

---

## BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

---

NAME Jingsong Zhou	POSITION TITLE Assistant Professor		
eRA COMMONS USER NAME			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Hunan Medical University, Changsha, China	M.D.	1980-1986	Medicine
Rush University-School of Medicine, Chicago, IL	Ph.D.	1991-1997	Physiology and Biophysics

---

### Positions and Employment

- 1986-1991: Teaching and Research Assistant, Department of Physiology, Hunan Medical University, Changsha, China
- 1991-1997: Research Assistant, Department of Molecular Physiology and Biophysics, Rush University School of Medicine
- 2/96-8/96: Visiting graduate student, Department of Physiology, Loyola University
- 8/199 -1997: Research Associate, Department of Molecular Physiology and Biophysics, Rush University School of Medicine
- 1997-11/00: Research Fellow, Clinic Pharmacology, Vanderbilt University School of Medicine
- 2000-present: Assistant Professor, Department of Molecular Physiology and Biophysics, Rush University

### Honors

- "Graduate with Honors", Hunan Medical University, 1986.
- "Outstanding Research", Sigma Xi Scientific Research Society, 1997.
- "Medical Staff Award", Rush University, 1997.
- "American Heart Association Fellowship", 2000-2002

### Scientific Societies and Professional Activities

- Member of Biophysical Society since 1993
- Member of Basic CV Science Council of American Heart Association, 2002
- Referee for Peer-Reviewed Journals: *Molecular Pharmacology*; *The Journal of Biological Chemistry*

### Selected peer-reviewed publications (in chronological order)

- Pouvreau S, Royer L, Yi J, Brum G, Meissner G, Ríos E, and **Zhou J**. (2007). Voltage-operated Ca<sup>2+</sup> sparks require isoform 3 RyR channels in muscle. *Proc. Natl. Acad. Sci.* 104(12):5235-5240.
- Hallaq H, Yang Z, Viswanathan PC, Fukuda K, Shen W, Wang DW, Wells KS, **Zhou J**, Yi J, Murray KT. (2006). Quantitation of protein kinase A-mediated trafficking of cardiac sodium channels in living cells. *Cardiovasc. Res.* 72(2):250-261.
- Rios E, Launikonis BS, Royer L, Brum G, **Zhou J**. (2006). The elusive role of store depletion in the control of intracellular calcium release. *J. Muscle Res. Cell Motil.* 27:337-350.

- Launikonis, BS, **Zhou, J**, Santiago D, Brum G, Rios E. (2006). The Changes in Ca<sup>2+</sup> Sparks Associated with Measured Modifications of Intra-store Ca<sup>2+</sup> Concentration in Skeletal Muscle. *J. Gen. Physiol.* 128(1):45-54.
- Launikonis, BS, **Zhou, J**, Royer, L, Shannon, TR, Brum, G, and Rios, E. (2006). Depletion "skraps" and dynamic buffering inside the cellular calcium store. 2006. *Proc. Natl. Acad. Sci. USA.* 103(8):2982-2987.
- Zhou, J**, Yi, J, Royer, L, Launikonis, BS, González, A, García, J, and Ríos, E. (2006). A probable role of dihydropyridine receptors in repression of Ca<sup>2+</sup> sparks, demonstrated in cultured mammalian muscle. *Am. J. Physiol. Cell Physiol.* 290:C549-C553.
- Zhou, J**, Brum, G, González, A, Launikonis, BS, Stern, MD, and Rios, E. (2005). Concerted vs. Sequential. Two Activation Patterns of Vast Arrays of Intracellular Ca<sup>2+</sup> Channels in Muscle. *J. Gen. Physiol.* 126:301-309.
- Launikonis, BS, **Zhou, J**, Royer, L, Shannon, TR, Brum, G, and Ríos, E. (2005). Confocal imaging of [Ca<sup>2+</sup>] in cellular organelles by SEER, shifted excitation and emission ratioing of fluorescence. *J. Physiol.* 567:523-543.
- Wang, X, Weisleder, N, Collet, C, **Zhou, J**, Chu, Y, Hirata, Y, Zhao, X, Pan, Z, Brotto, M, Cheng, H, Ma, J. (2005). Uncontrolled calcium sparks act as a dystrophic signal for mammalian skeletal muscle. *Nature Cell Biology.* 7(5):525-530.
- Zhou, J**, Launikonis, BS, Rios, E, and Brum, G. (2004). Regulation of Ca<sup>2+</sup> sparks by Ca<sup>2+</sup> and Mg<sup>2+</sup> in mammalian and amphibian muscle. An RyR isoform-specific role in EC coupling? *J. Gen. Physiol.* 124:409-428.
- Rios, E, and **Zhou, J**. (2004). Control of dual isoforms of Ca<sup>2+</sup> release channels in muscle. **(Review) Biol. Res.** 37:583-591.
- Csernoch, L, **Zhou, J**, Stern MD, Brum, G, and Rios, E. (2004). The elementary events of Ca<sup>2+</sup> release elicited by membrane depolarization in mammalian muscle. *J. Physiol.* 557:43-58.
- Zhou, J**, Brum, G, Gonzalez, A, Launikonis BS, Stern MD, Rios, E. (2003). Ca<sup>2+</sup> sparks and embers of mammalian muscle. Properties of the source. *J. Gen. Physiol.* 122 (1):95-114.
- Zhou, J**, Shin, HG, Yi, J, Shen, W, Williams, CM, and Murray KT. (2002). Phosphorylation and putative ER retention signals are required for protein kinase A-mediated potentiation of cardiac sodium current. *Circ. Res.* 91:540-546.
- Zhou, J**, Yi, J, Hu, N, George, A, and Murray, KT. (2000). Activation of protein kinase A modulates trafficking of the human cardiac sodium channel in *Xenopus* oocytes. *Circ. Res.* 87:33-38.
- Zhou, J**, Cribbs, L, Yi, J, Shirokov, R, Perez-Reyes, E, and Rios, E. (1998). Molecular cloning and functional expression of a skeletal muscle dihydropyridine receptor form *Rana catesbeiana*. *J. Biol. Chem.* 273(39):25503-25509.

### **Research Support**

American Heart Association Fellowship. 2000 ~ 2002.

(P.I.) "Molecular tools to study Ca<sup>2+</sup> signaling across two muscle membranes." Grant-In-Aid UCR (University Committee on Research, Rush University). 2001 ~ 2003.

**(Co-P.I.)** "Calcium Movements in Excitation-Contraction Coupling." **(P.I. Eduardo Rios)** NIH:NIAMSD, R37 AR32808-24. 2012

**(Co-P.I.)** "Skeletal Muscle. Ca<sup>2+</sup> Release Control inside the SR." **(P.I. Eduardo Rios)** NIH:NIAMSD, R01 AR04918-05 A1. 2008

**(P.I.)** "Abnormal interactions of mitochondria and sarcoplasmic reticulum in ALS muscle" Research Grant, MDA (Muscular Dystrophy Association), MDA-4351. 2007 ~ 2010.