

Laura L. Frost, Ph.D.

201 Wood Street
Pittsburgh, PA 15222

O: 412.392.3891
lfrost@pointpark.edu

Education

Ph.D. Microbiology and Immunology (2003)

West Virginia University, Morgantown, WV

Dissertation: STUDIES ON THE EFFECTS OF PROPANIL ON MACROPHAGE
FUNCTION AND SIGNALING

Master of Science in Plant Pathology (1995)

Iowa State University, Ames, IA

Thesis: SOYBEAN CYST NEMATODE, *HETERODERA GLYCINES*:
EFFECTS OF FOUR HERBICIDES ON EGG HATCH AND
FACTORS AFFECTING EMBRYOGENY

Bachelor of Science, Biology Pre-Med concentration (1993)

California University of Pennsylvania, California, PA

Teaching and Advising Experience

August 2010 – present Associate Professor, Point Park University, Pittsburgh, PA

August 2005 – August 2010 Assistant Professor, Point Park University, Pittsburgh, PA

Courses taught at Point Park University:

General Biology I

General Biology I Laboratory

Introductory Microbiology (with lab)

Biochemistry

Immunology

Molecular and Cellular Biology

Developmental Biology

Genomics and Proteomics

Receptors, Signaling Pathways and Cellular Control Mechanisms

Introduction to Genetics (with lab)

Human Genetics

Botany (with lab)

Virology

Introduction to Scientific Literature (Student requested Special Topics course)

Introduction to the Natural Sciences I and II (basic principles of physics, biology and chemistry)

Traditional classroom, hybrid and online

Advising duties:

Maintain contact and advise over 50 traditional and non-traditional undergraduate
Biology, PreMed and Biotechnology majors

May 2003 – May 2005 Assistant Professor, Gannon University, Erie, PA

August 2002 – 2003 Instructor, Gannon University

Courses taught at Gannon University:

Microbiology

Microbiology Laboratory

Clinical Microbiology
Virology
Aquatic Micro. Lab
Advised 20-25 undergraduate pre-pharmacy majors

Clinical Micro Lab
Aquatic Microbiology
Introductory Microbiology

Professional Memberships and Activities

American Association for the Advancement of Science (AAAS)
American Society for Microbiology (ASM)
Allegheny Branch of the American Society for Microbiology (ABASM)
Quality Matter Certified Master Reviewer
Advisory Board Member: Annual Editions, Microbiology, McGraw Hill 2009.
Reviewer for McGraw Hill publishers: Integrated Science 5th and 6th ed. by Tillery, Enger and Ross.
Reviewer for W.H. Freeman publishers: Genetics: A Conceptual Approach, 3rd, 4th and 5th ed. by Benjamin Peirce

Honors and Awards

2010 Outstanding Advisor, Point Park University
2003 Nominated for the "Excellence in Teaching" award, Gannon University
1994 International Society of Nematology, Best Student Research Paper
1993 Regional Beta Beta Beta, Best Student Research Paper
1992 Member, Beta Beta Beta National Biological Honor Society, Upsilon Theta Chapter

Patents

Barnett, J.; R. Schafer; K Van Dyke, **L. Frost**. Use of N-(3,4-dichlorophenyl)propanamide, common name, propanil, and all analogs and derivatives as anti-inflammatory or immunosuppressive drugs. Application Filed 10/2003.

Grants Received

Opdyke, M, B. Dolney and **L. Frost**. (2008) Lichen Community Structures Across and Urban to Rural Landscape Gradient. # WRCP-08296 \$5,287.00
Frost, L. (2004) Effects of propanil on macrophage NADPH oxidase activity. Faculty Research Committee, Gannon University.
Fabina, J., Carmasino, A., and **Frost, L.** (2004) Effects of propanil on NADPH oxidase activity in macrophages. Duratz Endowment for Student Research, Gannon University.
Novotny, M. and **Frost, L.** (2003) Effects of *Bitis nasicornis* venom on mammary tumor growth and activation of the signaling protein, Src. Beta Beta Beta National Grants Competition.

