Curriculum Vitae

BIOGRAPHICAL

Name: Arlee E. Dulak (formerly Fafalios)
Home Address:

Home Phone:

Birth Date:
Birth Place:
Citizenship:
Email: arlee_dulak@uml.edu

EDUCATION and TRAINING

Dates attended	Name and location	Degree	Mentor/Major Subject
Research Associate: 2010-2011	University of Pittsburgh Department of Pathology Pittsburgh, PA 15212		Reza Zarnegar, Ph.D. Department of Pathology
Postdoctoral Associate: 2009-2010	University of Pittsburgh Department of Pathology Pittsburgh, PA 15212		Reza Zarnegar, Ph.D. Department of Pathology
Graduate: 2005-2009	University of Pittsburgh School of Medicine Pittsburgh, PA 15212	Ph.D.	Beth R Pflug, Ph.D. Cellular and Molecular Pathology
Undergraduate: 2001-2005	Allegheny College Meadville, PA 16335	B.S.	Brandi Baros, Ph.D. Biology

PUBLICATIONS

Fafalios (Dulak) A, Ma J, Tan X, Stoops J, Luo J, DeFrances MC, and Zarnegar R. 2011. A hepatocyte growth factor receptor (Met)-insulin receptor hybrid governs hepatic glucose metabolism. *Nature Medicine* 13; 17(12): 1577-84.

Fafalios (Dulak) A, Akhavan A, Parwani AV, Bies RR, McHugh KJ, and Pflug BR. 2009. Translocator Protein Blockade Block Prostate Tumor Growth. *Clinical Cancer Research* 15: 6177.

PROFESSIONAL ACTIVITIES

Educational Experience:

Lecturer and Student Services Coordinator – University of Massachusetts Lowell, Jan 2011-present

- Currently teaching courses including Human Anatomy & Physiology 1/2 and Basic Clinical Microbiology & Pathology Lecture and Laboratory.
- Out of the classroom activities including but not limited to a variety of service projects, organization of student activities, and enhancement of faculty to student communication.

Adjunct Biology Faculty – Community College of Allegheny County, Fall 2009-Spring 2010

- Designed the course outline for a lecture/lab that covers topics related to both basic and medical Microbiology.
- Successfully covered all of the proposed material in an engaging and timely manner.
- Received one of the highest Student Survey of Opinion scores in the Biology department (4.9/5)

Guest Lecturer – Central Catholic High School, Spring 2008

- Prepared and executed a basic cancer biology lecture for high school students.
- Enhanced my lecturing abilities by learning the skills necessary to present conceptually difficult material in a more basic manner that is easily understandable to the target audience.

Tutor – Foundations of Biomedical Science, University of Pittsburgh, Fall 2006

- Helped students better comprehend the material covered in lecture through one-on-one tutoring.

Teaching Assistant – Molecular Biology and Cellular Biology, Allegheny College Department of Biology, Fall 2004-Spring 2005

- Assisted the professors in preparing for lab and guided the students through the experiments when needed.

Research Experience:

2009-2010 **Postdoctoral Associate, University of Pittsburgh**

Principal Investigator – Reza Zarnegar, Ph.D.

Project: Crosstalk Between Met and Insulin Receptor in the Liver: Implications in Carcinogenesis and the Metabolic Syndrome

Goals: To establish evidence supporting a crosstalk between two receptor tyrosine kinases, Met and IR, and to determine the functional consequences of this interaction.

Techniques: Cell culture, Protein extraction, SDS-PAGE, Immunoblot analysis

2006-2009 **Dissertation Research, University of Pittsburgh**
Principal Investigator – Beth R. Pflug, Ph.D.
Project: Increased Expression of Translocator Protein (TSPO) in Prostate Cancer: Implications as a Therapeutic Target for Advanced Disease
Goals: To demonstrate that TSPO is key survival factor involved in the progression to advanced, androgen-refractory prostate cancer through its actions as a regulator of apoptosis and cell proliferation and to examine the potential application of the TSPO antagonist, Lorazepam, in cancer therapeutics.
Techniques: Cell culture, Protein extraction, RNA extraction, RT-PCR, Real Time qPCR, SDS-PAGE, Immunoblot analysis, Cloning, Invasion Assay, Xenograft mouse model

