

## ***2<sup>nd</sup> ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM***

---

### **BIOCHEMISTRY**

#### **RADICALLY NEW AND POWERFUL TECHNIQUE FOR *in-vivo* IMAGING USING PROTEIN-POLYMER HYBRIDS**

Saadiah Averick, Sukanta Dolai, Wei Shi, Samar Rizk, Jose Saltos;

*Dr. S. Krishnaswami Raja*; Department of Chemistry, College of Staten Island, CUNY, Staten Island, NY

#### **NEW GENERATION OF BIOMARKERS: CATALYTIC INCORPORATION OF FRET CAPABLE MOLECULES INTO SILYLATED POLY BUTADIENE (S)**

Esra Cinar, Alok Sarker, Mouhanad A. Bittar; *Dr. Bhanu P.S. Chauhan*

Department of Chemistry, William Paterson University, Wayne, NJ

#### **METAL NANOPARTICLES SYNTHESIS IN BIOBASED POLYMERIC SYSTEMS: A SUSTAINABLE APPROACH IN HYBRID MATERIALS DEVELOPMENT**

Kareem Douglas, Praveen Kumar Bemula, Colleen Achong and George John; Department of Chemistry; CUNY, New York, NY

#### **COMPARISON OF END RESTRAINTS FOR THE MOLECULAR DYNAMIC STUDY OF MODEL COLLAGEN II-LIKE PEPTIDES IN EXPLICIT WATER AT 310K**

Andrew Glowacki, Marc Linder, *Dr. Gloria Anderle*; Department of Chemistry & Geology, Fairleigh Dickinson University, Madison, NJ

#### **CHEMICAL AND BIOCHEMICAL MODELS OF PARRONDO'S PARADOX**

Thomas Gordon, Daniel Osipovitch, *Dr. Pauline M. Schwartz*

Department of Chemistry & Chemical Engineering, University of New Haven, West Haven, CT

#### **BIODIESEL: FROM CORN OIL TO ENGINE EXHAUST**

Tim Lamb, Dana Patterson, Danielle Odom, Doug Lally, Jay P. Charlebois, *Dr. Amber Flynn Charlebois*; Department of Chemistry, Fairleigh Dickinson University, Madison, NJ

#### **IN SITU SPECTROPHOTOMETRIC ANALYSIS IN GEL ELECTROPHORESIS**

Priyal Patel<sup>1</sup>, Rebecca Rene<sup>2</sup>, Dr. Anita J. Brandolini<sup>2</sup>, *Dr. Amber*

*Flynn Charlebois*<sup>1</sup>

<sup>1</sup>Department of Chemistry, Fairleigh Dickinson University, Madison, NJ

<sup>2</sup>School of Theoretical & Applied Sciences, Ramapo College of New Jersey, Mahwah, NJ

## ***2nd ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM***

---

### **PHYSIOLOGY**

#### **ROLE OF PEROXISOME PROLIFERATOR ACTIVATED RECEPTORS (PPARS) IN THE INTESTINE AND TAIL DURING THE METAMORPHOSIS OF XENOPUS LAEVIS**

Juan Claros-Sorto, *Dr. Jaishri Menon*

Department of Biology, William Paterson University, Wayne, NJ

#### **LOCALIZATION AND GENE EXPRESSION FOR NITRIC OXIDE SYNTHASE ISOFORMS DURING INTESTINAL REMODELING IN ANURAN TADPOLES, XENOPUS LAEVIS**

Karthik Gopal, Anna Yap, *Dr. Jaishri Menon*

Department of Biology, William Paterson University, Wayne, NJ

#### **SYNAPTOTAGMIN'S ROLE IN NERVE CELL PROCESS OUTGROWTH AND BRANCHING PATTERNS**

RaElle Jackson, Joan Lee, *Dr. Karen Greif*

Department of Biology, Bryn Mawr College, Bryn Mawr, PA

#### **CONSTRUCTION OF A YFP ADENOVIRAL PROTEIN TO STUDY THE ROLE OF SYNAPTOTAGMIN IN DEVELOPING NEURITES**

Douglas Marks, *Dr. Karen Greif*

Department of Biology, Bryn Mawr College, Bryn Mawr, PA

#### **THE NICOTINIC ACETYLCHOLINE RECEPTOR AS A TARGET FOR COCAINE**

Holly Ringhauser, *Dr. Benedetta A. Sampoli Benitez*

Department of Natural Sciences, Marymount Manhattan College,  
New York, NY

*2nd ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM*

---

**ECOLOGY & EVOLUTION**

**EFFECTS OF SAND BURIAL ON THE COASTAL DUNE GRASS *AMMOPHILA BREVILIGULATA***

Seth Eberhardt, *Dr. Michael Peek*

Department of Biology, William Paterson University, Wayne, NJ

**A COSMOPOLITAN OSTEICHTHYAN FAUNA FROM IN AND AROUND THE DEBRIS CONES OF HARVESTER ANT NESTS: UPPER CRETACEOUS (MAASTRICHTIAN) FAIRPOINT MEMBER OF THE FOX HILLS FORMATION, MEADE COUNTY, SOUTH DAKOTA**

