CURSCA

Celebration of Undergraduate Research, Scholarship, and Creative Activity

Spring 2020
This program highlights just a fraction of the undergraduate research, scholarship, and creative activity taking place at Marist College during any given academic year. From assessment of toxin levels in the Hudson River, to analysis of the modern tragicomedy, undergraduate scholarly and creative activities are occurring across all schools and disciplines at Marist. As a consequence of these in-depth learning activities, the students are able to acquire the knowledge and skills that help them to become independent learners, to build professional relationships, as well as to prepare for graduate study and future careers in industry. Students who undertake research as undergraduates tend to learn more and to be more satisfied with their undergraduate studies, which is just one of the reasons why we celebrate these activities at our annual showcase!

Unfortunately this year’s CURSCA was canceled due to COVID-19. However, this does nothing to diminish the important scholarly and creative accomplishments of our students. This program includes the student projects that were accepted for CURSCA 2020, but it does not capture the breadth and depth of our plans for improving CURSCA. Starting this year, a number of important changes were made to CURSCA, and these positive changes will carry over into future years. In addition to the traditional poster and oral presentations, this year’s CURSCA welcomed thematic submissions, including panels on criminal justice, civic engagement projects, and ethics. Also, we expanded CURSCA to include musical and theatrical performances, as well as poetry readings. We would like to thank the Center for Social Justice Research, the Center for Civic Engagement and Leadership, Marist Music, the Theatre Program, and the Creative Writing Program for the important work they did to expand CURSCA’s program this year. Finally, the committee worked on student engagement templates in order to expand attendance at CURSCA, and to inspire the next generation of student researchers. Not all of these positive developments are reflected in this program.

CURSCA 2020 would also have included a keynote lecture by Dr. Jennifer Shanahan, the Assistant Provost for High-Impact Practices at Bridgewater State University. In addition, Dr. Shanahan was slated to present the inaugural Center for Teaching Excellence annual teaching lecture focusing on expanding access to high-impact practices to all students.

In closing, we would like to thank the CURSCA 2020 Committee – Jessica Boscarino, Nancy Calabrese, Susan Chambre, Qihao Ji, Raymond Kepner, Elizabeth Reid, Stephanie Seketa, and James Snyder – for the hard work they did to improve CURSCA and to strengthen undergraduate research, scholarship, and creative activities at Marist.

Sincerely,
Dr. Elisa Woolridge and Dr. Juris Pupcenoks
CURSCA 2020 Co-Chairs
STUDENT PRESENTATIONS

ELIZABETH ABARE
*Juvenile Dermatomyositis in a Female Collegiate Basketball Player*
Faculty Mentor: Prof. Mark Gildard

OLIVIA ABRAMCHIK-CAVALLO
*Brostrom Procedure and Os Trigonum Excision in a Football Athlete: A Case Study*
Faculty Mentor: Prof. Mark Gildard

JULIANNA ADLER-COLVIN
*How an Invasive Species Affects Infiltration: A Look at Japanese Knotweed*
Faculty Mentor: Dr. Zion Klos

GABRIELLA AZZARITI
*HoneyHoney and Ambrosia: Lèvres pour Toujours*
Faculty Mentor: Prof. Caroline Rider

MATTHEW BADIA
*Use of Gadolinium to Track Sewage Effluent through the Poughkeepsie, NY Water System*
Faculty Mentor: Dr. Neil Fitzgerald

ARIANA BAKST
*A Rare Humeral Shaft Fracture via Pitch in the Arm of a High School Pitcher*
Faculty Mentor: Prof. Mark Gildard

SARA BARKER
*Arthrex ACL Repair for Interscholastic Football Player*
Faculty Mentor: Prof. Mark Gildard

MADISON BARR
*Harmful Effects of Plea Deals on the Criminal Justice System*
Faculty Mentor: Prof. Lucy Holtsnider

