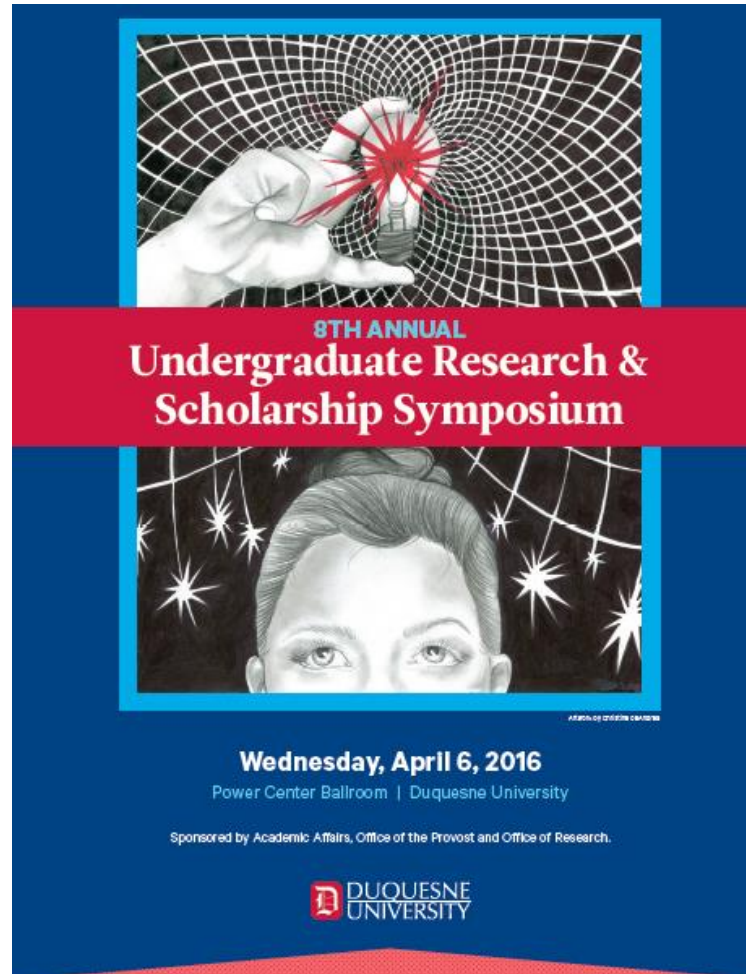


The 8<sup>th</sup> Annual  
**Undergraduate Research &  
Scholarship Symposium**  
Duquesne University



**Award Winners**

## **Bayer School of Natural and Environmental Sciences**

**2 FOR EXCELLENCE IN RESEARCH IN THE BASIC SCIENCES: \$300**

### **Effects of Macromolecular Crowding on Ferredoxin and Ferredoxin-NADP+ Reductase Enzyme Kinetics**

Danielle Bautista

Junior | Chemistry | Bayer School of Natural and Environmental Sciences | Abstract Number: 39

Faculty Advisor: David Seybert, Ph.D.

### **Separating Complex DNA Mixtures Containing Related Individuals Using TrueAllele® Mixture Interpretation Software**

Olivia Goodwin

Senior | Forensic Science and Law | Bayer School of Natural and Environmental Sciences | Abstract Number: 83

Faculty Advisor: Lisa Ludvico, Ph.D.

**4 FOR HONORABLE MENTION: \$100**

### **Asymmetric catalysis of aqueous Mukaiyama aldol reactions by dinuclear zinc semi-crown ligands**

Ayan Ahmed

Junior | Biochemistry | Bayer School of Natural and Environmental Sciences | Abstract Number: 15

Faculty Advisor: Jeffrey Evanseck, Ph.D.

### **DNA Barcoding of Stomach Contents Reveals Trophic Competition among Three Species of Trout**

Brandon Hoenig

Senior | Biology | Bayer School of Natural and Environmental Sciences | Abstract Number: 34

Faculty Advisor: Brady Porter, Ph.D. and Brian Trevelline

### **Modeling chronic bladder pain in male and female mice: Exploring the chronicity of repeated cyclophosphamide injections**

Abigail Cox

Sophomore | Biology | Bayer School of Natural and Environmental Sciences | Abstract Number: 65

Faculty Advisor: Benedict Kolber, Ph.D. Graduate Student Mentor: Katleyn Sadler

### **Structural and Electrochemical Investigation of [CuII(Me6TREN)Cl][Cl] Complex in the Presence of Weak Nitrogen Containing Bases**

Megan Wasson, Gabrielle Pros

Junior | Chemistry | Bayer School of Natural and Environmental Sciences | Abstract Number: 86

Faculty Advisor: Tomislav Pintauer, Ph.D.

