Celebration of Academic Excellence
Featuring Senior Honors Projects from the Class of 2019

APRIL 24-26, 2019
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Abstracts for Lightning Talks, Panel Discussions, Posters & FIRE Talks are available online at msmary.edu/sparc

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Greetings from the University Honors Program Director and SPARC Festival Co-Chairs

Welcome!

Members of the Mount St. Mary’s University faculty dedicate themselves to excellence in both scholarship and teaching, integrating the latest developments in their disciplines into classroom instruction. Our students follow suit by presenting their work at the annual SPARC Festival.

Each year, we celebrate our academic excellence by showcasing the scholarly and creative projects of our faculty and undergraduates who represent the College of Liberal Arts, the School of Natural Science and Mathematics, the Richard J. Bolte, Sr. School of Business, the Division of Education and Human Services, and the University Honors Program.

We are pleased to announce that Constance Rice, Esq. will be delivering the SPARC Keynote address, “Race, Truth and Your Power in Reconciliation: #WhyBlackfaceStillMatters” in Knott Auditorium on Thursday, April 25 after 11:30 a.m. Rice is a civil rights lawyer who has worked passionately to engineer systemic fixes to entrenched inequality and injustice. For this reason, she has been designated as one of the top 10 most influential attorneys in California by the California Law Business Journal. In addition, the Honored Faculty Speaker, chosen by the Honors Committee, is Patrick Lombardi, Ph.D., Assistant Professor of Biochemistry. His talk, “Deciphering the Code: How our Cells Recruit DNA Repair Factors Using the Protein Ubiquitin,” will take place on Thursday, April 25 in Knott Auditorium at 4:30 p.m.

We invite you to join us on the Mount’s main campus in Emmitsburg, Maryland. Our senior honors project presentations reflect our students’ year-long studies of work closely mentored by outstanding faculty on topics of shared interest. These projects serve both as capstone experiences in students’ majors and as springboards to graduate school or a profession. Honors presentations are in the O’Hara Dining Room located in Patriot Hall and Laughlin Auditorium located in the Coad Science Building; SPARC events are campus-wide. Speakers, times and topics are listed in this brochure and can found online at msmary.edu/SPARC. These, and all SPARC events, are free and open to the public.

If you need directions to these venues or any further information, please email us at sscott@msmary.edu; kennedy@msmary.edu; turner@msmary.edu.

We look forward to seeing you at these events!

Sarah K. Scott, Ph.D.
Director, University Honors Program

Mary Catherine Kennedy, Ph.D., & Michael Turner, Ph.D.
Co-Chairs, SPARC Festival
Keynote Speaker

Constance Rice, Esq.
“Race, Truth and Your Power in Reconciliation: #WhyBlackfaceStillMatters”

Thursday, April 25, 2019
11:30 a.m.-12:30 p.m. | Knott Auditorium

Connie Rice is a civil rights lawyer who engineers systemic fixes to entrenched inequality and injustice. California Law Business Journal twice designated her one of the top 10 most influential attorneys in California. Through impact litigation, campaigns and inside bureaucratic maneuvering, she has led coalitions and clients to win more than $30 billion in damages, bonds and policy changes. Bus riders, death row inmates, folks abused by police, school kids, whistleblowers, cops and sufferers of every stripe of discrimination (sex, race, disability, age), have sought her counsel. But so have her opponents, like the Los Angeles Police Department she sued for 15 years but which now reserves a parking space for her at its new headquarters.

Rice grew up all over the world in an Air Force family headed by her parents Anna, a biology teacher, and Phillip, a pilot and colonel. She graduated from Harvard-Radcliffe colleges in 1978, achieved her black belt in taekwondo in 1981 and entered New York University School of Law on a Root Tilden Scholarship. In law school, she worked extensively on capital punishment cases at the NAACP Legal Defense and Educational Fund. After graduating from law school in 1984, she clerked for the Honorable Damon J. Keith at the United States Court of Appeals for the Sixth Circuit for two years before winging it west to California where she joined the law firm of Morrison & Foerster in San Francisco. She rejoined the NAACP Legal Defense Fund in 1989 as Western Regional Counsel, won several landmark cases and, in the words of one magazine, established herself as “the voice of Los Angeles’ oppressed.” Together with Co-Directors Molly Munger, Penda Hair and Steve English, Rice launched The Advancement Project, a policy action and technology organization in 1998, and in the words of Los Angeles Magazine, “picked up where Clarence Darrow left off.” Rice serves on the board of public radio station KPCC and as chief of staff to Sinbad, her jet black cat.
Patrick Lombardi, Ph.D., Assistant Professor of Biochemistry
“Deciphering the Code: How Our Cells Recruit DNA Repair Factors Using the Protein Ubiquitin”
Thursday, April 25, 2019
4:30-5:15 p.m. | Knott Auditorium

Patrick Lombardi, Ph.D., received his Bachelor of Science degree in chemistry from Yale University in 2006. He earned his doctoral degree in chemistry from the University of Pennsylvania under the guidance of Professor David W. Christianson, Ph.D. While in the Christianson laboratory, Lombardi used X-ray crystallography to determine the three-dimensional structures of several bacterial metalloenzymes, including a polyamine deacetylase and a terpene cyclase. Lombardi joined the laboratory of Professor Cynthia Wolberger, Ph.D., at the Johns Hopkins University School of Medicine in 2012 where his research focused on understanding the structural basis of ubiquitin signaling in the DNA damage response. At the Mount, Lombardi works with undergraduate researchers to study ubiquitin signaling using a combination of biochemistry, biophysics and structural biology.

Abstract

*DNA is the blueprint for making everything in our bodies. However, we all continuously experience DNA damage from both internal and external sources. We are able to preserve our genetic information because our cells are equipped with DNA repair machinery that detects and fixes this damage. Our group is interested in understanding how the cell’s DNA repair machinery is targeted to damage sites. This talk will focus on how cells utilize the protein ubiquitin to recruit DNA repair factors, with emphasis on the experiments Mount St. Mary’s students are conducting to characterize the protein-binding interactions that are essential for this process.*
### SPARC Festival Schedule