CRYSTAL BARROCA and MIA FELLIN
*Biochemical Characterization of Autophagy in Melanocytes*
Faculty Mentor: Dr. Megan Dennis

KELSEY BENAVIDES
*Resilience of Immigrant Youth in a Vocational/Education Program*
Faculty Mentor: Dr. Martha Garcia
JENNIFER BEREAN
15 Year Old Softball player with SI Dysfunction
Faculty Mentor: Prof. Mark Gildard

NICHOLAS BLASKEY and MOLLY SMITH
A Practical Analysis Of Programming Languages through Honeypots
Faculty Mentor: Dr. Alan Labouseur

OLIVIA BOND, VICTORIA REY, and JILLIAN SIMON
The Specter of Fame: Teaching Edgar Allan Poe's Obsession with Celebrity
Faculty Mentor: Dr. Patricia Tarantello

JANA BRZOVSKI
JBZ Snacks and Lena’s Schokolade: Gluten-Free Pretzels in Germany
Faculty Mentor: Prof. Caroline Rider

ANALISA CASO
Transformative Sounds: From Music to Phonetics
Faculty Mentor: Dr. Patricia Tarantello

AILINE CESPEDES
Teacher and Program Impact on the Socio-Emotional and Educational Needs of Newly Arrived Immigrant Students
Faculty Mentor: Dr. Martha Garcia

CHELSI CHELSI
Research Related to the Feasibility of Aggregating Values from an Accelerometer and the Activity Recognition API to Establish a Threshold Value for Identifying Road and Pedestrian Involved Accidents on Smartphone Devices
Faculty Mentor: Prof. Christopher Algozzine

REBECCA COLE
Thrown to the Wolves: The Lived Experiences of Female Offenders under Community Supervision
Faculty Mentor: Dr. Carol Rinke

ALYSSA CONRAD
Unexplained Exertional Rhabdomyolysis in Division I Collegiate Football Player
Faculty Mentor: Prof. Mark Gildard

RAE CRESCAS, LISA GIULIANELLI, and SHANTELLE CLARK
Clothing for Transgender Individuals
Faculty Mentor: Prof. Jodi Hartmann
GABRIELLA DeGENNARO
Influence of Sediment Dynamics on Microplastic Hotspot Accumulation in Hudson Valley Drinking Reservoirs
Faculty Mentor: Dr. Zion Klos

ISABELLA DelVECCHIO
The Effect of Strategic Instruction for Categorical Clustering on Preschoolers' Recall Accuracy
Faculty Mentor: Dr. Mary Stone

ALINA DiMELLA
Stitch Fix: Beneath the Fix
Faculty Mentor: Prof. Jennifer Finn

CLARICE DREXLER
Uncoupling the Influences of Organic Matter and Groundwater Inflow on Endangered Turtle Habitat in Wetland Ponds
Faculty Mentor: Dr. Zion Klos

ELIZABETA DUSHAJ
Avon Pharma and Shkoder Fields: Erzna in the Albanian Market
Faculty Mentor: Prof. Caroline Rider

NICOLE FARISHIAN
DaVinci Worldwide + Judge Sports: Erg Boards in Morocco
Faculty Mentor: Prof. Caroline Rider

NINA FASSNACHT, MARYELLEN KELLY, AIDAN NOWAKOWSKI, and ALEXA PERUFFO
Chromatin Remodeling Mediates Repair of DNA Damage in the Adult C. elegans Germ Line
Faculty Mentor: Dr. Paula Checchi

MICAELA FONTANETTA
Expression of Autophagy-Related Proteins in Macrophages with Ongoing Nutrient-Stress
Faculty Mentor: Dr. Megan Dennis

NICOLE GOMEZ
Conservative Treatment for Subluxing Ulnar Nerve
Faculty Mentor: Prof. Mark Gildard

TARA GUAIMANO
“A Human Enterprise:” Newsroom Transparency as an Effort to Increase Public Trust in American Journalism
Faculty Mentor: Dr. Kevin Lerner
FRANCESCA GUZZO-CROCAMO
The Effect of Body Scan Meditation on Phantom Limb Pain: A Pilot Study
Faculty Mentor: Dr. Kristin Jay