2006 **Research Rotation, University of Pittsburgh**
Principal Investigator – Kelly Cole, Ph.D.
Project: Creating Codon Optimized (CO) SIV17E-Cl gp140 from CO SIVmac239 Using Site Directed Mutagenesis
Goals: To create codon optimized SIV envelope glycoproteins to increase protein expression levels in order to produce a more time efficient and safer method for viral protein production.
Techniques: Site-directed mutagenesis, Primer design, Agarose gel electrophoresis, Enzymatic digestions, Virus purification

2005 **Research Rotation, University of Pittsburgh**
Principal Investigator – Marie C. DeFrances, M.D., Ph.D.
Project: Increased expression of phosphoAkt and phosphoERK 44/42 and increased PI3K activity following siRNA knockdown of the PI3K regulator PIK3IP1
Goals: To further support PIK3IP1 as a PI3K regulator through siRNA knockdown of the protein followed by examining the phosphorylation status of two critical cellular proteins, Akt and ERK.
Techniques: siRNA transfections, Radioactivity assays, Western blot analysis

2005 **Research Rotation, University of Pittsburgh**
Principal Investigator - Beth Pflug, Ph.D.
Project: The Role of Fatty Acid Synthesis in Prostate Cancer Cell Steroidogenesis
Goals: To investigate if prostate cancer cells are synthesizing their own steroids, such as testosterone and dihydrotestosterone, from cholesterol and thus are not truly "androgen-independent".
Techniques: TRAMP mouse model, Immunohistochemistry, Light microscopy, Lipid extraction, DNA isolation, ELISA

2004-2005 **Senior Comprehensive Project, Allegheny College**
Mentor – Brandi Baros, Ph.D.

Project: The Effects of Site-Directed Mutagenesis at Amino Acids E292 and R294 of Bacteriophage HK97 Capsid Protein
Goals: To determine if we could disrupt capsid formation through mutagenesis of two amino acids that we believed are critical for HK97 structural stability.
Techniques: Phage isolation, Site-directed mutagenesis

2004 **Summer Undergraduate Research Program, University of Pittsburgh**
Principal Investigator – Yuan Chang, M.D.
Project: Transcriptional Analysis of Latent and Inducible Kaposi's Sarcoma-Associated Herpesvirus Transcripts in the K4 to K7 Region
Goals: To identify unannotated KSHV genes in the region between 21,500 and 30,000 bp of the KSHV long unique coding region.
Techniques: Northern blots, Phage library screening, RACE analysis

Abstracts/Presentations:

2008 **Society for Basic and Urologic Research Annual Meeting, Phoenix, AZ:**
Attended and presented: "Increased Expression of Translocator Protein in Prostate Cancer: Implications as a Therapeutic Target for Advanced Disease".

2008 **The University of Pittsburgh Biomedical Graduate Program Annual Symposium and Nakada Lecture, Pittsburgh, PA:**
Presented: "Increased Expression of Translocator Protein in Prostate Cancer: Implications as a Therapeutic Target for Advanced Disease".

2008 **The University of Pittsburgh, Department of Pathology Annual Retreat, Pittsburgh, PA:**
Presented: "Increased Expression of Translocator Protein in Prostate Cancer: Implications as a Therapeutic Target for Advanced Disease".

2007 **The University of Pittsburgh, Department of Pathology Annual Retreat, Pittsburgh, PA:**
Presented: "Dysregulation of Translocator Protein Expression and Localization in Prostate Cancer".

2007 **The University of Pittsburgh Biomedical Graduate Program Annual Symposium and Nakada Lecture, Pittsburgh, PA:**
Presented: "The Role of Translocator Protein in Prostate Cancer".

2007 **AACR Annual Meeting, Los Angeles, CA:**
Attended and presented: "The Role of Translocator Protein in Prostate Cancer".

2007 **The University of Pittsburgh Science2007, Pittsburgh, PA:**
Presented: "Dysregulation of Translocator Protein Expression and Localization in Prostate Cancer".

2006 **The University of Pittsburgh Biomedical Graduate Program Annual Symposium and Nakada Lecture, Pittsburgh, PA:**
Presented: "The Role of Translocator Protein in Prostate Cancer".