Kelly Annesley
Mentored By: Dr. Dan Doviak
On the Prospects for Dialectical Thinking in Improving Moral Belief
Funded by: Summer Research Grant from Dean of Academic Life

Bryan Axvil
Mentored By: Dr. Sherry Young
Synthesis of Peptoids to be Used as Blood-Brain Barrier Shuttles
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Laura Barbalato (with Amulya Makkapati)
Mentored By: Dr. Martin Edwards
Assessing the Prevalence of Human Pathogens in Lehigh Valley Deer Ticks
Funded by: James Vaughan Fund for Summer Research

Carly Baron
Mentored By: Dr. Laura Edelman
Music and Emotion: Indirect Measures
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Samantha Bernstein (with Holly Szukis)
Mentored By: Dr. Paul T. Meier
The effect of ectoparasites on corticosterone levels in two avian species: S. sialis and T. bicolar
Funded by: Summer Research Grant from Dean of Academic Life

Macauley Breault
Mentored By: Dr. Cameron Riviere, Carnegie Mellon University
Auto-calibration and Hybrid Force/Position Control for the Cerberus Cardiac Robot
Funded by: Robotics Institute Summer Scholars (RISS) Program, an NSF CISE REU site

Kelly Anne Cann
Mentored By: Dr. Savitri P. Skandan, The Cancer Center at Lehigh Valley Hospital
Review of the Melanoma Cases Treated at Lehigh Valley Health Network in 2013
Funded by: Lehigh Valley Health Network and the Research Scholars Program

Timothy Carroll
Mentored By: Dr. Patrick Williams
Using Electrophysiology to Determine the Function of the Lateral Protocerebrum in N. bullata
Funded by: Neuroscience Collaborative Research Program

Caleb Clever
Mentored By: Dr. Brett Fadem, Brookhaven National Laboratory
Life of Pi: Studying Inflow and Outflow of Energy from Particles that Interact Electromagnetically
Funded by: NSF-RUI Award Number 1209240

James Custer
Mentored By: Dr. James Batteas, Dr. Natalie Stingelin, Imperial College London
CdSe Quantum Dot Band Edge Tuning Through Photooxidation on Nanopatterned Polymers for Applications in Hybrid Cell Photovoltaics
Funded by: NSF and KAUST

Adam Elwood
Mentored By: Dr. Jordanna Spraybery
Bumblebee Discrimination of Odorants by Classical Conditioning
Funded by: Neuroscience Collaborative Research Program

Emin Eminof (with Angela Grassi)
Mentored By: Patrick Williams
Insect Visual Attention
Funded by: Neuroscience Collaborative Research Program and The Lake Road Fellowship

Mel Ferrara
Mentored By: Dr. Kate Richmond
Intersex/DSDD Treatment Models and Burnout Among Health Care Providers
Funded by: Summer Research Grant from the Dean of Academic Life

Ryan Ferrie
Mentored By: Dr. Bruce Anderson
Enthalpy of binding between Humic acid, Norfloxacain & AYG
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Lydia Fisher
Mentored By: Dr. Rich Niesenbaum
Exploring Plant Herbivory through Leaf Age and Growth Rate
Funded by: Vaughn Summer Research Grant

Tyler Florio
Mentored By: Dr. Keri Colabroy
Lincomycin Biosynthesis: Hanging Drop Vapor Diffusion Protein Crystallization of LmbB1
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Elaine Miriam Gersz
Mentored By: Dr. Edward Schwarz (PI), Dr. John Daiss and Dr. Sheila Bello
Molecular characterization of the brain barrier shuttle Lmb24 in Staphylococcus aureus
Funded by: NSF

Marianna (Annie) Gierczyk
Mentored By: Dr. Cliff Kussmaul
POGIL in Computer Science
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Rachel Gonsenbauer
Mentored By: Dr. Heidi Fuchs, Institute of Marine and Coastal Sciences at Rutgers University
Effects of Turbulence and Food on Respiration by Sea Urchin Larvae
Funded by: National Science Foundation

Angela Grassi (with Emin Eminof)
Mentored By: Patrick Williams
Insect Visual Attention
Funded by: Neuroscience Collaborative Research Program and The Lake Road Fellowship

Max Greenberg
Mentored By: Dr. Paul Meier
Absence of Local Adaptation To Varying Salt Concentrations in Spotted Salamanders (Ambystoma maculatum)
Funded by: Trainer Summer Research Grant

Tommy Hoffmann
Mentored By: Dr. Keri Colabroy
Pre-Steady State Kinetics of L-DOPA Dioxygenase
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Lisa Houseal
Mentored By: Dr. Christine Ingersoll
Automated Sample Preparation for GC-MS Characterization of Cell Culture Media
Funded by: The Lake Road Research Fellowship in Biological or Chemical Sciences

Benjamin Kimelman
Mentored By: Dr. Brett Fadem, Brookhaven National Laboratory
MPC: The Little Detector that Could
Funded by: NSF-RUI grant number 1209240

Andrew Kincaid
Mentored By: Dr. Robert Fuller
Measurement of Interfacial Tension in a Model Water-Oil System
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Dayna Kline
Mentored By: Dr. Erika Bagley
Family Influences and the Effects on Bullying
Funded by: Summer Research Grant from Dean of Academic Life

Kathryn Kooistra
Mentored By: Dr. Eliat Glikman, Middlebury College
Investigating Multiple Aspects of Natural Agricultural Practices
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Amulya Makkapati (with Laura Barbalato)
Mentored By: Dr. Martin Edwards
Assessing the Prevalence of Human Pathogens in Lehigh Valley Deer Ticks
Funded by: Lehigh Valley Health Network and the Research Scholars Program

