
Laboratory of Molecular Biology, NIDDK/NIH
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EDUCATION AND TRAINING

Post-doctoral fellow, 2007-2010. National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD.
Advisor: Michael W. Krause, Ph.D., in collaboration with John A. Hanover, Ph.D.
Role of the O-GlcNAc modification in insulin signaling and the glucose stress response in *C. elegans*.

Ph.D., Molecular Biology, June 2007. Princeton University, Princeton, NJ.
Thesis Advisor: Virginia A. Zakian, Ph.D.
Heterochromatic silencing at *S. cerevisiae* telomeres: roles for telomere structure and nuclear structure.

Research Technician, 1998-2000. Department of Pediatric Oncology, Dana-Farber Cancer Institute, Boston, MA.
Laboratory of Alan D. D'Andrea, M.D.
Mutational analysis of the DUB-2A deubiquitinating enzyme; biochemical analysis of the interaction between the erythropoietin receptor and RON-STK kinase.

A.B. cum laude, Biological Sciences, May 1998. Smith College, Northampton, MA.
Senior Thesis Advisor: Steven A. Williams, Ph.D.
Analysis of the cuticlin gene family of the human parasite *Onchocerca volvulus*.

TEACHING EXPERIENCE

Instructor, BIOL 317: *Molecular and Cell Biology*, Foundation for Advanced Education in the Sciences (FAES) Graduate School at NIH (Undergraduate, Fall 2009)

Co-Facilitator, *Sex and the Model Organism: A Cell Biology Approach*, Office of Intramural Training and Education, NIH (Undergraduate journal club, Summer 2009)

Quin Morton Teaching Fellow, WRI 159: *Science in the Media*, Princeton Writing Program, Princeton University (2006-07)

Senior Graduate Fellow, McGraw Center for Teaching and Learning, Princeton University (2006-07)

Instructor, *Senior Thesis Writers' Workshop*, Department of Molecular Biology, Princeton University (2003-05)

Assistant in Instruction, Department of Molecular Biology, Princeton University
MOL 506: *Molecular Biology of Eukaryotes* (Graduate, Spring 2004)
MOL 342: *Genetics* (Undergraduate, Fall 2002)
MOL 209: *Principles of Molecular, Cellular and Developmental Biology* (Non-majors, Fall 2001)

FELLOWSHIPS, SCHOLARSHIPS, AND GRANTS

National Institute of Diabetes and Digestive and Kidney Diseases Nancy Nossal Fellowship, 2008-2010
National Science Foundation Pre-doctoral Fellowship in Genetics, 2001-2004
Princeton University First Year Fellowship in Science and Mathematics, 2000-2001
Smith College Blakeslee Fund Research Fellowship, Summer 1998
Howard Hughes Medical Institute Travel Fund Grant, December 1997
Nancy Kershaw Tomlinson Fund Grant, November 1997
Howard Hughes Medical Institute Research Fellowship, Summer 1997
STRIDE Scholar Research Assistant, awarded to 2% of applicants, Smith College 1995-1997
National Merit Scholar, 1995

AWARDS

Presentation Award, NIDDK Fellows' Scientific Retreat, National Institutes of Health, 2010
Fellows Award for Research Excellence (FARE), National Institutes of Health, 2010
Poster Award, NIDDK Fellows' Scientific Retreat, National Institutes of Health, 2008
Thomas J. Silhavy Award for Service to Molecular Biology Dept, Princeton University, 2004
Molecular Biology Departmental Teaching Award, Princeton University, 2002
Phi Beta Kappa, inducted 1998
Sigma Xi, inducted 1998
Highest Honors in Biological Sciences, Smith College, 1998
Margaret Wemple Brigham Prize for Immunology and Microbiology, Smith College, 1998
Emogene Mahoney Prize for best literary essay by a first-year student, Smith College, 1996

UNDERGRADUATE MENTORING

Laboratory Mentor, Krause Lab, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health

- Lindsey Hall, James Madison University '11 (Summer 2010)

Laboratory Mentor, Zakian Lab, Department of Molecular Biology, Princeton University

- Keren Glinert '08 (2005-06)
- Irene Ying, California Institute of Technology '06 (Summer 2005)
- Jillian Godfrey Scaife '04 (Senior Thesis 2003-04)
- Arati Tripathi *08 (Graduate Rotation Student, Spring 2003)

Graduate Mentor, Princeton Summer Undergraduate Research Experience (PSURE), Office of Academic Affairs and Diversity, Princeton University (Summer 2005)

- Program for 11 undergraduate students from various disciplines designed to motivate and prepare underrepresented minorities for graduate school.

PROFESSIONAL DEVELOPMENT

Management Skills for Scientists. Office of Intramural Training and Education, National Institutes of Health. June 2010.

Education and Outreach Workshop. Genetics 2010: Model Organisms to Human Biology. Boston, MA. June 2010.

Biology Education: Focus on Successful Pedagogical Techniques for Large Lecture Classes. 17th International *C. elegans* Meeting, Los Angeles, CA. June 2009.

The National Science Foundation: Funding Opportunities, Evaluation Criteria and Successful Strategies. 17th International *C. elegans* Meeting, Los Angeles, CA. June 2009.

Scientists Teaching Science: An Introduction to Best Practices in Science Education (8 sessions). Office of Intramural Training and Education, National Institutes of Health. March-May 2009.

Grant Writing 101 (3 sessions). NIDDK Office of Fellow Recruitment and Career Development, National Institutes of Health. January-February 2008.

Faculty Development Program, Princeton Writing Program, Princeton University. 2006-07.

