

**The 16<sup>th</sup> Annual  
Student Scholarship  
and Creative Endeavors Day**

**April 20, 2021**

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**The 16<sup>th</sup> Annual Moravian College  
Undergraduate Student Scholarship  
and Creative Endeavors Day  
April 20, 2021**

**Schedule**

8:00 a.m.	<b>Welcome and Opening Remarks</b>
8:05 a.m. – 9:00 a.m.	Session I: Oral Presentations Abstracts
9:40 a.m. – 10:55 a.m.	Session II: Oral Presentations Abstracts
11:20 a.m. – 12:15 p.m.	Session III: Oral Presentations Abstracts
12:00 p.m. – 1:00 p.m.	Student Poster Presentations I Abstracts

## SESSION I: Oral Presentations

Oral Presentations			
Session I: Moderator - Dr. Cecilia Fox (Biological Sciences, Neuroscience)			
<a href="#">ZOOM LINK</a>			
8:05 AM	Charlotte Reid	Biochemistry	Drs. Anastasia Thévenin & Shari Dunham
8:25 AM	Victoria Vargas, Sonal Arora	Biochemistry	Dr. Anastasia Thévenin
8:45 AM	Raquel Lopez de Boer	Neuroscience	Dr. Cecilia Fox

## SESSION II: Oral Presentations

Oral Presentations			
Session II: Moderator -Dr. Crystal Fodrey (English)			
<a href="#">ZOOM LINK</a>			
9:40 AM	Ryan Scott	English	Meg Mikovits
10:00 AM	Natalie Slayton	Global Religions	Dr. Jason Radine
10:20 AM	Camaryn Wheeler	English	Dr. Crystal Fodrey
10:40 PM	Chloe Mondok	Neuroscience	Dr. Cecilia Fox

## **SESSION III: Oral Presentations**

Oral Presentations

Session III: Moderator - Dr. Kara Mosovsky (Biological Sciences)

[ZOOM LINK](#)

11:20 AM	Emma Miller	Mathematics	Dr. Nathan Shank
11:40 AM	Alec Buttner	Bioc	

# **SESSION V: Oral Presentations**

Oral Presentations

Session V: Moderator - Dr. Sandy Bardsley (History)

[ZOOM LINK](#)

2:40 PM C§





Chad Propst	Chemistry	Dr. Alison Holliday
Janniry Cabrera Belen	Environmental Science	Dr. Sara McClelland
Tamar Giorgadze	Global Religions	Dr. Jason Radine
Nihal Capan	Chemistry	Dr. Alison Holliday
Tyler Geroulo	Biochemistry	Dr. Stephen Dunham
Elizabeth Hutnick	Chemistry	Dr. Michael Bertucci



**Student Oral Presentations I**  
**ZOOM LINK**  
**8:05 – 9:00 AM**

**Moderator: Dr**

**Student Oral Presentations II**  
**ZOOM LINK**  
**9:40 – 10:35 AM**

**Moderator: Dr. Crystal Fodrey (English Department)**

**Title:** **Towards a Measure of Conceptual Change: Understanding How First Year Writing Complicates Students' Prior Knowledge about Writing**

**Students:** Ryan Scott

**Advisor:** Meg Mikovits

**Location:** [Zoom](#)

9:40 AM - 9:55 AM

**Title:**

**Diverse FemM**





## **Student Oral Presentations V**

**[ZOOM LINK](#)**

**2:40 – 3:50 PM**

**Moderator: Dr. Sandy Bardsley (History)**

**Title: Ballet or Court Dance? Exploring the Foundations of the Classical Ballet in the Court of Louis XIV, 1650-1700**

**Students: Colby Robertson**

**Advisor: Dr. Heikki Lempa**

**Location: [Zoom](#)**

**2:40 PM - 2:55 PM**



**Student Poster Presentations I**  
**ZOOM LINK**  
**12:00 - 1:00 PM**

**Title:** **Dominance Hierarchies in Freshwater Shrimp**  
**Students:** Rachel Moser  
**Advisor:** Dr. Josh Lord  
**Location:** [Zoom](#)



