

# Student Accomplishments for 2006 – 2007

## On Campus: Biology Summer Research Program (BSRP), Summer 2006

- Jason Anari** (Junior) Mentor: Dr. Amanda Norvell  
*Maternal control of patterning during Drosophila melanogaster oogenesis.*
- Jessica Decker** (Senior) Mentor: Dr. Janet Morrison  
*Ecological and genetic interactions between the grass Andropogon virginicus and a smut fungus pathogen, Sporisorium ellisii.*
- Perian Doko** (Senior) Mentor: Dr. Curt Elderkin  
*Population genetics of the Eastern Elliptio river mussel, Elliptio complanata.*
- Mackenzie Esch** (Junior) Mentor: Dr. Howard Reinert  
*Largescale survey of the water quality and characteristics of potential habitats for the endangered queen snake, Regina septemvittata.*
- JingJing Feng** (Junior) Mentor: Dr. Howard Reinert  
*Largescale survey of the water quality and characteristics of potential habitats for the endangered queen snake, Regina septemvittata.*
- Aaron McKeonFish** (Sophomore) Mentor: Dr. Donald Lovett  
*Examination of glycosylation and phosphorylation as mechanisms for modulating Na<sup>+</sup>, K<sup>+</sup> ATPase activity in gills of estuarine crabs.*
- Anjali Mone** (Junior) Mentor: Dr. Marcia O'Connell  
*Cytoplasmic polyadenylation during embryogenesis in zebra fish.*
- Eugene Muchnik** (Senior) Mentor: Dr. Curt Elderkin  
*Population genetics of the Eastern Elliptio river mussel, Elliptio complanata.*
- Michaela Olsavska** (Junior) Mentor: Dr. Jim Bricker  
*Diatoms as a measure of well pollution.*
- Divya Patel** (Sophomore) Mentor: Dr. Jim Bricker  
*Heterozygosity in microsatellite loci as a measure of fitness in corn snakes, E. guttata (an endangered species in New Jersey).*
- Arthur Romanchuk** (Junior) Mentor: Dr. Janet Morrison  
*Ecological and genetic interactions between the grass Andropogon virginicus and a smut fungus pathogen, Sporisorium ellisii.*
- Michael Rossetti** (Senior) Mentor: Dr. Jeff Erickson  
*Serotonin and the development of breathing behavior: analysis of serotonin-deficient Pet1 knockout mice.*
- Naomi Siegel** (Sophomore) Mentor: Dr. Marcia O'Connell  
*Cytoplasmic polyadenylation during embryogenesis in zebra fish.*
- Brian Sposato** ((Junior) Mentor: Dr. Jeff Erickson  
*Serotonin and the development of breathing behavior: analysis of serotonin-deficient Pet1 knockout mice.*
- John Trahanas** (Senior) Mentor: Dr. Amanda Norvell  
*Maternal control of patterning during Drosophila melanogaster oogenesis.*

**Peter Treitler** (Junior)

Mentor: Dr. Donald Lovett

*Modulation of Na<sup>+</sup>, K<sup>+</sup> ATPase activity in the gills of green crabs Carcinus maenas through membrane trafficking.*

## **Off Campus: Research Projects**

**Jennifer Addo**

University of Virginia, Mountain Lake Biological Station  
*Competitive Territoriality in an Intertaxa Guild Pair*

**Noha Aljawhary**

UMDNJ – Robert Wood Johnson University Hospital, Department of Molecular Cardiology  
*Intracellular Zinc Protects Rat Hearts from Ischemia/Reperfusion Injury Induced by Doxorubicin*

**Wendy Bottinor**

UMDNJ – New Jersey Medical School, Department of Microbiology and Molecular Genetics  
*The Role of SOS Induction in the Translational Stress-Induced Mutagenesis (TSM) Phenotype*

**Rachel Boyle**

TAMU, Department of Veterinary Physiology & Pharmacology  
*Mechanical Summation of Microlymphatic Contractions: In Vivo Study with Pallid Bats*

**Adam Clarke**

University of Pennsylvania, Department of Neuroscience  
*Metabolic Demand of Optic Nerve and Retinal Axons*

**Mike Coppola**

Princeton University, Department of Molecular Biology  
*Signal Transduction in Stationary Phase E. coli*