## **Center for the Catholic Intellectual Tradition and Center for Spiritan Studies**

**Catholic Intellectual Tradition and Spiritan Studies Award for Undergraduate Research: \$250**

### **Say Yes to the Dress Goes to Church: A Feminist Theological Analysis of Catholic Marriage Preparation in the Mid-Atlantic Region**

Maggie Ballantyne

Senior | Public Relations | McAnulty College and Graduate School of Liberal Arts | Abstract Number: 82

Faculty Advisor: Elisabeth Vasko, Ph.D.

## **Center for African Studies**

**Award for Undergraduate Research: \$250**

### **Critical Perspectives on Occupational Therapy Practice in Resource-Scarce African Contexts**

Molly Edwards, Chase Ratliff

Senior | Occupational Therapy | Rangos School of Health Sciences | Abstract Number: 29

Faculty Advisor: Anne Marie Hansen, EdD, OTR/L; FAOTA

## Center for Teaching Excellence

Award for Undergraduate Research: \$250

**Representation Matters: How Representation in Children's Literature Influences Children of Different Ethnicities**

Taylor Cavalovitch

Senior | Early Childhood Education | School of Education | Abstract Number: 80

Faculty Advisor: Sandra Quiñones, Ph.D.

## Counselor Education Program

Award for Undergraduate Research: \$250

**Combatting Human Trafficking Using Mathematics**

Alfred Vogt

Senior | Mathematics | McNulty College and Graduate School of Liberal Arts | Abstract Number: 26

Faculty Advisor: Rachael Miller Neilan, Ph.D.

## Department of History

The Clio Award for Undergraduate Research in History

First Place: \$200

**The Redevelopment of Brownsville**

Tiffany Kent

Senior | History | McNulty College and Graduate School of Liberal Arts | Abstract Number: 100

Faculty Advisor: Andrew Simpson, Ph.D.

Second Place: \$100

**Education as a Tool of an Empire: American Indian Education**

Margaret Long

Senior | History & Secondary Education - Social Studies | McNulty College and Graduate School of Liberal Arts |

Abstract Number: 36

Faculty Advisor: Andrew Simpson, Ph.D.

Third Place: \$50

**Undercover Heroes? The Culper Ring and the Value of Espionage in the Revolutionary War**

Michael Romero Moore

Senior | History | McNulty College and Graduate School of Liberal Arts | Abstract Number: 106

Faculty Advisor: Andrew Simpson, Ph.D.

## Gumberg Library

Gumberg Library Award for Undergraduate Research: \$250

**The Effects of High Intensity Warmups on Athletes with Diagnosed Exercise Induced Asthma: A CRITICALLY APPRAISED TOPIC**

Emily Nelson, Alyse DePaola

Junior | Athletic Training | Rangos School of Health Sciences | Abstract Number: 97

Faculty Advisor: Sarah Manspeaker, PhD, ATC

## Honors College

Outstanding Poster: \$250

**The Western Sahara Conflict: Colonialism, Ethnicity, and the Bonds of Nationhood**

Mitchell Oeler

Senior | International Relations | McAnulty College and Graduate School of Liberal Arts | Abstract Number: 118  
Faculty Advisor: Jennie Schulze, Ph.D.

## Mary Pappert School of Music

Mary Pappert School of Music Undergraduate Award: \$250

### Reevaluating Perceptions of Tchaikovsky's Pathétique Symphony

Jacob Leonowitz

Senior | Music Education | Mary Pappert School of Music | Abstract Number: 77

Faculty Advisor: Benjamin Binder, Ph.D.

## McAnulty College and Graduate School of Liberal Arts

Outstanding Research Merit: \$250

### Investigating the Empirical Aesthetics of Poetic Language

Sara Boothe, Elizabeth Mance

Senior | Psychology | McAnulty College and Graduate School of Liberal Arts | Abstract Number: 58

Faculty Advisor: Alexander Kranjec, PhD.