**Wednesday, April 24, 2019**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>3:30-4:45 p.m.</td>
<td>Opening Celebration</td>
<td>Founder’s Plaza</td>
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<td>(Rain Location: Patriot)</td>
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<tr>
<td>4:30 p.m.</td>
<td>President Trainor’s Address</td>
<td>Founder’s Plaza</td>
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<td>(Rain Location: Patriot)</td>
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<td>5:00-6:00 p.m.</td>
<td>FIRE Talks I</td>
<td>President’s Dining Room</td>
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<tr>
<td>5:00 p.m.</td>
<td>Dr. Emil Berendt, Economics</td>
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<td>5:20 p.m.</td>
<td>Dr. Emil Berendt, Economics</td>
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<td>5:00-7:00 p.m.</td>
<td>Student Exhibition</td>
<td>Williams Art Gallery</td>
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<td>5:00-6:00 p.m.</td>
<td>Student Debate</td>
<td>Seminary Dining Room</td>
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<td></td>
<td>Debate Moderator: Dr. Jordan Loveridge, Communication &amp; English</td>
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<td>Debaters: COMM 303 Argument Class</td>
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<td></td>
<td>Deldridge Berry</td>
<td>Jeremiah Paige</td>
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<td>Libia Cepeda-Balcazar</td>
<td>Morgan Weigle</td>
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<td>Isaac Hamilton</td>
<td>Rachel Wheeler</td>
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<td>Cuyler McCorkindale</td>
<td>Mitchell Wileczek</td>
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<td>Joshua Moreno</td>
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<td>5:40-9:00 p.m.</td>
<td>Lightning Talk I</td>
<td>Phillips Library - Main</td>
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<td>5:40 p.m.</td>
<td>Emma Gehringer, Biology</td>
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<td>6:00 p.m.</td>
<td>Frances Patricia Stump, Biology</td>
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<td>6:20 p.m.</td>
<td>Elaina Perry, Biochemistry</td>
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<td>6:40 p.m.</td>
<td>Zach Lawson &amp; Mike Hochstein, Chemistry</td>
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<td>7:00 p.m.</td>
<td>Christopher Homick, Biochemistry</td>
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<td>7:20 p.m.</td>
<td>Gianna Pomykacz &amp; Chardane Logan, Chemistry</td>
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<td>7:40 p.m.</td>
<td>Emily Davis, Chemistry</td>
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<td>8:00 p.m.</td>
<td>Scott Lawrence Korte, Chemistry</td>
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<td>8:20 p.m.</td>
<td>Ashley Kegley, Chemistry</td>
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<td>8:40 p.m.</td>
<td>Erik Menjivar, Environmental Science</td>
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<tr>
<td>6:00-9:00 p.m.</td>
<td>Honors I</td>
<td>O’Hara Dining Room</td>
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<td>6:00 p.m.</td>
<td>Ariana R. Aragón, Communication</td>
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<td>6:45 p.m.</td>
<td>Kielce Gussie, Theology</td>
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<td>7:30 p.m.</td>
<td>Melody Connell, Communication</td>
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<td>8:15 p.m.</td>
<td>Stephanie Kennedy, Criminal Justice</td>
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<td>7:00-8:00 p.m.</td>
<td>VPA Dept. Music Showcase</td>
<td>Delaplaine Fine Arts Center</td>
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<td>Featuring the Mount Chorale &amp; Student Soloists</td>
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<td>Time</td>
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<td>8:00-11:00 a.m.</td>
<td>Honors II A</td>
<td>Laughlin Auditorium</td>
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<tr>
<td>8:00 a.m.</td>
<td>Natasha Akomeah, Biochemistry</td>
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<td>8:45 a.m.</td>
<td>Katelyn Comeau, Biochemistry</td>
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<td>9:30 a.m.</td>
<td>Elizabeth O’Hare, Biochemistry</td>
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<td>10:15 a.m.</td>
<td>John Owens, Biochemistry</td>
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<tr>
<td>8:00-11:30 a.m.</td>
<td>Honors II B</td>
<td>O’Hara Dining Room</td>
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<td>8:00 a.m.</td>
<td>Kaitlyn Heintzelman, English</td>
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<td>8:45 a.m.</td>
<td>Roderick Stephen Thomson, International Studies</td>
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<td>9:30 a.m.</td>
<td>Matthew McKenna, Business &amp; Philosophy</td>
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<td>10:15 a.m.</td>
<td>Sydney Johnson, Philosophy</td>
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<td>11:00 a.m.</td>
<td>Bryanna Youtzy, Accounting &amp; Philosophy</td>
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<td>8:40-11:15 a.m.</td>
<td>Lightning Talk II A</td>
<td>Phillips Library - Main</td>
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<td>8:40 a.m.</td>
<td>Taylor Carhart &amp; Kristen Akers, Psychology</td>
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<td>9:00 a.m.</td>
<td>Joseph Contreras &amp; Patrick Aquino, Mathematics</td>
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<td>9:20 a.m.</td>
<td>Bryan Dorbert, Computer Science</td>
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<td>9:40 a.m.</td>
<td>Anthony Drake, Computer Science</td>
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<td>10:00 a.m.</td>
<td>Matthew Luby, Computer Science</td>
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<td>10:20 a.m.</td>
<td>Christian Dovel, Computer Science</td>
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<td>10:40 a.m.</td>
<td>Tyler Shimchak, Computer Science</td>
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<tr>
<td>11:00 a.m.</td>
<td>Joshua Kaufman, Computer Science</td>
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<tr>
<td>9:00-10:15 a.m.</td>
<td>Lightning Talk II B</td>
<td>Knott Academic Center</td>
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<td><strong>Room 320</strong></td>
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<td>9:00 a.m.</td>
<td>Ethan Fiery, Economics</td>
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<td>9:20 a.m.</td>
<td>Wayne Carroll III, Economics</td>
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<td>9:40 a.m.</td>
<td>Ivan Korpics, Sport Management</td>
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<td>10:00 a.m.</td>
<td>Gabrielle Benedictis, Brenda Brodbeck, Alexandra Roblero &amp; Alba Sarria, World Languages &amp; Cultures</td>
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8:45-10:00 a.m.  Panel Presentations I  Knott Academic Center

Room 225
Panel Title: "Plague, Motherhood and Politics: Inspiration for Cultural Expression in the Middle Ages"
Faculty Sponsor: Dr. Charles Strauss, History
Respondent: Dr. Teresa Rupp, History
Panelists: Magdalene Monahan, Chyna Gilmore & Shannon Dunne

Room 220
Panel Title: "What was it like to study Rhetoric and Literature at the Mount in the 19th Century?: Evidence from the Mount Archive"
Faculty Sponsor: Dr. Jordan Loveridge, Communication & English
Respondent: Dr. Carl Glover, Communication
Panelists: Jonathan Gilbert, Joseph Furtkevic, Francis Lukban & Shannon Hunt