Mentored Graduated and Undergraduate Research Projects

Graduate Students mentored:

December 2002 – 2005 Master's Degree thesis advisor to Subhashree Hariharan,
Thesis: The role of microbes in arsenic production in sediments of ponds on Presque Isle

Undergraduate research projects mentored:

May 2008 – May 2009: Bryan Dolney, Identification of Lichen populations in Southwestern Pennsylvania

- August 2003 – May 2005: Matthew Novotny, Effects of *Bitis nasicornis* venom on Src signaling in MCF-7 cells.
- August 2004- May 2005: Jacqueline Fabina, Effects of propanil on macrophage NADPH oxidase function.
- January 2003 – May 2003: Renae Zieler, Investigations into *Clostridium botulinum* Type E in zebra mussels (*Dreissena polymorpha*) and round goby (*Neogobius melanostoma*) populations with potential relevance to avian botulism in Lake Erie

Published Manuscripts, Book Chapters and Abstracts

- Opdyke, M.R., B.E. Dolney, **L. Frost**, and J.D. Roy. (2011) A study of epiphytic lichen communities in urban and rural environments in southwestern Pennsylvania. *Journal of Pennsylvania Academy of Science* 85:151-158.
- Ustyugova, IV, **Frost, LL**, Van Dyke, K, Brundage, KM, Schafer, R, Barnett, JB. 2007. 3,4-dichloropropionaniline suppresses normal macrophage function. *Toxicological Sciences* 97(2):364-74.
- Frost, L. L.**, Y. X. Neeley, R.Schafer, L. Gibson and J. Barnett. 2001. Propanil Inhibits Tumor Necrosis Factor- α Production by Reducing Nuclear Levels of the Transcription Factor Nuclear Factor- κ B in the Macrophage Cell Line IC-21. *Toxicology and Applied Pharmacology* 172:186-193.
- Novotny, M and **Laura Frost**, Effects of *Bitis nasicornis* venom on Src signaling in MCF-7 cells. Tri Beta BIOS, May 2005. (Abst.).
- Van Dyke, K., McMonnell, P., Taylor, M. and **Frost, L.** *Peroxynitrite-Based Luminol Luminescence of Macrophages and Enhancement of the Signal in Luminescence Biotechnology*. CRC Press, New York, 2002.
- Barnett, J.B., R. Schafer and **L. Wainwright**. 1999. Dichlorophenyl propionamide reduces TNF- α transcription by reducing nuclear NF- κ B levels in macrophages. International Congress of the Society for Leukocyte Biology, Innate Resistance to Infection, Churchill College, Cambridge, U.K. (Abst.).
- Wainwright, L.L.** and G.L. Tylka. 1995. Embryological development of *Heterodera glycines* on soybean cultivars of different maturity groups in Iowa. *Journal of Nematology* 27:523. (Abst.).

Professional Presentations

- Frost, L.**, K. Hall. Using Clickers for Summative Assessment, Turning Technologies Annual Users National Conference, UNLV, 12 October 2009.
- Hall, K., P. Beal, **L. Frost**. Click This! Annual Professional Development Workshop, Point Park University. 28 August 2009.

Mentored Student Research Publications and Presentations

- Dolney, B.E., M.R. Opdyke, and **L. Frost**. (2009) Lichen distribution across a landscape gradient as an indicator of air pollution and habitat alteration. Poster presented at *Ecological Society of America Meeting*, Abstract PS 95-189.
- Dolney, B.E., M.R. Opdyke, and **L. Frost**. (2009) Lichen distribution across an urban to rural landscape gradient as an indicator of air pollution and habitat alteration. Poster presented at *Pennsylvania Academy of Science Meeting*, Abstract 57.
- Novotny, M. and **L. Frost**, Effects of *Bitis nasicornis* venom on Src signaling in MCF-7 cells. Tri Beta, Wheeling Jesuit University, 2005.