

Martin Bienengraeber, PhD

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Education

1987 – 1990 B.A., (Chemistry) Ludwigs-Maximilians-University - University of Munich.
1990 - 1993 M.S., (Chemistry) Ludwigs-Maximilians-University - University of Munich
1994 - 1999 Ph.D., (Biochemistry) Ludwigs-Maximilians-University, University of Munich

Employment

1999 – 2002 Research Fellow, Cardiovascular Research Laboratory, Mayo Clinic
2003– 2010 Assistant Professor, Anesthesiology and Pharmacology, Medical College of Wisconsin (MCW)
2010 - 2016 Associate Professor, Anesthesiology and Pharmacology, MCW
2016 - Adjunct Professor, Anesthesiology and Pharmacology, MCW

Research grants and awards (last 10 years):

2005-2007: Gemi fund; Principal investigator; "Mechanism of cardio-protection by xenon"

2005-2008: NIH/NIGMS; Co-investigator on the project "Effects of anesthetics on ischemic myocardium"

2006-2008: Advancing a Healthier Wisconsin; Principal investigator; "Role of mitochondria in cardiac protection from ischemic injury"

2008-2013: NIH/NIGMS; Co-investigator; "Anesthetic-Induced Cardiac Preconditioning"

2010-2015: NIH/NIHLBI; Principal investigator; "Mechanisms of photobiomodulation in myocardial reperfusion injury"

2015 – 2020: NIH/NIHLBI; Co-investigator; "Reperfusion injury protection strategies during basic life support injury"

2015 - 2020: NIH/NIGMS; Co-investigator; "Anesthetic-Induced Cardiac Preconditioning"

Supervision of doctoral and postdoctoral students: Co-supervised 2 doctoral dissertations and 3 postdoctoral fellows

Research profile

My research examines mitochondria as triggers and effectors in protection of the heart from ischemia and stress, using physiological, pharmacological and molecular techniques as well as proteomics. The overall goal is to identify drugs and proteins that protect cardiomyocyte mitochondria during oxidative stress.

Editorial boards/Journal reviews/Grant review boards:

Editorial board member of *Physiological Genomics*; reviewer for a number of journals including *The Journal of Physiology*, *British Journal of Pharmacology*; *American Journal of Physiology*; *Anesthesiology* and others. Also elected member of NIH study sections and AHA peer review committee.

Publications: 67 publications, 3462 citations; Selected publications listed below:

1. **Bienengraeber M** et al., SUR2A mutations identified in human dilated cardiomyopathy disrupt catalytic KATP channel gating. *Nat Genet* 36: 382-387, 2004.
2. Ljubkovic M, ... **Bienengraeber M**. Targeted expression of Kir6.2 in mitochondria confers protection against hypoxic stress. *J Physiol* 577: 17-29, 2007.
3. Zhang R, ... **Bienengraeber M**. Near infrared light protects cardiomyocytes from hypoxia and reoxygenation injury by a nitric oxide dependent mechanism. *J Mol Cell Cardiol* 46: 4-14, 2009.
4. **Bienengraeber M**, et al. Quantitative characterization of changes in the cardiac mitochondrial proteome during anesthetic preconditioning and ischemia. *Physiol Genomics* 45:163-70, 2013.
5. Keszler A, ... **Bienengraeber M**. Far red/near infrared light-induced protection against cardiac ischemia and reperfusion injury remains intact under diabetic conditions and is independent of nitric oxide synthase. *Front Physiol*. 5:305, 2014.