9:30-11:00 a.m.  Poster Session I  Patriot Hall

Patrick Aquino & Trey McGough, Mathematics
Kristine Hodgson-Torres & Jose M. Lucero, Psychology
Stephanie Kennedy, Criminal Justice
Bret W. Hollandsworth, Criminal Justice
Nicholas Lavenberg, Economics
Anthony Kortisses, Economics
Mary Stratton, Economics
Sam Stephan, Economics
John M. Wilson, Economics
Jackson Wood, Economics
Katherine Corr, Political Science
Lyndsey Saunders, Sociology
Brittany Brier, Sociology
Chris Gooden, Sociology
Terrell Washington, Sociology
Yvelly Cabral, Sociology
Robert Petrizzo, Sociology
Rachael Mattio, Sociology
Jazzmine Alston, Sociology
Allyson Bahr, Sociology
Kaitlin Simmons, Sociology
Jessica Encinas, Sociology
Kelly Marjarum, Sociology
Camila Vaca-Pereira, Sociology
Bridget Kimberly Leonard, Sociology
Sarah R. Gouin, Sociology
Zack Costello, Sociology
Cristal Alvarez-Hernandez, Sociology
Thomas Reilly, Sociology
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<th>Time</th>
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<td>10:00-11:00 a.m.</td>
<td><strong>FIRE Talks II</strong></td>
<td>Phillips Library 102</td>
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<td>10:00 a.m.</td>
<td>Dr. Brian Gilchrist, Communication</td>
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<td>10:20 a.m.</td>
<td>Dr. Thane Naberhaus, Philosophy</td>
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<td>10:40 a.m.</td>
<td>Dr. Jack Dudley, English</td>
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<tr>
<td>10:15-11:30 a.m.</td>
<td><strong>Panel Presentations II</strong></td>
<td>Knott Academic Center</td>
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| **Room 224** | Panel Title: “Women in Politics – Training Ms. President”  
Faculty Sponsor: Dr. Amanda Beal, Political Science  
Respondent: Dr. Maureen Oakley, Political Science  
Panelists: Catherine Lynch, Taylor Remsburg, Aryana McLeod, Shea Rowell, Rachel Keifer & Dr. Amanda Beal |                        |
| **Room 225** | Panel Title: “The Emergence of U.S. Power Abroad Over the Long 20th Century”  
Faculty Sponsor & Respondent: Dr. Charles Strauss, History  
Panelists: Alexander Mateo, Paul Macrae & Cameron O’Malley |                        |
| **Room 321** | Panel Title: “The History, Poetics, and Politics of American Stand-Up Comedy”  
Faculty Sponsor: Dr. David Wehner, English  
Respondent: Dr. Kurt Blaugher, Theatre  
Panelists: Maggie Hoover, Kaitlyn Heintzelman & Miltiadis Papadopoulos |                        |
| **Room 323** | Panel Title: “Semester of Service”  
Faculty Sponsor & Respondent: Dr. Barbara Marinak, Education  
Panelists: Vincent Rapposelli, Josue Amaya, Annisha Montgomery & Richard Medina |                        |
| 11:30 a.m.-12:30 p.m. | **Keynote Address**                     | Knott Auditorium       |
|               | Ms. Constance Rice, Esq.  
Title of Talk: "Race, Truth and Your Power in Reconciliation: #WhyBlackfaceStillMatters" |                        |
<p>| 1:00-2:00 p.m. | <strong>FIRE Talks III</strong>                       | President’s Dining Room |
| 1:00 p.m.     | Dr. Amanda Beal, Political Science        |                        |
| 1:20 p.m.     | Dr. Kristopher Kohler &amp; Drew Bonner, Sociology |                      |
| 1:40 p.m.     | Dr. Jack Trammell, Sociology              |                        |
| 1:00-3:00 p.m. | <strong>Honors III A</strong>                        | Laughlin Auditorium    |
| 1:00 p.m.     | Caitlin McCormack, Biology                |                        |
| 1:45 p.m.     | Joseph Renna, Biology                     |                        |
| 2:30 p.m.     | Rachel Day, Biology                       |                        |
| 1:00-4:30 p.m. | <strong>Honors III B</strong>                         | O’Hara Dining Room     |
| 1:00 p.m.     | Isabel Russell, History                   |                        |
| 1:45 p.m.     | Shea Rowell, English &amp; Music              |                        |
| 2:30 p.m.     | Joseph Furtkevic, Communication           |                        |
| 3:15 p.m.     | Donna Szajdek, Psychology                 |                        |
| 4:00 p.m.     | Elizabeth Boyle, History                  |                        |</p>
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<tr>
<th>1:00-2:30 p.m.</th>
<th>Poster Session II</th>
<th>Patriot Hall</th>
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<td>Taylor Remsburg, Sociology</td>
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<td>Bailey Raymond &amp; Makayla Sutphin, Psychology</td>
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<td>Megan McCaskey, Jessica Lee, Khalil Reid &amp; Allison Wade, Psychology</td>
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<td>Aurora Reed &amp; Erin Gamble, Psychology</td>
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<td>Kristina Winkeler &amp; Lauren Gray, Chemistry</td>
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<td>Julia Baer &amp; Joel Bowman, Chemistry</td>
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<td>Bridget Shepherd &amp; Emily Wood, Psychology</td>
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<td>Thomas Pitts, MaryAnn Grace, Emily Biesecker &amp; Victoria Doing, Psychology</td>
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<td>Liz Bullard, Maria Mack, Rachel Finn &amp; Kayla Hughes, Psychology</td>
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<td>Nicholas Starvaggi &amp; Ethan Pham, Chemistry</td>
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<td>Zena Mohammed, Madison Collins, Shaun Miller &amp; Will Almozard, Psychology</td>
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<td>Joseph Contreras &amp; Mark Plavetic, Mathematics</td>
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<td>Catherine Lynch, Samantha Vanderlipp &amp; Megan Zuvich, Mathematics</td>
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<td>Rebecca Breiner &amp; Hanna Lorenzen, Mathematics</td>
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<td>Natalie Brunner &amp; Abigail Spencer, Mathematics</td>
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<td>Nicole Pinto &amp; Donna Szajdek, Psychology</td>
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<td>Morganne Hendrickson, Brianna Rizzo, Gemma O’Keefe &amp; Alyssa Gallagher, Psychology</td>
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<td>Aurora Moser-Reed, Ajani Roberts, Casey Smial &amp; Kelly VanDyke, Psychology</td>
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<td>Daniel John Coleman, Chemistry</td>
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<td>Sydni Surowiec &amp; Madison Norris, Psychology</td>
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<td>Gianna Duca &amp; Sandra Granados, Psychology</td>
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<th>1:00-2:30 p.m.</th>
<th>Lighted Corners</th>
<th>Phillips Library 102</th>
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<tr>
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<td>Alba Sarria, Editor</td>
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<tr>
<td></td>
<td>Kaitlyn Heintzelman, Prose Editor</td>
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<td>Rachel Donohue, Design &amp; Art Editor</td>
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<td>Breanna DeSimone, Poetry Editor</td>
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<td>Annisha Montgomery, Co-Design &amp; Poetry Editor</td>
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<td>Dr. Tom Bligh, Faculty Advisor</td>
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<td>Hannah Barber</td>
<td>Alexandra Edwards</td>
<td>Matenyeh Kaba</td>
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<td>Samantha Boyd</td>
<td>Melanie Exler</td>
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<td>Sarah Dirndorfer</td>
<td>Jazlyn Ibarra</td>
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### 1:30-2:45 p.m.  Panel Presentations III  Knott Academic Center

**Room 220**  
Panel Title: "Digital Humanities"  
Faculty Sponsor: Dr. Elizabeth Strauss, History  
Panelists: Matthew McDonald, Sydney Johnson, Patrick Aquino, Nathaniel Bentz, Massa (Olivia) Atsu, Dr. Greg Murry, Dr. Elizabeth Strauss & Mr. T.J. Rainsford

**Room 225**  
Panel Title: "National Growing Pains: Policing, Highway Construction and Environmental Protection in America, 1700s-1970s"  
Faculty Sponsor: Dr. Charles Strauss, History  
Respondent: Dr. Timothy Fritz, History  
Panelists: Mark Van Dyke, Jamie Karpency & Hugh Kinsey

**Room 321**  
Panel Title: "What Constitutes ‘Grit?’ from the Fall 2018 West Point Annual Ethics Leadership Conference"  
Faculty Sponsor: Professor Dana Sauers, iLEAD  
Respondent: Professor Michael Hoover, Education  
Panelists: Harry Scherer, Sarah Frouh, Isiah Williamson & Shahanaaz Soumah

**Room 323**  
Panel Title: "What is the Role of the Laity in the Church?"  
Faculty Sponsor: Dr. Paige Hochschild, Theology  
Respondent: Msgr. Michael Heintz, Seminary  
Panelists: Tony Bennett, Patrick Collins, Patrick Fitzgerald, Emily Flaherty, Kielce Gussie, Gabrielle Hayes, Kaitlyn Heintzelman, Clare Logue, Erin Sample & Heather Stevenson

### 2:30-4:00 p.m.  VPA Dept. Music Major Roundtable  Knott Auditorium

Music Majors: Jasmine Patrick, Shea Rowell, Bryan Dorbert & Tahreem Fayiz

### 2:00-4:00 p.m.  Lightning Talk III A  Phillips Library - Main

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Field</th>
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<tbody>
<tr>
<td>2:00 p.m.</td>
<td>Zach Roberts, Computer Science</td>
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<td>2:20 p.m.</td>
<td>Thien Mai, Computer Science</td>
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<td>2:40 p.m.</td>
<td>Marquus I. Chambers, Computer Science</td>
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<td>3:00 p.m.</td>
<td>Justin Dennis, Computer Science</td>
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<td>3:20 p.m.</td>
<td>Jeremy Paraoan, Computer Science</td>
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<td>3:40 p.m.</td>
<td>Gilles Tamukong, Computer Science</td>
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### 2:00-4:15 p.m.  Lightning Talk III B  Knott Academic Center

**Room 320**  
<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Field</th>
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<tbody>
<tr>
<td>2:00 p.m.</td>
<td>Sean P. Zaleski, Economics</td>
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<td>2:20 p.m.</td>
<td>Nathaniel F. Bald, Economics</td>
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<td>2:40 p.m.</td>
<td>Alexander Langan, Economics</td>
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<td>3:00 p.m.</td>
<td>Carolyn Ciccocioppo, Economics</td>
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<td>3:20 p.m.</td>
<td>Rebecca E. Lee, Economics</td>
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<td>3:40 p.m.</td>
<td>Hanna Houck, Economics</td>
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<td>4:00 p.m.</td>
<td>Scott Owens, Economics</td>
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</table>
3:00-4:30 p.m.  Poster Session III  Patriot Hall

Dhane Schmelyun, Hannah Orland, Kate Burke, Lauren Gray, Kayla Kebreau & Emmanuella Osei-Asante, Biochemistry
Matenyeh Kaba & Thomas Pitts, Psychology
Jessica Lee, Rebecca Cermak & Victoria Doing, Psychology
Emely Cruz, Ivy McLaughlin, Kate McCann & Caroline Colson, Psychology
Charlotte Elrod & Laura Kingham, Chemistry
Frances Stump, Kelly Majerowicz, Joseph Renna & Thomas Richardson, Biology
Thomas Dolinar & Chris Gooden, Chemistry
Natasha Akomeah & Ashley Kegley, Biology
Patrick Aquino, Data Science
James Morrie, Natalie Berry & Allison Koontz, Psychology
Birhan Nega Alemayehu, Sarah Frouh & Emmanuel Kesse, Biology
Kristine Hodgson-Torres, Psychology
Nicole Pinto & Keziah Adabrah, Biology
Veronica Balick & Rachel Keifer, Biology
Sasha-Gay Williams & Emma Gehringer, Biology
Sean Kazmierski, Environmental Science
Malik Kadir, Biology
Angel Madariaga, Daniel Coleman & Christopher Homick, Biology
Mitchel Geraghty, Biology
Nicholas Starvaggi, Chemistry
Elizabeth O’Hare & Katelyn Comeau, Biology
Pablo Badia, Chemistry
Kayla Hughes & Drew Wertz, Psychology