LEADERSHIP, SERVICE, AND OUTREACH

Alternate Judge, NIH Fellows Award for Research Excellence (FARE) Competition (for FY 2011)

Instructor, Montgomery County (Maryland) Science Adventures Program for ages 8-15 (2008-10)

Judge, NIH Graduate Student Research Symposium Poster Session (2008-09)

Co-chair, Princeton Molecular Biology Graduate Student Committee (2003-04);
Member, (2001-06)

Reviewer, Assistant in Instruction Handbook, Princeton University (Summer 2004)

Chair, Princeton Molecular Biology Graduate Recruiting Committee (2002-03);
Member, (2001-03)

INVITED TALKS

- Smith College, Life Sciences Colloquium Series, Northampton, MA, Spring 2010.
- Muhlenberg College, Biology Seminar Series, Allentown, PA, Spring 2009.

SELECTED PRESENTATIONS & MEETING ABSTRACTSPlatform Presentations:

Mondoux, MA, Hanover, JA, and MW Krause. 2010. Glucose Stress and O-GlcNAc Cycling Regulate Insulin Signaling in *C. elegans*. National Institute of Diabetes and Digestive and Kidney Diseases Fellows' Retreat. Cambridge, MD.

Mondoux, MA and VA Zakian. 2003. The Role of Peripheral Localization, Rap1p, and Subtelomeric Structure in Telomere Position Effect. Summer Symposium in Molecular Biology: Chromatin Structure and Function. Penn State University, University Park, PA.

Poster Presentations:

Mondoux, MA, Love, DC, Ghosh, S, Hanover, JA, and MW Krause. 2010. O-GlcNAc Cycling and Insulin Signaling Respond to Nutrient Stress in *C. elegans*. Genetics 2010: Model Organisms to Human Biology. Boston, MA.

Mondoux, MA, Hanover, JA, and MW Krause. 2009. The O-GlcNAc Modification Modulates Nutrient Stress and Differentiates DAF-2/DAF-16 Phenotypes in *C. elegans*. 17th International *C. elegans* Meeting. Los Angeles, CA.

Mondoux, MA, Hanover, JA, and MW Krause. 2009. O-GlcNAc Modulates Insulin Signaling and Nutrient Sensing in *Caenorhabditis elegans*. Gordon Research Conference, Glycobiology. Ventura, CA.

Mondoux, MA, Hanover, JA, and MW Krause. 2008. The Role of O-GlcNAc Modification in Insulin and Nutrient Signaling in *Caenorhabditis elegans*. *C. elegans* Aging, Stress, Pathogenesis, and Heterochrony Topic Meeting. Madison, WI.

Mondoux, MA, *Godfrey, JS, and VA Zakian. 2006. The Role of the Nuclear Periphery and Subtelomeric Structure in Telomere Position Effect and Telomere Length Regulation. Yeast Genetics and Molecular Biology Meeting. Princeton, NJ.

Mondoux, MA, *Godfrey, JS, and VA Zakian. 2006. The Role of the Nuclear Envelope and Rap1p in Telomere Position Effect. Genetic Analysis: Model Organisms to Human Biology Meeting. San Diego, CA.

Mondoux, MA, *Godfrey, JS, and VA Zakian. 2004. The Role of Peripheral Localization, Rap1p, and Subtelomeric Structure in Telomere Position Effect. Dynamic Organization of Nuclear Function Meeting. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.

Mondoux, MA, Tham, WH, and VA Zakian. 2002. The Role of Rap1p and Peripheral Localization in Telomere Position Effect. Gordon Research Conference, Chromatin Structure and Function. Tilton, New Hampshire.

*denotes undergraduate co-author

PUBLICATIONSResearch Articles:

[‡]Love, DC, [‡]Ghosh, S, [‡]**Mondoux, MA**, Fukushige, T, Wang, P, Wilson, M, Iser, WB, Wolkow, CA, Krause, MW, and JA Hanover. 2010. Dynamic O-GlcNAc cycling at promoters of *C. elegans* genes regulating longevity, stress, and immunity. *PNAS* 107(16): 7413-8.

Mondoux MA and VA Zakian. 2007. Subtelomeric elements influence but do not determine silencing levels at *Saccharomyces cerevisiae* telomeres. *Genetics* 177(4): 2541-6.

Mondoux MA, ^{*}Scaife, JG, and VA Zakian. 2007. Differential nuclear localization does not determine the silencing status of *Saccharomyces cerevisiae* telomeres. *Genetics* 177(4): 2019-29.

Baek, K-H, **Mondoux, MA**, Jaster, R, Fire-Levin, E, and AD D'Andrea. 2001. DUB-2A, A New Member of the DUB Subfamily of Deubiquitinating Enzymes. *Blood*. 98(3): 636-42.

Kuang, Y, Garcia-Higuera, I, Moran, A, **Mondoux, M**, Digweed, M, and AD D'Andrea. 2000. Carboxy terminal region of the Fanconi anemia protein, FANCG/XRCC9, is required for functional activity. *Blood*. 96(5): 1625-32.

Review Articles & Book Chapters:

Mondoux, MA, Krause, MW, and JA Hanover. 2010. *C. elegans* Genetic Networks Predict Roles for O-GlcNAc Cycling in Key Signaling Pathways. *Current Signal Transduction Therapy*. 5(1): 60-73.

Mondoux, MA, and VA Zakian. 2006. Telomere Position Effect: Silencing Near the End. in *Telomeres, 2nd Edition*. Eds. EH Blackburn, T deLange, and V Lundblad. Cold Spring Harbor Laboratory Press.

^{*}denotes undergraduate co-author

[‡]these authors contributed equally to this work