**Title:**      **Co**







## **Student Poster Presentations II**

**[ZOOM LINK](#)**

**4:00 - 5:00 PM**

**Title:** **Assessing Nurses' Knowledge of the Care of Clients with Autism Spectrum Disorder Seeking Treatment in the Emergency Department: A Mixed Methods Study**

**Students:** Alexa Hromyak

**Advisor:** Dr. Paulette Dorney

**Location:** [Zoom](#)

**Title:** Capillary Electrophoresis Identification of Rhodium-DNA Interstrand Cross-linkage  
**Students:** Alec Brisbois  
**Advisor:** Drs Shari Dunham & Alison Holliday  
**Location:** [Zoom](#)

**Title:** Fixed Cram with Higher Polyominoes  
**Students:** Emma Miller, Gabrielle Demchak, Victoria Samuels, Jacob Freeh, Jacob Smith  
**Advisor:** Dr. Nathan Shank  
**Location:** [Zoom](#)

**Title:** Digital Interpersonal Emotion Regulation and In-Person Interpersonal Emotion Regulation: The Role of Anxiety, Depression, and Stress  
**Students:** Sean McFarland  
**Advisor:** Dr. Aleena Hay  
**Location:** [Zoom](#)

**Title:** **Effects of Ocean Acidification on the Foraging Patterns of Atlantic Horseshoe Crabs**  
**Students:** Thomas Mateo  
**Advisor:** Dr. Josh Lord  
**Location:** [Zoom](#)

Advisor: Dr. Josh Lord  
Location: [Zoom](#)

**Title:** **The Synthesis and Characterization of Two Novel Rhodium Compounds**  
Students: Emily Saulino  
Advisor: Dr. Stephen Dunham  
Location: [Zoom](#)



**Title:** Finding the Detection Limit of a Pesticide Using LC-MS  
**Students:** Chad Propst  
**Advisor:** Dr. Alison Holliday  
**Location:** [Zoom](#)

**Title:** Pesticide Contamination in Wetlands: Impacts of Pesticides on Anuran Diversity and Abundance  
**Students:** Janniry Cabrera Belen  
**Advisor:** Dr. Sara McClelland  
**Location:** [Zoom](#)

ΜΚ ΗΗΟ.Δ.Θ.Β.Ι Γ.Β.Λ.Μ.Π.Σ Η.Δ.Μ.Ε.Θ Γ.Λ. Γ.Β.Ρ.Π.Ε.Ο.Δ.Μ.Η.Θ.Σ Μ.Μ.Κ.Κ

**Title:** **Investigating the Effects of Different Washing Techniques on the Pesticide Residue Concentrations of Strawberries**

Students: Nihal Capan

Advisor: Dr. Alison Holliday

## 2020 SOAR Summer Research Grant Recipients

Capillary Electrophoresis Identification of Rhodium-DNA Interstrand Cross-linkage  
**Alec Brisbois** & Dr. Alison Holliday, & Dr. Shari Dunham

Creating Performance Editions from the Archives  
**Julian Calv** & Dr. Hilde Binford  
Assisted by Gwyneth A. Michel, Assistant Director, Moravian Music Foundation

Investigating the Effects of Different Washing Techniques on Pesticide Residue Concentrations of Commercial Strawberries  
**Nihal Capan** & Dr. Alison Holliday

Caring for Patients with Obesity During a Disaster: An Integrative Review  
**Kathryn DeWitt** & Dr. Karen Groller

Assembling the Earthworm Genome  
**Daniel Faudree** & Dr. Christopher Jones

Synthesis and Characterization of Glucose Conjugated Rhodium Complexes  
**Elliott Guido** & Dr. Stephen Dunham

Interpersonal Emotion Regulation and Anxiety  
**Lauren Kubic** & Dr. Aleena Hay

Protective Effects of Curcumin on the Production and Metabolism of Dopamine in the 6-Hydroxydopamine Model of Parkinson's Disease  
**Raquel Lopez de Boer** & Dr. Cecilia Fox

Computer Vision Tracking Framework for Parkinson's Disease Model-Rats  
**Renee Mapa** & Dr. Jeffrey Bush