3:00-4:30 p.m.  Moorings and Tolle Lege  Phillips Library 102

**Moorings Staff**
Shea Rowell, Senior Editor-in-Chief
Kaitlyn Heintzelman, Co-Editor-in-Chief
Kelley Northam, Co-Editor-in-Chief
Katherine Stohlman, Co-Editor-in-Chief
Dr. Sean Lewis, Faculty Advisor
Dr. Andrew Rosenfeld, Faculty Advisor
Dr. Elizabeth Strauss, Faculty Advisor

**Editors**
Hannah Barber
Jacob Cherry
Shannon Dunne
Matthew McDonald
Miltiadis Papdopoulos
Matthew Selba
Courtney Varley

**Tolle Lege Staff**
Paul Welte, Editor-in-Chief
Julia Baer
Julia Cool
Kerri Czekner
Patrick Fitzgerald
Shannon Hunt
Danny Majerowicz
Dr. Thane Naberhaus, Faculty Advisor

Sydney Johnson, Assistant Editor-in-Chief
Matthew McKenna
John Owens
Andrew Phillippi
Leo Rodriguez-Segura
Nicholas Starvaggi
Jack Vukelich
Dr. Luis Vera, Faculty Advisor
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<tr>
<th>Time</th>
<th>Event Description</th>
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<tr>
<td>4:30-5:15 p.m.</td>
<td>Honored Faculty Speaker</td>
<td>Knott Auditorium</td>
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<tr>
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<td>Dr. Patrick Lombardi, Assistant Professor of Biochemistry</td>
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<td>Title of Talk: “Deciphering the Code: How Our Cells Recruit DNA Repair Factors</td>
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<td>Using the Protein Ubiquitin”</td>
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<td>5:40-9:15 p.m.</td>
<td>Lightning Talk IV</td>
<td>Phillips Library - Main</td>
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<td>5:40 p.m.</td>
<td>Taylor Remsburg &amp; Marie Dickson, Sociology</td>
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<td>6:00 p.m.</td>
<td>Grace King, English</td>
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<td>6:20 p.m.</td>
<td>Annisha Montgomery, English</td>
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<td>6:40 p.m.</td>
<td>Kelley Northam, History</td>
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<td>7:00 p.m.</td>
<td>Grace Bovard, Communication</td>
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<td>7:20 p.m.</td>
<td>Chachie Tchuenkam, Political Science</td>
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<td>7:40 p.m.</td>
<td>Jamie Karpency, Political Science</td>
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<td>8:00 p.m.</td>
<td>Gloria Marie DeMoura, Theology</td>
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<td>8:20 p.m.</td>
<td>Trisha Nee, Criminal Justice</td>
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<td>8:40 p.m.</td>
<td>Le-Roy Battle III, Sociology</td>
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<td>9:00 p.m.</td>
<td>Jasmine Patrick, Fine Arts - Music</td>
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<td>6:00-8:00 p.m.</td>
<td>Honors IV A</td>
<td>Laughlin Auditorium</td>
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<td>6:00 p.m.</td>
<td>Samuel Dainton, Environmental Science</td>
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<td>6:45 p.m.</td>
<td>Paul Welte, Biology</td>
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<td>7:30 p.m.</td>
<td>Valerie Bakly, Biology</td>
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<td>6:00-8:00 p.m.</td>
<td>Honors IV B</td>
<td>O’Hara Dining Room</td>
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<td>6:00 p.m.</td>
<td>Phillip Dudeck, History &amp; Political Science</td>
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<td>6:45 p.m.</td>
<td>Emma Blake, Accounting &amp; Business</td>
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<td>7:30 p.m.</td>
<td>Kayla Pahl, Sociology</td>
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<tr>
<td>7:30-9:30 p.m.</td>
<td>VPA Dept. Theatre Showcase</td>
<td>Delaplaine Fine Arts Center</td>
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**Friday, April 26, 2019**

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<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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<tr>
<td>11:30 a.m.-1:30 p.m.</td>
<td>Mosaic Festival</td>
<td>Seminary Dining Room</td>
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<tr>
<td>3:30-5:00 p.m.</td>
<td>Awards Ceremony</td>
<td>Knott Auditorium</td>
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Senior Honors Project Abstracts
(in alphabetical order of surname)

Natasha Akomeah
“MicroRNA Target Validation in Cervical Cancer Using C. elegans as a Model System”
Major: Biochemistry
Mentor: Dr. Michael Turner
Abstract: DNA is the genetic code that determines every single component of a living organism. This research focuses on validating targets of miRNAs involved in cervical cancers using C. elegans as a model system.
Session Time: Honors Session II A Laughlin 8:00-8:30 a.m.

Ariana R. Aragón
“And the Word was Gay: A Look at the Relationship Between the Catholic Church with the LGBT Community Through McLuhan’s Hot and Cool Media”
Major: Communication
Mentor: Dr. Brian Gilchrist
Abstract: This paper analyzes the cross-sectionalism between the LGBT community and the Catholic Church and the effect that media has on that relationship.
Session Time: Honors Session I O’Hara Dining Room 6:00-6:30 p.m.

Valerie Bakly
“The Relationship of the Unfolded Protein Response’s XBP1 Transcription Factor with Ebola Virus”
Major: Biology
Mentor: Dr. Katy Dye
Abstract: The Ebola Virus Disease has resulted in >11,325 deaths in West Africa from 2014-2016. We hypothesize that the Ebola virus requires the unfolded protein response to replicate. HUVEC knockout cell line was produced and observations of interference with XBP1 were made to determine if the UPR is essential for Ebola replication.
Session Time: Honors Session IV A Laughlin Auditorium 7:30-8:00 p.m.

Emma Blake
“To Brexit or Not to Brexit? That is the Question”
Major: Accounting & Business
Mentor: Dr. Mike Barry
Abstract: This paper summarizes the predicted effects that Brexit will have on the United Kingdom’s economy. I analyze the implications on business, politics, international relations, and the nature of economic integration. This includes a study of goods and services markets, financial markets, and future relationships between nations.
Session Time: Honors Session IV B O’Hara Dining Room 6:45-7:15 p.m.

Elizabeth Boyle
“Reconsidering the Landscape of Emancipation in Antebellum America: The Manumission, Kidnapping, and Freedom of Kitty Payne”
Major: History
Mentor: Dr. Timothy Fritz
Abstract: The story of Catherine “Kitty” Payne is, foundationally, a story about one slave’s journey to freedom. Unlike other freedom narratives, Payne’s battle is with the courts rather than her master as she seeks to affirm her rights as a free person in Kitty v. Maddox.
Session Time: Honors Session III B O’Hara Dining Room 4:00-4:30 p.m.

Katelyn Comeau
“Mechanisms Behind the Wiring of the Touch System: An Exploration of LTMR Development, Growth, and Innervation”
Major: Biochemistry
Mentors: Dr. Dana Ward, with Dr. David Ginty and Dr. Shan Meltzer, Harvard Medical School
Abstract: This project seeks to uncover the mechanisms that guide nervous system development, growth, and innervation by analyzing the patterns LTMR axon projections display as they grow peripherally towards the skin.
Session Time: Honors Session II A Laughlin Auditorium 8:45-9:15 a.m.
Melody Connell
“Emerging Artists in This Technological Age: How Has Social Media Helped Artists Develop Their Career?”
Major: Communication
Mentor: Dr. Mary Catherine Kennedy
Abstract: The use of social media has affected the music industry, and emerging artists are rightly worried about entering into this wild landscape. This paper asks how artists use social media as a tool to avoid being lost in the mix of hundreds of new artists.
Session Time: Honors Session I
O’Hara Dining Room 7:30-8:00 p.m.

