

# Patricia M. Finkenstadt

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## Education

Ph.D. March 2002 **The Johns Hopkins University School of Medicine**,  
Baltimore, MD  
Advisor: Jay M. Baraban, M.D., Ph.D.  
Field of Study: Neuroscience  
Dissertation title: **Characterization of the Translin/Trax RNA  
Binding Complex**

Translin, and its binding partner Trax, have been implicated in the post-translational regulation of mRNAs. Dissertation research focused on the involvement of the complex in regulating the localization and regulation of mRNA at the synapse.

B.S. May 1996 **Southeast Missouri State University**, Cape Girardeau, MO  
Major: Psychology                      Minor: Zoology

## Teaching Experience

**Phoenix College, Residential Faculty**, Phoenix, AZ, August 2005 – present

**Anatomy and Physiology I and II:** A two-semester course sequence designed to introduce students to the structure and function of the human body. Topics include cells, tissues, and all body systems. Laboratory projects are focused on anatomical studies.

**Ashland University, Assistant Professor of Biology**, Ashland, OH, August 2002 – May 2005

**Cell Biology:** An intensive course designed to introduce upper level biology students to the principles of advanced cellular biology, including cell membrane structure and function, transcription, translation, cell signaling, vesicular trafficking, and protein sorting. Lab projects are designed to familiarize students with a variety of modern laboratory techniques, including SDS-PAGE, immunoblot analysis, cell culture, immunoprecipitation, chromatography and spectrophotometry.

**Molecular Biology:** A laboratory intensive course focusing on the molecular aspects of gene structure, transcription regulation, translation, and RNA processing. Coursework is designed to encourage students to develop a molecular biological vocabulary and gain proficiency in the techniques utilized by scientists to study these topics.

**Advanced Human Physiology:** A rigorous analysis of the human body from a physiological perspective. Emphasis is on understanding the biological and chemical properties of the major organ systems, specifically the nervous, endocrine, muscular, and cardiovascular systems.

**Human Biology:** A non-majors course designed to introduce students to the basic functioning of the human body. Emphasis is on understanding the concept of homeostasis as it applies to each of the major organ systems. Coverage of each organ system includes a discussion of pathological states that affect the system.

**Primary Literature: Readings in the Sciences:** An innovative collaborative faculty/student seminar designed to expose students to literature spanning the ecological and cellular aspects of biology. Students gain experience in preparing, presenting and discussing original research articles.

**National Science Foundation and Dunbar Senior High School Teaching Fellow,**  
Human Anatomy and Physiology, Baltimore, MD, Spring 2002

Offered scientific expertise to teachers at Dunbar Senior High School while gaining experience in curriculum development, lecture design and delivery, laboratory instruction, and alternative methods of teaching to disadvantaged and minority students.

**The Johns Hopkins University, Teaching Assistant,** Topics in Neuroscience, Fall 2001  
(with Dr. Michael Steinmetz)

**The Johns Hopkins University, Teaching Assistant,** Introduction to Cellular and Molecular Neuroscience, Spring 2000, Spring 1999 (with Dr. Douglas Fambrough)

**Biotechnical Institute of Maryland, Instructor,** Baltimore, MD, Spring 2000

Designed and taught an adult education lecture and laboratory.

## **Laboratory Instruction**

Trained high school, undergraduate, and graduate students and post-doctoral fellows in basic and advanced laboratory techniques.

## **Research Experience**

**Ashland University, Principal Investigator**, Ashland, OH, January 2003 – May 2005

Directed undergraduate students in performing original research related to the function of the Translin/Trax RNA binding complex. Research focuses on the subcellular localization of Translin in established cell lines using fluorescent microscopy.

**The Johns Hopkins University School of Medicine, Post-Doctoral Fellow**,  
Baltimore, MD, March 2002 – August 2002

Explored the function of the Translin/Trax RNA binding complex using fluorescent microscopy, electromobility shift assays, and immunoblot analysis.

## **Grants and Awards**

**Phoenix College Summer Project**, Summer 2006

Awarded grant from Phoenix College to attend a professional development course in coral reef ecology. Course included travel to Queensland, Australia, for extensive course work and SCUBA diving.

**Phoenix College Proposition 301 Grant**, Spring 2006

Awarded grant worth \$55,000 to purchase modern physiological data acquisition and analysis hardware and software from BioPac Systems (CA). Updated laboratory equipment is employed for skill-based and interactive experiments to involve students in dynamic activities that increase their comprehension of the functioning of the human body.

**Ashland University Study/Writing Grant**, Summer 2004

Awarded research grant from Ashland University to pursue the subcellular localization of Translin and Trax in established cell lines. Additional work focused on expanding the technical capabilities of the labs at AU in

order to better prepare students for graduate and professional degree programs.

**National Science Foundation Fellowship, Spring 2002**

Awarded fellowship to act as scientific resource for secondary school human anatomy and physiology teacher, as well as to gain experience in classroom and laboratory instruction at Dunbar Senior High School, Baltimore, MD.

**National Research Service Award, National Institutes of Mental Health, August 2000**

Received three-year pre-doctoral grant for thesis research entitled “The Function of the Translin/Trax RNA Binding Complex.”

**Laboratory Skills**

Gained experience and proficiency in a variety of laboratory techniques, including SDS-PAGE/immunoblot analysis, immunoprecipitation, electromobility shift assays, recombinant DNA technology (DNA electrophoresis, polymerase chain reaction, restriction enzyme analysis, and DNA purification), *in situ* hybridization, immunocytochemistry, immunohistochemistry, fluorescent microscopy, antibody production, column chromatography, RNA purification, protein purification, tissue culture maintenance, and primary neuronal culture preparation.

**Academic Societies and Honors**

May 1996	<i>Summa cum laude graduate</i> , Southeast Missouri State University
May 1996	Honor Scholar, Southeast Missouri State University
May 1996	Graduation with Distinction in Psychology, Southeast Missouri State University
Spring 1995	Phi Kappa Phi Honor Society
Spring 1994	Psi Chi Honor Society (Psychology)

**Professional Societies**

Human Anatomy and Physiology Society, Spring 2006 - present  
Society for Neuroscience, Spring 1999 – present

## **Professional Service**

Faculty Senate, Phoenix College, Fall 2006 – present

College Space Management Allocation Committee, Phoenix College, Fall 2006 – present

Senate Student Life Committee, Ashland University, August 2004 – May 2005

Faculty Senate, Ashland University, November 2004 – May 2005

## **Volunteer Work**

**Phoenix College, Contributor**, Sexually Transmitted Disease Seminar, Spring 2006

**Maryland Science Center Community Outreach, Assistant**, April 2000

**Tench Tilghman Elementary School, Tutor**, Reading for Life, Baltimore, MD 1998-1999