Mathematics Related to the Packing of Polyominoes and Strong Proper Connections of Graphs  
**Emma Miller** & Dr. Nathan Shank  
In coordination with the National Science Foundation (NSF) Research Experience for Undergraduates (REU) program in Computational and Experimental Mathematics at Moravian College

The Neuroprotective Effect of Dietary Curcumin in the 6-Hydroxydopamine Model of Parkinson's disease: A Cell Survival and Imaging Study  
**Chloe Mondok** & Dr. Cecilia Fox

Comparing Predator Avoidance Behaviors In Different Marine Habitats  
**Samuel Rappaport** & Dr. Joshua Lord

Cellular DNA-Binding of Select Rhodium Compounds  
**Charlotte Reid**, Dr. Shari Dunham, & Dr. Anastasia Thevenin

Synthesis of quorum sensing activators and inhibitors of *S. pneumoniae* with large, non-native, aliphatic amino acid substitutions  
**Naomi Rieth, Elizabeth Hutnick**, & Dr. Michael Bertucci



**Completed Honors Projects**  
**Spring 2020-Fall 2020**

**Madeleine Baker**

Advisors: Carole Lutte and Dr. Cecilia Fox

Music Education

The Benefits of General Music Class on Middle School Adolescence and Brain Development

**Elizabeth Horn**

Advisor: Dr. Crystal Fodfrey

English

English's Most Complex Four-Letter Word: An Etymological and Rhetorical Analysis of "Nazi"

**Riley Kirkpatrick**

Advisor: Dr. Jeffrey Bush

**Timothy Brunstetter**

Advisor: Dr. Jason Radine  
Global Religions  
Biblical Prophecy: A Unique Form of Divination

**Alec Buttner**

Advisor: Dr. Anastasia Thévenin  
Biochemistry  
Defining the Interactions Between Src, a Cancer Causing Kinase, and the Cx43 Gap Junctions in Glioblastomas

**Tevo'n Campbell**

Advisor: Drs. Stephen Dunham and Anastasia Thévenin  
Biochemistry  
Effects of Dirhodium Compounds with Oleic Acid on Cervical Cancer Cells

**Jesika DeDonato**

Advisor: Dr. Stephen Dunham  
Biochemistry  
Effects of Sequence Context of DNA Bases on Stability and Metal Ion Binding

**Emilee Engler**

Advisor: Dr. Michael Bertucci  
Chemistry  
A Comparative Analysis of Quorum Sensing in Two Pathogens, *Bacillus cereus* and *Streptococcus pneumoniae*

**Logan Farinhas**

Advisor: Dr. Natasha Woods  
Biology  
The Effect of Leaf Litter on Emergence of Invasive Flora in Lehigh Valley and Surrounding Areas

**Daniel Faudree**

Advisor: Dr. Christopher Jones  
Biology  
*Lumbricus terrestris* Genome Assembly

**Caroline Flora**

Advisor: Dr. Crystal Fodrey  
English  
Growing Up on the Autism Spectrum

**Ashlynn Forney**

Advisor: Dr. Christopher Jones  
Biology  
The Impact of Bang Sensitivity on the Longevity in *Drosophila melanogaster*

**Destiny George**

Advisor: Dr. Faith Okpotor  
Political Science  
Terrorism in Africa: A Comparative Analysis of Boko Haram in Nigeria and Al-Shabaab in Kenya



**Riley McHugh**

Advisor: Dr. Cecilia Fox

Neuroscience

The Impact of Capsaicin on the 6-Hydroxydopamine Model of Parkinson's Disease

**Chloe Mondok**

Advisor: Dr. Cecilia Fox

Neuroscience

The Neuroprotective Effect of Dietary Curcumin in the 6-Hydroxydopamine Model of Parkinson's disease: A Cell Survival and Imaging Study

**Liam Mulligan**

Advisor: Dr. Larry Lipkis

Music

Musical Settings of Three Shakespeare Plays

**Patrick Mullin**

Advisor: Dr. Andrew Crooke

English

Critical Applied Linguistic and Contextual Language Influences on Ottoman-American Mahjar Texts of