Phillip Dudeck
“Electoral Systems and Number of Parties: Possibilities for Increasing Party Representation in the United States”
Major: History & Political Science
Mentor: Dr. Maureen Oakley
Abstract: This study investigates the effects of electoral systems on the number of parties in presidential states for legislative elections using a t-test and linear regression model. The findings show proportional voting increases the average number of parties.
Session Time: Honors Session IV B
O’Hara Dining Room 6:00-6:30 p.m.

Samuel Dainton
“Nasty Neighbors: Evaluating the Effects of Garlic Mustard on Nearby Plants”
Major: Environmental Science
Mentor: Dr. Abby Kula
Abstract: Garlic mustard (Alliaria pettiolata) is an invasive species that is quickly spreading across the United States. To understand what makes it such a successful competitor, I studied how garlic mustard impacts the growth and reproductive potential of the trout lily (Erythronium americanum), a native species.
Session Time: Honors Session IV A
Laughlin Auditorium 6:00-6:30 p.m.

Joseph Furtkevic
“Heroic Ethos: From Homer to The Hobbit”
Major: Communication
Mentor: Dr. Jordan Loveridge
Abstract: This project employs classical and contemporary theories of rhetoric to analyze the ethos developed by two heroic figures: Odysseus from the Odyssey, and Bilbo from The Hobbit. I examine the protagonists’ rhetoric in three situations: pleas for aid, discourse with opponents, and a speech as victor.
Session Time: Honors Session III B
O’Hara Dining Room 2:30-3:00 p.m.

Rachel Day
“Fungal Control from Calcium Propionate: Testing the Effectiveness of a Food Safe Product as an Anti-Fungal Agent on Various Types of Fungus and Turf Grass”
Major: Biology
Mentor: Dr. Abby Kula
Abstract: This research tests the known food-safe product calcium propionate for its anti-fungal properties and its potential to be used commercially in the treatment of various fungal infections in different types of turfgrass. If effective, it could greatly reduce the use of environmentally harmful fungicides.
Session Time: Honors Session III A
Laughlin Auditorium 2:30-3:00 p.m.

Kielce Gussie
“On God’s Time: An Examination of the Length of Canonization Process in Contemporary Catholicism”
Major: Theology
Mentor: Dr. Joshua Brown
Abstract: I ask what factors constitute the length of time for a canonization process and what the consequences of these factors were on Mother Teresa and Pope John Paul II. The writings, technology, and worldly positions of these saints resulted in their short canonization process.
Session Time: Honors Session I
O’Hara Dining Room 6:45-7:15 p.m.
Kaitlyn Heintzelman  
“Jane’s Road to Calvary: Faith, Religion, and Female Romanticism in Jane Eyre”  
Major: English  
Mentor: Dr. Sean Lewis  
Abstract: This study focuses on the correlation between Christianity, Romanticism, and feminism in Brontë’s Jane Eyre. Jane develops a sincere grasp on the Christian faith, which ultimately allows her to live in a manifestation of God's presence and find her true purpose.  
Session Time: Honors Session II B O’Hara Dining Room 8:00-8:30 a.m.

Caitlin McCormack  
“The Effect of miRNA Regulation of XBP1 Transcription Factor on Ebolavirus Replication”  
Major: Biology  
Mentor: Dr. Katy Dye  
Abstract: Viruses such as the Hepatitis C and West Nile viruses have utilized the unfolded protein response (UPR) to upregulate their viral proteins during replication. This project examines whether the UPR is a key contributor in Ebola virus replication by interfering with a normally UPR-inhibiting miRNA, miR-30c-2-3p.  
Session Time: Honors Session III A Laughlin Auditorium 1:00-1:30 p.m.

Sydney Johnson  
“Bridging the Gap: The Role of the Israeli Media in Addressing the Confrontation on the Gaza Border in Late 2018”  
Major: Philosophy  
Mentor: Dr. Elizabeth Strauss  
Abstract: In November 2018, renewed confrontation between the Israelis and Palestinians on the Gaza Border led to another round of negotiations and media coverage. Utilizing critical discourse analysis and natural language processing, this case study assesses the potential of Israeli news media to shape a path toward lasting peace between Israelis and Palestinians.  
Session Time: Honors Session II B O’Hara Dining Room 10:15-10:45 a.m.

Matthew McKenna  
“The Philosophical Telos of a Business”  
Major: Business & Philosophy  
Mentor: Dr. Alejandro Canadas  
Abstract: People often accuse modern corporations of many and various unethical practices. I offer what I believe is the most fruitful and exhaustive solution to this problem by examining the philosophical purpose of modern corporations using Aristotelian principles.  
Session Time: Honors Session II B O’Hara Dining Room 9:30-10:00 a.m.

Stephanie Kennedy  
“The Impact of Extreme Risk Protection Orders on Domestic Violence”  
Major: Criminal Justice  
Mentor: Professor Joseph Vince, Jr.  
Abstract: Extreme Risk Protection Orders are a relatively new kind of law implemented by eight states in 2018. One proposed impact of these laws is that they help prevent domestic violence incidents involving firearms. This project analyzes California’s 2014 Extreme Risk Protection Order law to determine what impact it has had on the rate and the use of firearms during domestic violence incidents.  
Session Time: Honors Session I O’Hara Dining Room 8:15-8:45 p.m.

Elizabeth O’Hare  
“The Effect of Lipocalin-2 on Intestinal Adaptation in Short Bowel Syndrome Following Fecal Transplants”  
Major: Biochemistry  
Mentors: Dr. Dana Ward, with Samuel Alaish, M.D., Johns Hopkins Medical Institute  
Abstract: Short bowel syndrome following major bowel resection (SBR) causes high morbidity and mortality in neonates. The protein Lipocalin-2 affects nutrient delivery to intestinal microbiota. In this study, fecal transplants from LCN-2 knockout mice improved intestinal adaptation in germ-free mice.  
Session Time: Honors Session II A Laughlin Auditorium 9:30-10:00 a.m.
John Owens
“The Growth of Anti-miRNA 204 Plasmid in E. coli and its Transfection into HUVECs”
*Major: Biochemistry*
*Mentor: Dr. Katy Dye*

Abstract: This project’s goal has been to attempt to clone a customized anti-miRNA 204 plasmid in *E. coli* with the goal to transfet HUVECs and evaluate possible dysregulation of the UPR. I discuss techniques for the transformation into *E. coli* and transfection of the cloned plasmid into HUVECs, as will future directions.

Session Time: Honors Session II A
Laughlin Auditorium 10:15-10:45 a.m.

Kayla Pahl
“Life as a Stage: An Exploration of Dramaturgical Theory in Social Media Culture”
*Major: Sociology*
*Mentor: Dr. Layton Field*

Abstract: Utilizing Ervin Goffman’s theory of dramaturgy, this paper aims to explore the presentation of self online. Through qualitative interviews, focused on college aged youth and their usage of social media, this paper expects to find that society lends one to believe that life portrayed online is reality, not a role.

Session Time: Honors Session IV B
O’Hara Dining Room 7:30-8:00 p.m.

Joseph Renna
“Light-Induced Motor Response of Various Expressions of Channelrhodopsin-2 on Short Term Plasticity in *Caenorhabditis elegans*”
*Major: Biology*
*Mentor: Dr. Angy Kallarackal*

Abstract: Channelrhodopsin-2, a blue light-activated ion-channel protein, can be specifically expressed in different populations of *C. elegans* neurons and elicit a behavioral response in the worm. Quantifying this behavioral response provides insight into how the different expressions of Channelrhodopsin-2 in *C. elegans* affect short-term plasticity and learning.

Session Time: Honors Session III A
Laughlin Auditorium 1:45-2:15 p.m.

Shea Rowell
“Art Without Meaning: Parallel Modernism in Twentieth Century Literature & Music”
*Major: English & Music*
*Mentor: Dr. Mark Carlson & Dr. David Wehner*

Abstract: What is the role of art in a society that some claim is post-truth? This research examines the ways 20th-century music and literature evolved from Romanticism to Modernism and highlights various similarities between the two, especially in their ability and doubts to communicate meaning.

