

Matthew K Martz, Ph.D.

matthew.martz@gmail.com

Background in Biochemistry, Molecular and Cellular Biology with interests in:

- fundamental questions of cellular systems with a particular interest in cell signaling
- understanding fate-based decision processes during complex cellular dynamics and how regulatory networks handle aberrations
- how low-level chemical processes translate into high-level decision making in cells
- integrative approaches to asking scientific questions combining traditional biochemical and molecular biological techniques with novel microscopy methods
- translating cellular systems to computational machines to ask questions from an algorithmic standpoint
- adaption of machine learning techniques in the analysis of experimental data and in model development

Education

2006 - 2013

Ph.D. Biochemistry and Molecular Biology

Thomas Jefferson University

Thesis: Leukemia-Associated RhoGEF (LARG) is a Novel RhoGEF in Mitosis and Required for the Proper Completion of Abscission.

Mentor: Philip Wedegaertner

2002-2006

B.S. Biochemistry and Molecular Biology

Pennsylvania State University

University Park - Eberly College of Science

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Education - Additional

2011 **Introduction to Artificial Intelligence (Advanced Track)**
Sebastian Thrun and Peter Norvig
Stanford University (Online)

Professional Associations

2010 - present **American Society for Cell Biology**
2003 - 2006 **Penn State Biochemistry and Molecular Biology Society**

Research and Professional Experience

present **Manuscript Peer Review**
Biochemistry, Cytoskeleton

2010 - present **Faculty of 1000 Contributor**
<http://f1000.com/thefaculty/member/1861666527248890>

2006 - 2013 **PhD Student**
Thomas Jefferson University
Laboratory of Dr. Philip Wedegaertner
**Novel role for Leukemia-associated RhoGEF in mitosis using
biochemical studies and live cell imaging in collaboration with
Dr. Timothy J. Yen (Fox Chase Cancer Center)**

2005-2006 **Research Internship**
Pennsylvania State University
Penn State College of Medicine
Laboratory of Dr. Kent E. Vrana
TPH2 structure-function relationship through enzyme kinetics

2004 **Research Internship**
Pennsylvania State University
Harrisburg Campus
Laboratory of Dr. Katherine Baker
H. pylori in fresh water sources

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2003 **Research Internship**
Pennsylvania State University
Penn State College of Medicine
Laboratory of Dr. Mary K. Howett
Cloning of HSVII *vhs* (UL41)

Various Programming Initiatives and Minor Open Source Projects

Python, Databases, Linux/FreeBSD, Web
<http://github.com/mutaku>

Mentoring

2013 PhD Student Rotation Mentor
Thomas Jefferson University

2012 Summer Research Internship Student Mentor
Thomas Jefferson University

2010 PhD Student Rotation Mentor
Thomas Jefferson University

2005 - 2006 Biochemistry and Molecular Biology Society Student Mentor
Pennsylvania State University

Honors and Awards

2013 **Selected Participant - American Chemical Society Summer Institute**
American Chemical Society
Washington, DC

2012 **Thomas Jefferson University Alumni Travel Fellowship**
Thomas Jefferson University

2010 **Sigma Xi Research Day Winner**
Thomas Jefferson University

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2002 **Henrietta M. Fisher Memorial Honors Scholarship**
Pennsylvania State University
Eberly College of Science

Meetings and Presentations

2013 **Mid Atlantic Pharmacology Society Meeting**
University of the Sciences

2013 **[Invited Participant] American Chemical Society Summer Institute**
Washington, DC

2012 **[Poster] American Society for Cell Biology Meeting**
San Francisco, CA

2012 **[Invited Poster] Lennox K. Black International Prize for Excellence in
Biomedical Research 7th Symposium**
Thomas Jefferson University

2012 **[Talk] Biochemistry Department Retreat**
Thomas Jefferson University

2012 **[Poster] Experimental Biology**
San Diego, CA

2011 **[Judge] Sigma Xi Research Day**
Thomas Jefferson University

2011 **[Poster] Mid Atlantic Pharmacology Society Meeting**
Thomas Jefferson University

2011 **[Talk] Research in Progress**
Thomas Jefferson University

2011 **Gordon Research Conference on Molecular Pharmacology**
Ventura, CA

2010 **[Poster] Sigma Xi Research Day**
Thomas Jefferson University

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- 2010 **[Poster] G Protein Signaling Workshop**
Philadelphia, PA
- 2010 **[Poster] Biochemistry Department Retreat**
Thomas Jefferson University
- 2010 **American Society for Cell Biology Meeting**
Philadelphia, PA
- 2010 **[Talk] Research in Progress**
Thomas Jefferson University
- 2008 **[Poster] Sigma Xi Research Day**
Thomas Jefferson University
- 2008 **G Protein Signaling Workshop**
New York, NY
- 2005 **[Poster] Penn State Summer Research Fair**
Pennsylvania State University
Penn State College of Medicine

Publications

Google Scholar Profile

<http://scholar.google.com/citations?hl=en&user=--NTAGoAAAAJ>

1. **Martz MK**, Grabocka E, Beeharry N, Yen TJ, Wedegaertner PW. Leukemia-Associated RhoGEF (LARG) is a Novel RhoGEF in Cytokinesis and Required for the Proper Completion of Abcission. *Mol. Biol. Cell* September 15, 2013 vol. 24 no. 18 2785-2794.
2. **Matthew Martz** and Philip Wedegaertner: Faculty of 1000 Biology, 23 Jul 2010 <http://f1000biology.com/article/id/4242964/evaluation>
3. Carkaci-Salli N, Flanagan JM, **Martz MK**, Salli U, Walther DJ, Bader M, Vrana KE. Functional domains of human tryptophan hydroxylase 2 (hTPH2). *J Biol Chem.* 2006 Sep 22;281(38):28105-12. Epub 2006 Jul 24.

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References

Available upon request.