**Melissa Strom**

Advisors: Susan Morelock and Dr. Kristin Baxter

Art

Identity Construction and the Human Experience in Art-Making

**Adam Strouse**

Advisor: Dr. Shari Dunham

Biochemistry

Metal Ion Effects on the Enzyme Kinetics of a Phosphatase

**Victoria Vargas**

Advisor: Dr. Anastasia Thévenin

Biochemistry

Understanding Gap Junction Phosphorylation by p38 to Inhibit Tumor Growth

**Morgan Weaver**

Advisor: Dr. Josh Lord

Environmental Science

Effect of Ocean Acidification on Dominance Hierarchy Formation in *Pagurus longicarpus*

**Tyra Wentz**

Advisor: Dr. Christopher Jones

Biology/Genetics

Physical performance outcomes of *Drosophila melanogaster* as determined by diet and cardiac health

## Student Research Conference Participation

### **Alec Brisbois**

Capillary Electrophoresis Identification of Rhodium-DNA Interstrand Cross-linkage

Advisors: Dr. Shari Dunham & Dr. Alison Holliday

### **Alec Buttne, Emilee Engler, Kylie Chichura**

Development of Quorum Sensing Inhibitors for Streptococcus pneumoniae Through Optimization of the Hydrophobic Binding Face and Substitution of the N-Terminus Residue

Advisor: Dr. Michael Bertucci

### **Alexa Hromyak**

Assessing Nurses' Knowledge of the Care of Clients with Autism Spectrum Disorder Seeking Treatment in the Emergency Department: A Mixed Methods Study

Advisor: Dr. Paulette Dorney

### **Lauren Kubic**

Interpersonal and Intrapersonal Emotion Regulation Efficacy: The Role of Interpersonal Trust and Anxiety

Advisor: Dr. Aleeha Hay

Advisor: Dr. Alec Buttne, Dr. Adam der Seekint

### **Raquel Lopez de B**

**Emily Saulino**

The Synthesis of Novel Rhodium Com

**Emilee Engler**

Quorum sensing inhibition in *Streptococcus pneumoniae* using optimized CSP1 modifications including a key E1A substitution

Advisor: Dr. Michael Bertucci

**Alec Buttner**

Synthesis of an inhibitory peptide for quorum sensing in *Streptococcus pneumoniae* through optimization of the hydrophobic binding face and substitution of the N-terminus residue

Advisor: Dr. Michael Bertucci

**Rachel Riley**

Inhibition of Src Activity in Human Prostate Cancer Cells upon Expression of Cx43-based Gap Junctions

Advisor: Dr. Anastasia Thévenin

**Chandra Reid**

HeLa Cell Toxicity and Cellular DNA-Binding of Rhodium Complexes

Advisors: Shari U. Dunham and Anastasia Thevenin

**Sofia**

Advisors: Shari U. Dunham and Anastasia Thevenin

**Charlotte Reid**

HeLa Cell Toxicity and Cellular DNA-Binding of Rhodium Complexes

Advisors: Shari U. Dunham and Anastasia Thevenin

**Alec Buttner** (First Place prize in Biochemistry)

The Connexin 43 Carboxyl-Terminus Tail as a Src Inhibitor in Cancer Cells

**Charlotte Reid**

HeLa Cell Toxicity and Cellular DNA-Binding of Rhodium Complexes

Advisors: Shari U. Dunham and Anastasia Thevenin

**Raquel Lopez de Boer**

The Neuroprotective Effects of Curcumin in the 6-OHDA Model of Parkinson's disease: A Neurochemistry Study

Advisor: Dr. Cecilia Fox

**Chloe Mondok**

The Neuroprotective Effects of Curcumin and Vitamin E in the 6-Hydroxydopamine Rat Model of Parkinson's Disease

Advisor: Dr. Cecilia Fox

**Emma Miller**

Strong Proper Connection

Advisor: Dr. Nathan Shank

**Riley Kirkpatrick**

Massively Parallel Exact Histogram Equalization

Advisor: Dr. Jeffrey Bush