Session Time: Honors Session III B
O’Hara Dining Room 1:45-2:15 p.m.
Isabel Russell
“‘The Women Take Charge and the Plebes Shudder’: Co-Education at U.S. Service Academies and the Cultural Revolution of the Seventies”
Major: History
Mentor: Dr. Charles Strauss
Abstract: Supporters of accepting women to U.S. service academies from 1976 to 1980 championed gender equality in their rhetoric; however, students retained already held constructs of masculine and feminine during this period of transition while public perception remained suspicious. This project examines the co-education process and the enduring public debate.
Session Time: Honors Session III B
O’Hara Dining Room 1:00-1:30 p.m.

Donna Szajdek
“Tale as Old as Time: Music’s Involvement in Contextual Memory”
Major: Psychology
Mentor: Dr. Jon Slezak
Abstract: Context-dependent memory is the enhancement of memory when learning and recall environments are identical. The presence/absence of music lyrics was used as the context in the current study. Results indicated consistent environments did not enhance memory. Genre of music, lyrics, or a ceiling effect could have contributed to replication failure.
Session Time: Honors Session III B
O’Hara Dining Room 3:15-3:45 p.m.

Roderick Stephen Thomson
“Effects of CAFTA on Political and Satisfaction in Costa Rica, Honduras, and Guatemala”
Major: International Studies
Mentor: Dr. Amanda Beal
Abstract: Given recent liberalizing economic trends resulting in a proliferation of regional Free Trade Agreements, I analyze the effects of the Central American Free Trade Agreement (CAFTA) on individuals and in relation to macroeconomic performance and political trends over time.
Session Time: Honors Session II B
O’Hara Dining Room 8:45-9:15 a.m.

Paul Welte
“Optimal Foraging Theory, Competition, and Predator Avoidance in Passerine Birds at Mount St. Mary’s University”
Major: Biology
Mentor: Dr. Rosie Bolen
Abstract: Optimal foraging theory postulates that the risks and benefits of foraging activities are weighed so that food intake is maximized while risks are minimized. In this project, competition and predator avoidance behaviors in common passerine birds are examined in the context of optimal foraging theory.
Session Time: Honors Session IV A
Laughlin Auditorium 6:45-7:15 p.m.

Bryanna Youtzy
“Epistemic Status of Beliefs Based on Testimony in the Age of Social Media”
Major: Accounting & Philosophy
Mentor: Dr. Scott Coley
Abstract: This project examines testimony as a source of epistemic justification to understand the impact of social media on testimony’s reliability. Through this, we may be able to understand how social media platforms influence the reception of testimony.
Session Time: Honors Session II B
O’Hara Dining Room 11:00-11:30 a.m.
SPARC Presentations: FIRE Talks, Student Project Titles & Mentors

FIRE Talks I
Wednesday, 5:00-6:00 p.m.
President’s Dining Room

Dr. Emil Berendt
“The Housing Bubble: An Application of the Just Price”
Economics

Dr. Emil Berendt
“The Catholic Intellectual Tradition in Economics”
Economics

Lightning Talk I, School of Natural Science & Mathematics
Wednesday, 5:40-9:00 p.m.
Phillips Library - Main

Emma Gehringer
“Notes from the Emergency Department: My Time as a Medical Scribe”
Biology
Mentor: Dr. Danny Miles

Frances Patricia Stump
“In vitro and in vivo miRNA 238: Target Validation Study”
Biology
Mentor: Dr. Michael Turner

Elaina Perry
“Confronting Gene Therapy: Explications of Genetic Research in the Altering of Humanity”
Biochemistry
Mentor: Dr. Patrick Lombardi

Zach Lawson & Mike Hochstein
“The Synthesis and Characterization of CTA-4 and CTA-3,5 through IR and NMR Spectroscopy and Dynamic Light Scattering”
Chemistry
Mentors: Dr. Patti Kreke & Dr. Danny Miles

Christopher Homick
“Validating Candidate mRNA Gene Targets of the mRNA mir-124”
Biochemistry
Mentor: Dr. Michael Turner

Gianna Pomykacz & Chardane Logan
“Scaling Down the Esterification of Benzoic Acid”
Chemistry
Mentor: Dr. Patti Kreke

Emily Davis
“The Synthesis of Propyl m-nitrobenzoate”
Chemistry
Mentor: Dr. Patti Kreke

Scott Lawrence Korte
“A Study of Sourness in Beers and its Dependence on pH”
Chemistry
Mentor: Dr. Garth Patterson

Ashley Kegley
“Response Efficiencies of Smoke and Thermal Sensors in Various Fire Situations”
Chemistry
Mentor: Dr. Garth Patterson

Erik Menjivar
“Photocatalytic Degradation of Furosemide and Identification of Carboxylic Acid-based Derivatives using GC/MS/HS Trap”
Environmental Science
Mentor: Dr. Katy Dye
Lightning Talk II A, School of Natural Science & Mathematics

Thursday, 8:40-11:15 a.m.
Phillips Library - Main

Taylor Carhart & Kristen Akers
“Information About Epilepsy”
Psychology
Mentor: Dr. Caitlin Faas

Joseph Contreras & Patrick Aquino
“Pickomino”
Mathematics
Mentor: Dr. Brian Heinold

Bryan Dorbert
“Musician’s Utilities Program”
Computer Science
Mentor: Professor Scott Weiss

Anthony Drak
“Snack Scanner”
Computer Science
Mentor: Professor Scott Weiss

Matthew Luby
“MyCafé”
Computer Science
Mentor: Professor Scott Weiss

Christian Dovel
“Alumni Engagement Calendar – Android”
Computer Science
Mentor: Professor Scott Weiss

Tyler Shimchak
“iOS app for Alumni Reunion Weekend”
Computer Science
Mentor: Professor Scott Weiss

Joshua Kaufman
“Konnexion: A Connect Game with an Unbeatable AI”
Computer Science
Mentors: Professor Scott Weiss & Dr. Brian Heinold

Lightning Talk II B, Bolte School of Business/College of Liberal Arts

Thursday, 9:00-10:15 a.m.
Knott Academic Center, Room 320

Ethan Fiery
“Nazis and Their Economics”
Economics
Mentor: Dr. John Larrivee

Wayne Carroll III
“Banking in America”
Economics
Mentor: Dr. John Larrivee

Ivan Korpics
“Youth Sport: Does It Really Help the Development of a Child?”
Sport Management
Mentor: Dr. Tim Wolfe

Gabrielle Benedictis, Brenda Brodbeck, Alexandra Roblero & Alba Sarria
“Las Lavenderas”
World Languages & Cultures
Mentor: Dr. Andrea Solis

Poster Session I

Thursday, 9:30-11:00 a.m.
Patriot Hall

Patrick Aquino & Trey McGough
“Ticket to Using Graph Theory on a Board Game”
Mathematics
Mentor: Dr. Jonelle Hook

Kristine Hodgson-Torres & Jose M. Lucero
“Neurodiversity: Cerebral Palsy”
Psychology
Mentor: Dr. Caitlin Faas
Stephanie Kennedy
“The Impact of Extreme Risk Protection Orders on Domestic Violence”
Criminal Justice
Mentor: Dr. Layton Field

Katherine Corr
“Does One’s Race Impact their Level of Confidence in Congress?”
Political Science
Mentor: Dr. Maureen Oakley

Bret W. Hollandsworth
“Growing Tensions”
Criminal Justice
Mentor: Dr. Layton Field

Lyndsey Saunders
“A District of Discrimination: The Educational Effects of Historical Redlining in Baltimore”
Sociology
Mentor: Dr. Layton Field

Nicholas Lavenberg
“The Historical Roll of Civil Society in Shaping Human Culture”
Economics
Mentor: Dr. John Larrivee

Brittany Brier
“What School Type is Better? Graduation Rates of Black Students at PWIs and HBCUs”
Sociology
Mentor: Dr. Layton Field

Anthony Kortisses
“The Flawed Nature of Fractional Reserve Banking”
Economics
Mentor: Dr. John Larrivee

Chris Gooden
“Education’s Effect on Students of Color”
Sociology
Mentor: Dr. Layton Field

Mary Stratton
“Eugenics and its Effects on Economic Structure”
Economics
Mentor: Dr. John Larrivee