## Mylan School of Pharmacy

Award for Undergraduate Research: \$250

### Development of Design Space for Fluidized Bed Multiparticulates Coating Process

Kiana Motto, Hanzhou Feng

Senior | Pharmacy | Mylan School of Pharmacy | Abstract Number: 33

Faculty Advisor: Carl Anderson, Ph.D.

## Office of the Provost

Outstanding Scholarship Award: \$250

### Modeling chronic bladder pain in male and female mice: Exploring the chronicity of repeated cyclophosphamide injections

Abigail Cox

Sophomore | Biology | Bayer School of Natural and Environmental Sciences | Abstract Number: 65

Faculty Advisor: Benedict Kolber, Ph.D. Graduate Student Mentor: Katleyn Sadler

1 for Honorable Mention: \$125

### Business of Athletics: Dynamics Between Collegiate Athletic Organizations and the Business World

Malcolm Guya

Senior | Psychology | McAnulty College and Graduate School of Liberal Arts | Abstract Number: 20

Faculty Advisor: Elizabeth Brown, MA

1 for Best Formal Presentation: \$125

### Blood Brain Barrier Integrity in a Murine Model of BCR-ABL Induced Acute Lymphoblastic Leukemia

Julia Marn

Junior | Physician Assistant | Rangos School of Health Sciences | Abstract Number: 17

Faculty Advisor: Bridget Calhoun, PhD

## Office of Multicultural Affairs

Outstanding Undergraduate Research: \$250

### Systemic Solutions to Systemic Problems of Injustice: Exploring Empathy and Self-Awareness in Preservice Teacher Training and the Preschool to Fourth Grade Classroom

Christina McElwee

Sophomore | Early Childhood Education | School of Education | Abstract Number: 142

Faculty Advisor: Patricia Sheahan, Ph.D.

## Phi Kappa Phi, National Honors Society

**Outstanding Research: \$500**

**Rioting Gender in Post-Soviet Russia: The Implications of Political and Doctrinal Rhetoric on Human Rights**

Kaitlyn Clem

Junior | English | McAnulty College and Graduate School of Liberal Arts | Abstract Number: 81

Faculty Advisor: Elisabeth Vasko, Ph.D.

**2 for Honorable Mention: \$250**

**Detection of Lead in Drinking Water using Homemade and Inexpensive LED-based Fluorometer**

Gage Tiber

Junior | Physics | Bayer School of Natural and Environmental Sciences | Abstract Number: 31

Faculty Advisor: Theodore Corcovilos, Ph.D.

**Evaluation of appropriateness of vaccination procedures of the 13-valent pneumococcal conjugate vaccine and the 23-valent pneumococcal polysaccharide vaccine in a hospital setting.**

Sabina Vaichys, Paige Coleman, Matthew Sears, Branden Nemecek, Anthony Guarascio

Senior | Pharmacy | Mylan School of Pharmacy | Abstract Number: 44

Faculty Advisor: Branden Nemecek, PharmD

## Rangos School of Health Sciences

**2 for Rangos School of Health Sciences Award for Undergraduate Research: \$250**

**Blood Brain Barrier Integrity in a Murine Model of BCR-ABL Induced Acute Lymphoblastic Leukemia**

Julia Marn

Junior | Physician Assistant | Rangos School of Health Sciences | Abstract Number: 17

Faculty Advisor: Bridget Calhoun, PhD

**Relating Structure and Function: A Histological Characterization of the Human Piriformis Muscle**

Rachel Sweetnich

Senior | Physical Therapy | Rangos School of Health Sciences | Abstract Number: 79

Faculty Advisor: Matthew Kostek, Ph.D.

## School of Nursing

**School of Nursing Undergraduate Research Award: \$250**

**Is Universal Healthcare Universally Better?**

Heather Konstanzer

Junior | Nursing | School of Nursing | Abstract Number: 60

Faculty Advisor: Cherith Simmer, MS, RN

## University Academic Sustainability Committee

**Excellence in Sustainability & the Environment: \$250**

**Detection of Lead in Drinking Water using Homemade and Inexpensive LED-based Fluorometer**

Gage Tiber

Junior | Physics | Bayer School of Natural and Environmental Sciences | Abstract Number: 31

Faculty Advisor: Theodore Corcovilos, Ph.D.