

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Zhenheng Guo		POSITION TITLE	
eRA COMMONS USER NAME ZHENHENG.GUO		Assistant Professor	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Hunan Medical School, Changsha, China	M.D.	1986	Medicine
University of Virginia, Charlottesville, USA	Ph.D.	1999	Cell Biology

Please refer to the application instructions in order to complete sections A, B, and C of the Biographical Sketch.

A. Professional Positions

1981 to 1986	M.D. candidate, Hunan Medical School, Changsha, China
1994 to 1999	Ph.D candidate, Department of Cell Biology, University of Virginia
1999 to 2004	Research Associate & Senior Research Associate, Department of Physiology, University of Kentucky
2004 to present	Assistant Professor, Department of Physiology, University of Kentucky

Awards and Other Professional Activities

1998 ASCB Predoctoral travel Awards

B. Selected peer-reviewed publications (in chronological order).

- Guo Z, Turner C, Castle D (1998) Relocation of the t-SNARE SNAP-23 from lamellipodia-like cell surface projections regulates compound exocytosis in mast cells. *Cell* 94:537-548
- Castle JD, Guo Z, Liu L (2002) Function of the t-SNARE SNAP-23 and secretory carrier membrane proteins (SCAMPs) in exocytosis in mast cells. *Mol Immunol* 38:1337-1340
- Guo Z, Liu L, Cafiso D, Castle D (2002) Perturbation of a very late step of regulated exocytosis by a secretory carrier membrane protein (SCAMP2)-derived peptide. *J Biol Chem* 277:35357-35363
- Liu L, Guo Z, Tieu Q, Castle A, Castle D (2002) Role of Secretory Carrier Membrane Protein SCAMP2 in Granule Exocytosis. *Mol Biol Cell* 13:4266-4278
- Guo Z, Su W, Ma Z, Smith GM, Gong MC (2003) Ca²⁺-independent Phospholipase A2 Is Required for Agonist-induced Ca²⁺ Sensitization of Contraction in Vascular Smooth Muscle. *J Biol Chem* 278:1856-1863
- Su W, Guo Z, Deschepper CF, Randall DC, Gong MC (2003) Dissociation of coronary artery contractile hyperreactivity from hypertension. *Am J Hypertens* 16:570-576
- Guo Z, Su W, Allen S, Pang H, Daugherty A, Smart E, Gong MC (2005) COX-2 up-regulation and vascular smooth muscle contractile hyperreactivity in spontaneous diabetic db/db mice.

Cardiovasc Res 67:723-735

8. Pang H, Guo Z, Su W, Xie Z, Eto M, Gong MC (2005) RhoA-Rho kinase pathway mediates thrombin- and U-46619-induced phosphorylation of a myosin phosphatase inhibitor, CPI-17, in vascular smooth muscle cells. *Am J Physiol Cell Physiol* 289:C352-360
9. Gong MC, Arbogast S, Guo Z, Mathenia J, Su W, Reid MB (2006) Calcium-independent phospholipase A2 modulates cytosolic oxidant activity and contractile function in murine skeletal muscle cells. *J Appl Physiol* 100:399-405
10. Pang H, Guo Z, Xie Z, Su W, Gong MC (2006) Divergent kinase signaling mediates agonist-induced phosphorylation of phosphatase inhibitory proteins PHI-1 and CPI-17 in vascular smooth muscle cells. *Am J Physiol Cell Physiol* 290:C892-899
11. Xie Z, Su W, Guo Z, Pang H, Post SR, Gong MC (2006) Up-regulation of CPI-17 phosphorylation in diabetic vasculature and high glucose cultured vascular smooth muscle cells. *Cardiovasc Res* 69:491-501
12. Boustany C, Akers S, Guo Z, Su W, Gong MC, Cassis L (2006) Enhanced Vascular Contractility and Diminished Coronary Artery Flow in Rats made Hypertensive from Diet-Induced Obesity. *Int J Obes (Lond)* (2006) Jul 4; [Epub ahead of print]

C. Research Support

Ongoing Research Support

Scientist Development Grant Guo (PI)
01/2004 – 12/2007

American Heart Association National Center

A novel mechanism for up-regulation of RGS2 expression by angiotensin II in vascular smooth muscle cells

The major goal of this project is to elucidate the signal transduction pathways that mediate angiotensin II-induced RGS2 up-regulation in vascular smooth muscle cells.

National Institute of Health R01 (HL082791-01) co-PI (PI: Dr. Ming C. Gong)
07/01/2006-06/30/2011

Vascular Smooth Muscle Hyper-contractility and Hypertension in Type II-Diabetes