Yvelly Cabral
“Socioeconomic Status Impact on High School Graduation Rates”
Sociology
Mentor: Dr. Layton Field

Sam Stephan
“The Impact of Reductionist Views of Human Nature on Economic and Social Theory of the Late 1800s and Early 1900s”
Economics
Mentor: Dr. John Larrivee

Terrell Washington
“Intimate Partner Violence Statistics: Heterosexual Communities v. LGBTQ Communities”
Sociology
Mentor: Dr. Layton Field

John M. Wilson
“The Influences of Economics on Social Crises”
Economics
Mentor: Dr. John Larrivee

Robert Petrizzo
“Relation between Tattoos and Delinquent Behavior”
Sociology
Mentor: Dr. Layton Field

Jackson Wood
“The Expectations of a Socialist Utopia”
Economics
Mentor: Dr. John Larrivee
Rachael Mattio
“The Presence of Substance Abuse in Relationships with Intimate Partner Violence”
Sociology
Mentor: Dr. Layton Field

Jazzmine Alston
“Does living in a Violent Urban Neighborhood Make Individuals More Susceptible to Experiencing PTSD Symptoms?”
Sociology
Mentors: Dr. Layton Field & Dr. Denise Obinna

Allyson Bahr
“Violence against Native Women Compared to Non-Native Women”
Sociology
Mentor: Dr. Denise Obinna

Kaitlin Simmons
“The Seton Center”
Sociology
Mentor: Dr. Layton Field

Jessica Encinas
“Examining Aggression in Children’s Cartoons”
Sociology
Mentor: Dr. Layton Field

Kelly Marjarum
“Impact of Cochlear Implants on the Deaf Community”
Sociology
Mentor: Dr. Layton Field

Camila Vaca-Pereira
“Is College Attainable for All?”
Sociology
Mentor: Dr. Layton Field

Bridget Kimberly Leonard
“The Struggle of Motherhood with the Burden of Mistreatment”
Sociology
Mentor: Dr. Layton Field

Sarah R. Gouin
“Outlooks on Abortion Based on Gender, Race and Religion”
Sociology
Mentor: Dr. Layton Field

Zack Costello
“Gun Regulations vs. Violent Crime Rate”
Sociology
Mentor: Dr. Layton Field

Cristal Alvarez-Hernandez
“What Does Culture Have to Do With It?”
Sociology
Mentor: Dr. Layton Field

Thomas Reilly
“Saudi Arabia: A Human Rights Debacle”
Sociology
Mentor: Dr. Layton Field

FIRE Talks II
Thursday, 10:00-11:00 a.m.
Phillips Library 102

Dr. Brian Gilchrist
“Technology Mediating Dasein and Seyn: Martin Heidegger’s Black Notebooks as Media Ecology and Philosophy of Communication”
Communication

Dr. Thane Naberhaus
“The Case Against Reality”
Philosophy

Dr. Jack Dudley
“American Horror Films as Social Critique: Capitalism, Race & Nation”
English
FIRE Talks III
Thursday, 1:00-2:00 p.m.
President’s Dining Room

Dr. Amanda Beal
“Breeding Populism: The Rise and Spread of Populism in Europe”
Political Science

Dr. Kristopher Kohler & Drew Bonner
“Taking a Stand by Taking a Knee: Black Lives Matter, the National Anthem and Activist Trajectories of Protesting Athletes”
Sociology

Dr. Jack Trammell
“Disability in the Ancient World: New Scholarship Examines a Timeless Human Experience”
Sociology

Poster Session II
Thursday, 1:00-2:30 p.m.
Patriot Hall

Taylor Remsburg
“I’m Not a Feminist; I’m Something Else”
Sociology
Mentor: Dr. Layton Field

Bailey Raymond & Makayla Sutphin
“Tourette’s Syndrome: An inside Look into a Misunderstood World”
Psychology
Mentor: Dr. Caitlin Faas

Megan McCaskey, Jessica Lee, Khalil Reid & Allison Wade
“Does Pavlovian Conditioning Procedure Influence Condition Place Preference in Rats?”
Psychology
Mentor: Dr. Jon Slezak

Aurora Moser-Reed & Erin Gamble
“Klinefelter and You”
Psychology
Mentor: Dr. Caitlin Faas

Kristina Winkeler & Lauren Gray
“Synthesis of Tetraphenylporphin”
Chemistry
Mentor: Dr. Patti Kreke

Julia Baer & Joel Bowman
“Cinnamon, Spice, and Everything Nice: Synthesis of trans-E-Cinnamaldehyde from Aldol Condensation”
Chemistry
Mentor: Dr. Patti Kreke

Bridget Shepherd & Emily Wood
“Effects of Fetal Alcohol Syndrome on Executive Functioning and Mental Health”
Psychology
Mentor: Dr. Caitlin Faas

Thomas Pitts, MaryAnn Grace, Emily Bieseker & Victoria Doing
“Withdrawal Effects of Ethanol on C. elegans’ Thrashing Behavior”
Psychology
Mentor: Dr. Angy Kallarackal

Liz Bullard, Maria Mack, Rachel Finn & Kayla Hughes
“C. elegans, Nicotine, and Locomotion”
Psychology
Mentor: Dr. Angy Kallarackal
Nicholas Starvaggi & Ethan Pham
“Running Tylenol out of Business: Synthesis & Purification of Acetaminophen”
Chemistry
Mentor: Dr. Patti Kreke

Zena Mohammed, Madison Collins, Shaun Miller & Will Almozard
“The Effect of Psychoactive Drug (Ethanol) on C. elegans’ Behavior”
Psychology
Mentor: Dr. Angy Kallarackal

Joseph Contreras & Mark Plavetic
“Instant Insanity”
Mathematics
Mentor: Dr. Jonelle Hook

Catherine Lynch, Samantha Vanderlipp & Megan Zuvich
“Minimal Coprime Labelings of Nonisomorphic Graphs”
Mathematics
Mentor: Dr. Jonelle Hook

Rebecca Breiner & Hanna Lorenzen
“Vertex Coloring”
Mathematics
Mentor: Dr. Jonelle Hook

Natalie Brunner & Abigail Spencer
“Check-ing Out the Shortest Path”
Mathematics
Mentor: Dr. Jonelle Hook

Nicole Pinto & Donna Szajdek
“Fragile X Syndrome: What Is It?”
Psychology
Mentor: Dr. Caitlin Faas

Morganne Hendrickson, Brianna Rizzo, Gemma O’Keefe & Alyssa Gallagher
“Comparing Simultaneous and Backward Conditioning of Short-Term Pavlovian Conditioning in Male Sprague Dawley Rats”
Psychology
Mentor: Dr. Jon Slezak

Mitchel Geraghty & Ivy McGlaughlin
“Chromosome Deletion Syndrome”
Psychology
Mentor: Dr. Caitlin Faas

Aurora Moser-Reed, Ajani Roberts, Casey Smial & Kelly VanDyke
“Long Term Learning: Is Backward or Simultaneous Conditioning more Impactful?”
Psychology
Mentor: Dr. Jon Slezak

Daniel John Coleman
“Manufacturing of 3D Printers”
Chemistry
Mentor: Dr. Garth Patterson

Sydni Surowiec & Madison Norris
“ADHD Myths and Truths”
Psychology
Mentor: Dr. Caitlin Faas

Gianna Duca & Sandra Granados
“Treacher Collins Syndrome”
Psychology
Mentor: Dr. Caitlin Faas
## Lightning Talk III A, School of Natural Science & Mathematics

**Thursday, 2:00-4:00 p.m.**
**Phillips Library - Main**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Field</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zach Roberts</td>
<td>“Dose Control: Android Application”</td>
<td>Computer Science</td>
<td>Professor Scott Weiss</td>
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<tr>
<td>Thien Mai</td>
<td>“Voting Web Application”</td>
<td>Computer Science</td>
<td>Professor Scott Weiss</td>
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<tr>
<td>Marqus I. Chambers</td>
<td>“Landlord Tenant Intercommunication”</td>
<td>Computer Science</td>
<td>Professor Scott Weiss</td>
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<tr>
<td>Justin Dennis</td>
<td>“Make it Better: An RPG Game”</td>
<td>Computer Science</td>
<td>Professor Scott Weiss</td>
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<tr>
<td>Jeremy Paraoan</td>
<td>“Your Guide to Victory: Your TCG Guide”</td>
<td>Computer Science</td>
<td>Professor Scott Weiss</td>
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<tr>
<td>Gilles Tamukong</td>
<td>“WiFi Channel Planner”</td>
<td>Computer Science</td>
<td>Professor Scott Weiss</td>
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## Lightning Talk III B, Bolte School of Business