**Hasan Danish**

UMDNJ – Robert Wood Johnson Medical School  
*Co-localization of Heme Oxygenase 2 (HO2) and Neuronal Nitric Oxide Synthase (nNOS) in the preBotzinger Complex*

**Margaret Duffy**

UMDNJ – Graduate School of Biomedical Sciences  
*Reporter Expression in C. elegans Larval Development*

**Bryan Foley**

Cooper University Hospital, UMDNJ – Robert Wood Johnson Medical School, Dept of Cardiology  
*Changes in Heart Rate Volatility In A Murine Model of Sepsis*

**Daniel Fox**

UCLA, Division of Hematology/Oncology, Jonsson Comprehensive Cancer Center  
*Efficacy of EGFR/HER2 Dual Tyrosine Kinase Inhibitor in Human Prostate Cancer*

**Nihar Gala**

The Children's Hospital of Philadelphia, Joseph Stokes Research Institute. Dept of Anesthesiology  
*Effects of CCK Receptor Antagonist in pPVTh on Habituation of HPA activity*

**Nicole Gerber**

UMDNJ – Department of Orthopaedics  
*Rapid Assessment of Chondrocyte and Osteoblast Differentiation*

**Ron Golan**

Pepperdine University, Natural Science Division  
*The Effect of Cell Density on the Ability of 7F2 Mesenchymal Stem Cells to Transdifferentiate*

**Kaycie Hopkins**

The Wistar Institute, Genetics Department  
*Specific Protein Binding Occurs in Promoter Targeting Sequences in *Drosophila melanogaster**

**Shaum Kabadi**

Clemson University (NSFREU), Department of Molecular Genetics and Biochemistry  
*Examination of Possible Catalytic Misfire by Plant Hexokinase*

**David Kong**

ScheringPlough Research Institute, Dept of Neurobiology  
*Drug Discovery: Adrenoceptor-induced Contraction of Nasal Mucosa*

**Jeffrey Mojica**

Drexel College of Medicine, Department of Biochemistry and Molecular Biology  
*Transcription Regulation of Sterol Biosynthesis in *Saccharomyces Cerevisiae**

**Christine Mullin**

Coriell Institute for medical Research, Cytogenetic Laboratory  
*Spectral Karyotyping (SKY) Establishes Chromosomal Homologies between a New World Monkey (*Pithecia pithecia*) and Humans*

**Natasha Nayak**

UMDNJ – Robert Wood Johnson Medical School, Dept of Surgery, Division of Neurosurgery  
*Netrin Signaling and Glial Migration in *Drosophila melangaster**

**Mitra Neshatfar**

Geisinger Health Systems Department of Cardiology, Danville, PA  
*Left Ventricular Diastolic Filling in Severe Left Ventricular Dysfunction: Chronotropic Incompetence*

**Jessica Paciorek**

Hoffmann La Roche Pharmaceuticals, Dept of Respiratory, Inflammation and Autoimmune Disease  
*Analysis of a Novel Bronchodilator Compound as a Putative Therapy for Chronic Obstructive Pulmonary Disease*

**Purak Parikh**

Duke University Medical Center, Department of Neurobiology  
*Neuroeconomic Principles Underlying the Valuation of Social Information*

**Michael Pesa**

Rutgers University, Department of Entomology  
*Seasonal Variation in Spatial Distribution of the Entomopathogenic Nematodes *Steinernema carpocapsae* and *Heterorhabditis bacteriophora* in Turfgrass Systems*

**Amit Shah**

UMDNJ Robert Wood Johnson Medical School, Department of Medicine  
*The Effects of Estradiol and Difluoromethylornithine on MCF7 and T47D Breast Cancer Cells*

**Sagar Shah**

UMDNJ – Department of Cell Biology and Molecular Medicine  
*Evolutionary Conservation of NonCoding RNA, roX*

**Kevin Tierney**

UMDNJ – Department of Pharmacology and Physiology  
*The Effect of Luminal Glucose on Phosphate Uptake and NaPi2b Expression in the Rat Small Intestine*

**Mihir Vyas**

Princeton University, Department of Molecular Biology  
*Selfcatalyzed Sitespecific Depurination of Guanine Residues within an in vivo System*