MADISON HEITZ
Ewings
Faculty Mentor: Prof. Mark Gildard

NAOMI HEPHZIBAH
Golden Beauty and Natural Essence: Natural Hair Care in Ghana
Faculty Mentor: Prof. Caroline Rider

AUDREY HUGGAN
Insights of Myelodysplastic Syndrome over a 9-Year Span
Faculty Mentor: Prof. Mary Van Demark

ZACHARY JACOBS
Collegiate Female Rower with a Unique Lower Lumbar Injury Presentation
Faculty Mentor: Prof. Mark Gildard

EMILY KLEIN
A Case of a Factor VII Deficiency and Lewis A Immunization in Pregnancy
Faculty Mentor: Prof. Mary Van Demark

ANNEMARIE LEE and ESABELLE GERVASIO
Alginate Encapsulation Protects Xylanase from Oxidative Inactivation
Faculty Mentor: Dr. Elisa Woolridge

CADE McNAUGHTON
Prax + Netherlands Med: Updated Medical Devices
Faculty Mentor: Prof. Caroline Rider

PATRICK McSHEA
Mechanistic Evaluation of the Modified Scott Test through Computational Chemistry Methods
Faculty Mentor: Dr. John Galbraith

SELENA MILDON
Honeyworks and Manuka Med: Manuka Heal in New Zealand
Faculty Mentor: Prof. Caroline Rider
JASMINE MILLER
Multi Fracture Accident Caused by a Motor Vehicle Accident with Internal Fixations and Profound Joint Involvement
Faculty Mentor: Prof. Mark Gildard

RICHARD MONSKY and MICHAEL ROSKO
Solvatochromism and Aggregation-Induced Emission Enhancement in V-Shaped Donor-Acceptor Molecules
Faculty Mentor: Dr. Jocelyn Nadeau

KAYLIN MOSS and ZACHARIE HAPPEL
Decentralized Identity Management with IBM Trusted Identity
Faculty Mentor: Prof. Brian Gormanly

SAMANTHA MUSSO
Assessing Cyanobacterial Toxins Produced from Harmful Algal Communities in the Hudson River Watershed
Faculty Mentor: Dr. Zion Klos

PEDRO NOBREGA
Noxx & Sons + Alpha in Brazil
Faculty Mentor: Prof. Caroline Rider

AIDAN NOWAKOWSKI
Regulation of DNA Repair Pathways to Ensure Gamete Quality
Faculty Mentor: Dr. Paula Checchi

HADLEY O’CONNOR
Rates of Cancer Incidence Among Firefighters
Faculty Mentor: Prof. Terrance Paskell

ALEXANDER PAKULA
Barry and the Modern Tragicomedy
Faculty Mentor: Dr. Philip Scepanski

ELLIE PETRACCIONE
Double Trouble in the Hudson River Estuary: Dominant Abiotic Factors Controlling Harmful Algal Bloom Risk and the Compounding Influence of Invasive Water Chestnut
Faculty Mentors: Dr. Zion Klos and Dr. Raymond Kepner
CHRISTOPHER PETRUCELLI and WILLIAM KLUGE

*Precision Time Protocol Security Exploits*
Faculty Mentor: Dr. Casimer DeCusatis

AMY PITTS

*On Missing Data*
Faculty Mentor: Dr. Matthew Glomski

ALEX PRIZGINTAS

*The Race Against Spoiled Milk*
Faculty Mentor: Dr. Kristin Bayer

ALEX PRIZGINTAS

*Dave Brubeck and the Transformation of Music*
Faculty Mentor: Dr. Kristin Bayer

DIHAO PU

*The Effect of Basis Set Size on Charge-Shift Bonding Calculation*
Faculty Mentor: Dr. John Galbraith