**Thursday, 2:00-4:15**
**Knott Academic Center, Room 320**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Field</th>
<th>Mentor</th>
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<tbody>
<tr>
<td>Sean P. Zaleski</td>
<td>“The Miracle of the Cistercians”</td>
<td>Economics</td>
<td>Dr. John Larrivee</td>
</tr>
<tr>
<td>Nathaniel F. Bald</td>
<td>“Designer Society: How the Perfect Combination of Ideas and Conditions Led to Eugenic Economic and Social Policies”</td>
<td>Economics</td>
<td>Dr. John Larrivee</td>
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<tr>
<td>Carolyn Ciccocioppo</td>
<td>“Hostility to the Family in the Thought of Marx and Engels and its Influence on Communist Policy”</td>
<td>Economics</td>
<td>Dr. John Larrivee</td>
</tr>
<tr>
<td>Rebecca E. Lee</td>
<td>“Material Well-Being Trends in the 20th Century”</td>
<td>Economics</td>
<td>Dr. John Larrivee</td>
</tr>
<tr>
<td>Hanna Houck</td>
<td>“Oppression in Communist Regimes: The Cuban Experience”</td>
<td>Economics</td>
<td>Dr. John Larrivee</td>
</tr>
<tr>
<td>Scott Owens</td>
<td>“Moral Corrosion of Communism”</td>
<td>Economics</td>
<td>Dr. John Larrivee</td>
</tr>
</tbody>
</table>
Poster Session III
Thursday 3:00-4:30 p.m.
Patriot Hall

Dhane Schmelyun, Hannah Orland, Kate Burke, Lauren Gray, Kayla Kebreau & Emmanuella Osei-Asante
“Determining the Structural Basis for Recruitment of the ALKBH3-ASCC Repair Complex to Sites of DNA Damage”
Biochemistry
Mentor: Dr. Patrick Lombardi

Matenyeh Kaba & Thomas Pitts
“Dementia of the Alzheimer’s Type: What Today’s Technology has Brought to Light”
Psychology
Mentor: Dr. Caitlin Faas

Jessica Lee, Rebecca Cermak & Victoria Doing
“Prader-Willi’s Syndrome”
Psychology
Mentor: Dr. Caitlin Faas

Emely Cruz, Ivy McGlaughlin, Kate McCann & Caroline Colson
“Locomotor Behavior in C. elegans After Exposure to Nicotine”
Psychology
Mentor: Dr. Angy Kallarackal

Charlotte Elrod & Laura Kingham
“Influence of Reflux Time on the Synthesis of Banana Oil”
Chemistry
Mentor: Dr. Patti Kreke

Frances Stump, Kelly Majerowicz, Joseph Renna & Thomas Richardson
“Determination of the Aggressiveness of the HCT 116 Cancer Cell Line”
Biology
Mentor: Dr. Dana Ward

Thomas Dolinar & Chris Gooden
“Effect of Salicylic Acid in Aspirin Synthesis”
Chemistry
Mentor: Dr. Patti Kreke

Natasha Akomeah & Ashley Kegley
“MDA-MB-231: The Impact of Triple Negativity”
Biology
Mentor: Dr. Dana Ward

Patrick Aquino
“Image Processing on Cancer Detection”
Data Science
Mentor: Professor Rebecca Portier

James Morris, Natalie Berry & Allison Koontz
“Short-Term Pavlovian Conditioning Using Place Preference of Rats”
Psychology
Mentor: Dr. Jon Slezak

Birhan Nega Alemayehu, Sarah Frouh & Emmanuel Kesse
“Analysis of Ovarian Adenocarcinoma through Testing of Cell Proliferation, Mitotic Index, Cell Growth and Chemo Response of OVCAR3 Cell Line”
Biology
Mentor: Dr. Dana Ward

Kayla Hughes & Drew Wertz
“What does it Mean to have Down Syndrome?”
Psychology
Mentor: Dr. Caitlin Faas

Kristine Hodgson-Torres
“Effects of Cortisol on Associative Memory in C. elegans”
Psychology
Mentor: Dr. Angy Kallarackal

Nicole Pinto & Keziah Adabrah
“T47D Human Breast Tumor”
Biology
Mentor: Dr. Dana Ward
Veronica Balick & Rachel Keifer
“Comparison of Cancer Cell Lines to Healthy Tissue Reveals Severity of the Cancer”
Biology
Mentor: Dr. Dana Ward

Sasha-Gay Williams & Emma Gehringer
“The Cell Line PC3”
Biology
Mentor: Dr. Dana Ward

Sean Kazmierski
“Training and Preparing to Become a Seasonal Park Ranger at Cunningham Falls State Park”
Environmental Science
Mentor: Dr. Abby Kula

Malik Kadir
“Testing Calcium Propionate (CaP) Efficiency as an Anti-fungal Agent on Turf Grass Phytopathogens”
Biology
Mentor: Dr. Christine McCauslin

Angel Madariaga, Daniel Coleman & Christopher Homick
“Examination of MDA-MB-435 Cancer Cells”
Biology
Mentor: Dr. Dana Ward

Mitchel Geraghty
“Developing Fitness Training Routines: Special Olympics Maryland”
Biology
Mentor: Dr. Christine McCauslin

Nicholas Starvaggi
“Ligand Modification of Iridium (III) Complexes towards Solar Energy Conversion Applications”
Chemistry
Mentor: Dr. Isaac Mills

Elizabeth O’Hare & Katelyn Comeau
“Analysis of MCF-7 Breast Cancer Epithelial Cells in Culture”
Biology
Mentor: Dr. Dana Ward

Pablo Badia
“More Energy for Less Time”
Chemistry
Mentor: Dr. Danny Miles

Lightning Talk IV,
College of Liberal Arts

Thursday, 5:40-9:15 p.m.
Phillips Library - Main

Taylor Remsburg & Marie Dickson
“The Head Tutor Program”
Sociology
Mentor: Ms. Kristin Sites

Grace King
“Speaking Out Against Oppression: Comparing the Voices of George Lamming and Meek Mill”
English
Mentor: Dr. Indrani Mitra

Annissha Montgomery
“The Power of Poetry”
English
Mentor: Dr. Sarah Scott

Kelley Northam
“The First Blast Against the Writings of John Knox: An Investigation of Knox’s Forms of Argumentation Against Female Monarchy”
History
Mentor: Dr. Jamie Gianoutsos
Grace Bovard
“1 in 3: An Analysis of Sexual Assault Awareness on Mount St. Mary’s University’s Campus”
Communication
Mentor: Dr. Mary Catherine Kennedy

Chachie Tchuenkam
“A Quantitative Analysis of the Relationship of Abortion Restrictions 2010 and Abortion Rates (Rate of Occurrence) 2013”
Political Science
Mentor: Dr. Maureen Oakley

Jamie Karpency
“Heritage or Hate?: The Symbolism of the Confederate Flag and Racially-Charged Politics”
Political Science
Mentor: Dr. Maureen Oakley

Gloria Marie DeMoura
“The Personalistic Psychology of St. John Paul II”
Theology
Mentor: Dr. Paige Hochschild

Trisha Nee
“Should Pharmaceutical Companies and their Management along with Conspirators be held Liable, Criminally and Civilly, for the Current Opioid Epidemic in the United States?”
Criminal Justice
Mentor: Professor Joseph Vince

Le-Roy Battle III
“Do Mount Students Understand Race?: The Racial Identity Development of Mount Students”
Sociology
Mentor: Dr. Layton Field

Jasmine Patrick
“Representation and Racism in Opera”
Fine Arts – Music
Mentor: Dr. Andrew Rosenfeld

Abstracts for Lightning Talks, Panel Discussions, Posters & FIRE Talks are available online. Visit msmary.edu/SPARC for a direct link.

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