Anna Martens
Mentored By: Dr. Harring/Lee Kolbe
Preventative Methods to Reduce Risks of Dengue Fever in a Rural Community
Funded by: Summer Research Grant from Dean of Academic Life and Friday Harbor Laboratories

Kelcie Molchan
Mentored By: Dr. Squire Booker, The Pennsylvania State University
Faint Quasars: Loudness and Reddening
Funded by: Summer Research Grant from Dean of Academic Life and Friday Harbor Laboratories

Alex Morales
Mentored By: Dr. Rich Niesenbaum
Investigating the Interaction between Host and Parasite in Trypanosoma brucei
Funded by: National Science Foundation

Kelly A. Osborne
Mentored By: Dr. Grant F. Scott
The Marriage of the Verbal and Visual: William Blake’s Narrative Forms
Funded by: Summer Research Grant from Dean of Academic Life

Tatiana J Patterson
Mentored By: Dr. Kate Richmond
Slavery and Mass Incarceration
Funded by: Summer Research Grant from Dean of Academic Life
Welcome to the summer research poster session! The posters presented today represent 8-10 week summer research projects performed by students in a variety of disciplines. Many students performed their summer work on campus and under the mentorship of a faculty member, others went off-campus for the summer to perform research at universities, hospitals and government facilities.

On-campus student research projects are typically funded through internal College grants, external funding secured by faculty members, or generous alumni. In addition, the College generously provides free dorm housing and one course credit.

Student Research Projects

Hayley Reed
Mentored By: Dr. Jesse Moran, Naval Surface Warfare Center Indian Head Division
Developing the Synthesis of a Novel Energetic
Funded by: Naval Research Enterprise Internship Program

David Reinert
Mentored By: Dr. Brett Fadem, Brookhaven National Laboratory
The Hadron Strikes Back
Funded by: NSF-RUI Award Number 1209240

Amanda Riley
Mentored By: Dan Speelman, Eric Blaesing, and Tom Bowen, Manufacturing Sciences & Technology (MS&T) Analytical team, Novartis Vaccines in Holly Springs, North Carolina
HPLC to UPLC Method Development for the Quantification of Hemagglutinin in Influenza Vaccine
Funded by: Novartis Vaccines

Emily Scharf
Mentored By: Dr. Jeff Rudski
Colored Chords: Synesthesia, Art and Metaphor
Funded by: Summer Research Grant from Dean of Academic Life

Jacqueline Schweighardt
Mentored By: Dr. Robert Fuller
Creation of Synthetic Lavender Scent
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Zachary Shuler
Mentored By: Dr. Naum Shaparin, Albert Einstein College of Medicine
Prospective Observational Study of Pain Experience in Children During Propofol Administration
Funded by: SURP and Montefiore Medical Center

Kyra Smith
Mentored By: Ms. Sue Clemens
Oral History of the Lehigh Valley’s LGBTQ Community
Funded by: Summer Research Grant from Dean of Academic Life

Matthiew Sticco
Mentored By: Dr. Keri Colabroy
Lincomycin Biosynthesis: Assessing the Activity of LmbX
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Holly Szukis (with Samantha Bernstein)
Mentored By: Dr. Paul T. Meier
The effect of ectoparasites on corticosterone levels in two avian species: S. sialis and T. bicolor
Funded by: Summer Research Grant from Dean of Academic Life

Elizabeth Thompson
Mentored By: Dr. Erika Iyengar, San Juan Island, Washington State University
Feeding Preference and Competition between Ariolimax Columbianus and Arion Rufus
Funded by: Vaughn Summer Research Grant

Anthony Vos
Mentored By: Ms. Chrysan Cronin
Effects of the Gut Microbiome Upon Drug Delivery and Absorption in a Microgravity Environment

Lauren Warning
Mentored By: Dr. Bruce Anderson
Exploring the interactions between citrate-stabilized silver nanoparticles and humic acid via fluorescence quenching
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Michael H. Weber
Mentored By: Dr. Kerri Pratt, University of Michigan
Effects of open water leads in sea ice on Arctic snow chemistry
Funded by: NSF Chemistry REU Program

Mitchell Weinberg
Mentored By: Dr. Brett Fadem, Brookhaven National Laboratory
The Ever Expanding Middle: Transverse Energy as a Function of Centrality
Funded by: NSF RUI Award Number 120924

Amanda Weiss
Mentored By: Dr. David R. Giovannucci, University of Toledo
SNAP Proteins and Calcium Store Acidity in Parotid Gland Exocytosis
Funded by: National Science Foundation and the Boyce Thompson Institute

Jessica Wilson
Mentored By: Dr. Marsha Baar
Progress towards the Synthesis of a Fluorescent Lead (II) Trapping Coumarinocryptand
Funded by: Provost’s Grant for Faculty-Student Collaborative Research

Chelsea Young
Mentored By: Dr. John Hranitz, Uludag University, Bursa, Turkey
The effects of insecticides on the motor coordination and sucrose sensitivity of the honey bee, Apis mellifera
Funded by: NSF-REU

Zachary Zimmerman
Mentored By: Dr. Tatyana Igumenova, Texas A&M University
Crystallization of the C2A Domain of Synaptotagmin-1 in Complex with Lead (II)
Funded by: NSF-REU

Gabrielle Whitney
Mentored By: Adele Zhou, Dr. Wojtek Pawlowski, Boyce Thompson Institute at Cornell University
Understanding the role of Meiosis-Specific Long Intergenic Non-Coding RNAs in Arabidopsis thaliana
Funded by: National Science Foundation and the Boyce Thompson Institute

This poster session was sponsored very generously by the Muhlenberg College offices of Admissions, the Provost, and Development and Alumni Relations, and by the departments of Biology, Chemistry, Physics and the Neuroscience program.