CLARE REILLY

*The Empathy Project*
Faculty Mentor: Dr. Daria Hanssen

MIA RIDGWAY

*Cyanobacterial Toxin Levels in the Hudson River Valley*
Faculty Mentor: Dr. Raymond Kepner

TYLER RIMALDI and DANIEL GROSSMANN

Faculty Mentors: Dr. Donald Schwartz, Dr. James Rauh, Dr. John McGee, and Dr. Carolyn Matheus

JAMES ROBITAILLE

*Quantifying Longitudinal Changes in Water Quality to Predict Groundwater Exchange in Sawkill Creek, NY*
Faculty Mentor: Dr. Zion Klos

ALEXANDRA SCHMITT

*ArmUS and Ukrbron: Battlefield Tech for Ukraine*
Faculty Mentor: Prof. Caroline Rider
TESS SHAPIRO and GRACE KELLY
*GTel TechApp*
Faculty Mentor: Prof. Christopher Algozzine

JILLIAN SIMON
*Supernatural Studies*
Faculty Mentor: Dr. Patricia Tarantello

JULIA SOLIN and HOLLY SHEA
*A Comparison of Russian and American Female Sex Trafficking Victim Modalities*
Faculty Mentor: Dr. Vernon Murray

JENNIFER SURDAM
*Secondary Trauma in Social Work*
Faculty Mentor: Dr. Daria Hanssen

KATERINA TZANNES and EDWIN FORSON
*Systems Administration Framework*
Faculty Mentor: Dr. Casimer DeCusatis

CHRISTOPHER VANEK
*Shakespeare's England: The Reality of Falstaff*
Faculty Mentor: Dr. Patricia Tarantello

JESSICA von KESSEL
*Multiple Lumbar Disc Herniation via Sneezing Mechanism in a Division I Collegiate Rower*
Faculty Mentor: Prof. Mark Gildard

JONATHAN VOSE and CASSIDY MAZELIN
*Headspace Solid Phase Microextraction GCMS as a Potential In-Situ Method for the Early Detection of Fusarium Head Blight in Barley*
Faculty Mentors: Dr. Neil Fitzgerald and Dr. Raymond Kepner

NICOLE WALSH and SAMANTHA LICCIARDI
*Analysis of Autophagic Response in Melanocytes*
Faculty Mentor: Dr. Megan Dennis

RYAN WERTLIEB
*Clean Cosmetics and Green Glam: Glen Glam in Ireland*
Faculty Mentor: Prof. Caroline Rider
ASHLEY WITCOMB
What's Poppin?: Bactericidal Action of Facial Cleansers and Their Active Ingredients on Cutibacterium acnes
Faculty Mentor: Dr. Raymond Kepner

RYAN WITTE and ISABELLE STOCKMAN
Mislocalization of Endolysosomal Proteins and Tfeb Activation upon Nutrient Stress in Melanocytes
Faculty Mentor: Dr. Megan Dennis

CASEY YAMAMOTO
Recovery of Diverse Flora after Control of Invasive Japanese Knotweed (Part 2)
Faculty Mentor: Dr. Richard Feldman

NICHOLAS YEE and EMMA STEVENSON
Generalized Newton’s Method and Applications in Maximum Likelihood Estimation
Faculty Mentor: Dr. Duy Nyugen
CURSCA 2020 COMMITTEE

Elisa Woolridge
Associate Professor of Chemistry & CURSCA Co-Chair

Juris Pupcenoks
Associate Professor of Political Science & CURSCA Co-Chair

Jessica Boscarino
Associate Professor of Political Science

Nancy Calabrese
Head, Public and Research Services Librarian

Susan Chambre
Assistant Professor of Special Education

Qihao Ji
Assistant Professor of Communication

Raymond Kepner
Associate Professor of Biology

Elizabeth Reid
Assistant Professor of Mathematics

Stephanie Seketa
Director of Academic Affairs

James G. Snyder
Interim Dean of Academic Engagement