Justin Linteris, *Dr. Martin Becker*

Department of Biology, William Paterson University, Wayne, NJ

**AUDITORY PREDATOR RECOGNITION IN NEW JERSEY FOREST BIRDS**

Emily Schmidt, Drew University

**DOES THE WAGGLE-DANCE SCENT OF HONEY BEE FORAGES INCREASE FORAGING EFFORT?**

Chad Socha, Christina Kupryk, Murat Mamkegh, *Dr. David Gilley*

Department of Biology, William Paterson University, Wayne, NJ

**STRONTIUM ISOTOPIC SIGNATURES IN THE ENAMELOID AND DENTINE OF UPPER CRETACEOUS SHARK TEETH FROM WESTERN ALABAMA: PALEOECOLOGIC AND GEOCHRONOLOGIC IMPLICATIONS**

Marlayna Sosna, *Dr. Martin Becker*

Department of Biology, William Paterson University, Wayne, NJ

## *2<sup>nd</sup> ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM*

---

### **GENETICS, CELL & MOLECULAR**

#### **PERIPLASMIC DOMAIN-INDEPENDENT SIGNAL DETECTION BY THE PhoQ HISTIDINE KINASE**

Shail Kabrawala, *Dr. Carey Waldburger*

Department of Biology, William Paterson University, Wayne, NJ

#### **MUTATION DETECTION IN PANTOTHENATE KINASE ASSOCIATED NEURODEGENERATION**

Meghan Kelly, Courtney Jones, *Dr. Charles Vigue*

University of New Haven

#### **A MOLECULAR DYNAMIC STUDY OF THE EFFECT OF A GLYCINE TO SERINE POINT MUTATION OF THE STRUCTURE OF COLLAGEN-LIKE MODEL PEPTIDES CONTAINING A REPUTED STABLE REGION OF COLLAGEN II**

Marc Lindner, Andrew Glowacki, *Dr. Gloria Anderle*

Department of Chemistry & Geology, Fairleigh Dickinson University, Madison, NJ

#### **CONSTRUCTING A FUNCTIONAL CHIMERIC HISTIDINE KINASE**

Poliana Oliveira, *Dr. Carey Waldburger*

#### **BINARY VECTOR DEVELOPMENT FOR GmGRP SILENCING IN SOYBEAN**

Luis Posadas, *Dr. David Slaymaker*

Department of Biology, William Paterson University, Wayne, NJ

#### **CDK5: A CONTRIBUTOR TO THE INSULIN PHENOTYPE OF TRANSDIFFERENTIATED PANCREATIC $\beta$ CELLS**

Jessica Stevens, *Dr. Ann Aguanno*

Department of Natural Sciences, Marymount Manhattan College,  
New York, NY

## ***2nd ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM***

---

### **BEHAVIOR**

#### **ANTIDEPRESSANT-LIKE BEHAVIORAL EFFECTS OF CB2 CANNABINOID LIGANDS IN THE MOUSE FORCED SWIM TEST**

Leizl Chua, Peter Tlatelpa, Brianna Beckmann, Alvaro Llorente-Berzal, Norman Schanz, Dr. Emmanuel S. Onaivi

Department of Biology, William Paterson University, Wayne, NJ

#### **THE EFFECT OF ETHANOL ON THE ESCAPE RESPONSE OF ZEBRAFISH**

Aleksey Etinger, Dr. Brian Palestis

Department of Biological Sciences, Wagner College, Staten Island, NY

#### **CROSS-FOSTERING & STRESS EFFECTS ON THE BTBR MOUSE**

Amanda Liggett, Frank Sagato, Norman Schanz, Dr. Robert Benno

Department of Biology, William Paterson University, Wayne, NJ

#### **ASSOCIATIVE LEARNING IN ZEBRAFISH**

Ngoc Nhung Nguyen, Kelly Lawless, Dr. Georgianna Gould

Department of Biology, William Paterson University, Wayne, NJ

#### **BEHAVIORAL GENETIC SCREENING FOR ANXIETY IN ZEBRAFISH**

James Sackerman, Adam Long, Dr. Georgianna Gould

Department of Biology, William Paterson University, Wayne, NJ

#### **CROSS-FOSTERING & STRESS EFFECTS ON ADULT MALE SOCIAL BEHAVIOR IN THE BTBR MOUSE**

Frank Sagato, Amanda Liggett, Norman Schanz, Dr. Robert Benno

Department of Biology, William Paterson University, Wayne, NJ