to create knockout mouse model, breeding transgenic animals and genotyping, *in vitro* smooth muscle contractility measurement
- Projects
 - Characterization of h2-calponin promoter and its effect on tension regulation
 - H2-calponin gene targeted mice and its knockout effects on smooth muscle function
 - Effect of parathyroid hormone on osteoblast

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

Teaching Assistant

St. John's, Canada
Sep 2001 - Dec 2003

- Guided laboratory sessions for physiology and pharmacology studies; Managed and supervised laboratory experiments of 30 students in the BS program

EDUCATION

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

PhD, Cardiovascular Physiology and Pharmacology (GPA 4.0)

St. John's, Canada
Sep 2000 - Oct 2004

- Recipient of merit-based transfer from Masters to PhD program during the first year of the program
- Awarded the Cardiovascular and Renal Physiology Graduate program prize for being the top graduate student in the program
- Awarded the Fellow of School of Graduate Studies 2003-04
- Thesis - Changes in vascular function in hypertension: Role of chloride in altered electromechanical coupling in salt hypertension
- Mentor – Dr. Reza Tabrizchi, Professor of Medicine, Memorial University, Canada
- Conducted experiments in *In vivo* and *In vitro*
 - Anesthetized animals, catheterized blood vessels, and measured blood pressure and heart rate
 - Assessed drug action on isolated tissues and conducted histological analysis of blood vessels
- Used statistical programming tools including Sigma Plot, SPSS, NCSS

INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH

Bachelor of Science, Pharmaceutical Sciences

Wardha, India
Aug 1994 - Jun 1998

- Ranked 2nd out of a class of 60
- Certified registered pharmacist in India
- Focused on pharmacokinetic and pharmacodynamic studies including
 - Dose-response curve and determine different variables such as EC_{50} , E_{max} , elimination constant, volume of distribution, clearance of a drug
 - Efficacy studies to compare different drug candidates.

PUBLICATIONS

- Huang QQ., Hossain MM., Wu K., **Parai K.**, Pope RM., Jin JP. (2007) Knockout of h2-calponin enhances macrophage motility and phagocytosis. (In preparation)
- Bieger D., **Parai K.**, Ford CA. and Tabrizchi R. (2006) Beta-adrenoceptor mediated responses in rat pulmonary artery: putative role of TASK-1 related K channels. *Naunyn Schmiedebergs Arch Pharmacol.* **373(3)**:186-96.
- **Parai K.** and Tabrizchi R. (2005) Impact of nitric oxide synthase inhibitor and chloride channel antagonist on mesenteric vascular conductance in anesthetized Dahl normotensive and hypertensive rats. *J. Cardiovasc. Pharmacol.* **45(6)**:569-579.
- **Parai K.** and Tabrizchi R. (2005) Effects of chloride substitution in isolated mesenteric blood vessels from Dahl normotensive and hypertensive rats. *J. Cardiovasc. Pharmacol.* **46(1)**:105-114.
- **Parai K.** and Tabrizchi R. (2002) A comparative study of the effects of Cl⁻ channel blockers on mesenteric vascular conductance in anesthetized rat. *Eur. J. Pharmacol.* **448(1)**:59-66.

CONFERENCES & ABSTRACTS

- Huang Q.-Q., Hossain M.M., Wu K., **Parai K.**, Pope R.M., Jin J.-P. (2008) **K**nockout of H2-calponin Enhances Macrophage Motility and Phagocytosis. *Biophys. J.* 2008 94: 3171
- **Parai, K.**, J.-P Jin (2008) H2-calponin deficient mice and the effects on smooth muscle tension regulation. 2008 Biophysical Society Meeting Abstracts, *Biophysical Journal*, *Biophys. J.* 2008 94: 681
- **Parai, K.**, J.-P Jin (2007) H2-calponin gene targeted mice and its knockdown effects on smooth muscle function. 2007 Biophysical Society Meeting Abstracts. *Biophysical Journal*, Supplement, 20a, Abstract, 653-Pos.
- **Parai, K.**, M. M. Hossain, J.-P Jin (2006) Transcriptional regulation of h2-calponin gene by mechanical tension. 2007 Biophysical Society Meeting Abstracts. *Biophysical Journal*, Supplement, 20a, Abstract, 2058-Pos.
- Presented scientific papers at Canadian Cardiovascular Congress in 2003, 2004

ADDITIONAL

- Member of Biophysical Society (2005-Present)
- US Permanent Resident
- Hobbies - Yoga, Indian classical music