**Student Research Projects**

Matthew Del Cielo (with Mazen Tolaymat)
The Effects of Nutrient and Light Environments on Defensive Chemistry in *Lindera benzoin*
Mentors: Dr. Christine Ingersoll and Dr. Richard Niesenbaum
Funded by: Merck-AAAS and NSF-CRUI

Thomas Flatley
Synthesis of Chiral Ligands for Asymmetric Heck Reactions from (1R,1')-Myrtenal
Mentor: Dr. Charles Russell
Funding: REBECs

David Paul Gasalberti
Effects of Volatile Anesthetics on the Conformational Dynamics of Ionotropic GluR2 Channels
Mentor: Dr. Jennifer Chen Lee
Funded by: NIH Intramural Research Training Award (IRTA)

Nicholas Gidosh
Synthesizing a Chiral Ligand from (-)-Menthone for the Heck Reaction
Mentor: Dr. Charles Russell
Funded by: REBECs

Christine Gleave
Discovery of a New Nickel-Catalyst for Chain-Growth Polymerizations
Mentor: Dr. Anne McNeil, University of Michigan
Funded by: National Science Foundation Research Experience for Undergraduates

Sam Gottheim
Expression and function of the *C. elegans* nuclear hormone receptor nhr-239
Mentor: Dr. Bruce Wightman
Funded by: National Science Foundation

Brendan Phelan (with Benjamin Liebov)
δ6 Complexes of Chiral C2-Symmetric Tetraamines as Potential Enantioselective Dearomatization Agents
Mentor: Dr. Joseph Keane
Funded by: REBECs

Benjamin Liebov (with Brendan Phelan)
The Effects of Pollution on Neurological Responses to Plant Odors in *Bombus impatiens*
Mentor: Dr. Jordanna Sprayberry
Funded by: Sentience Foundation

Jennifer Bleznak
Predicting Disease Recurrence in Breast Cancer Patients: A Comparison of Sentinel Lymph Node Biopsy and Axillary Node Dissection
Mentors: Dr. Jeremy Teissiére and Dr. Aaron Bleznak
Funded by: Lehigh Valley Health Network

Johanna Block (with Caitlin Burgdorf)
The Effects of Cycloheximide on Linked Memories
Mentor: Dr. Gretchén Gotthard
Funded by: The Sentience Foundation and the Neuroscience Collaborative Research Program

Jason Boulter
Investigation of the Allopregnanolone Binding Site on the GABA<sub>A</sub> Receptor
Mentor: Dr. Jeremy Teissiére
Funded by: Student and Faculty Collaboration Grant from Provost

Alex Breiding
Expression and function of the *C. elegans* nuclear hormone receptor nhr-239
Mentor: Dr. Bruce Wightman
Funded by: National Science Foundation

Ashley Brewer (with Samir Patel)
Cell Culture Media Characterization with Gas Chromatography-Mass Spectrometry
Mentor: Dr. Christine Ingersoll
Funded by: Johnson & Johnson

Lauren Pioppo (with Tara Tappen)
Function and regulation of the *C. elegans* nuclear hormone receptor nhr-67
Mentor: Dr. Bruce Wightman
Funded by: National Science Foundation

Sheelagh M. Pousatis
Head appendage development in larval *Streblospio benedicti*
Mentor: Dr. Elizabeth McCain
Funded by: The Dr. James R. Vaughan ’52 Student Research Award in Biology
Student Research Projects

Lauren Ryan (with Steven Motschwiller)
LED Monitoring System of the Phenix Muon Piston Calorimeter
Mentor: Dr. Brett Fadem
Funded by: National Science Foundation

Scott Sanowitz
Pion Reconstruction for Calibration of the PHENIX Muon Piston Calorimeter in Au+Au Collisions at RHIC
Mentor: Dr. Brett Fadem
Funded by: National Science Foundation PHY-0855762

Roxanne Sholevar
Lincomycin Biosynthesis: Characterization of S. lincolnensis Tyrosine Hydroxylase LmbB2
Mentor: Dr. Keri Colabroy
Funded by: Provost's Grant for Faculty-Student Collaboration

Kyle Sullivan
Quality Assurance Testing of RPC Modules for the PHENIX Muon Trigger Upgrade
Mentor: Dr. Brett Fadem
Funded by: Muhlenberg College Provost Office

Tara Tappen (with Lauren Pioppo)
Function and regulation of the C. elegans nuclear hormone receptor nhr-67
Mentor: Dr. Bruce Wightman
Funded by: National Science Foundation

Demetrai Tate (with Cory Hackmyer)
The Short and Long Term Effects of the Beta-Blocker Propanolol on Memory in an Animal Model of Post Traumatic Stress Disorder
Mentor: Dr. Gretchen Gotthard
Funded by: Provost's Grant for Faculty-Student Collaboration

Dana Tedesco
An Exploration of Structure and Function of Histone Acetyltransferase Complexes in Arabidopsis thaliana
Mentor: Dr. Amy Hark
Funding by: Merck/AAAS

Mazen Tolaymat (with Matthew Del Ciello)
The Effects of Nutrient and Light Environments on Defensive Chemistry in Lindera benzoin
Mentors: Dr. Christine Ingersoll and Dr. Richard Niesenbaum
Funded by: Merck-AAAS and NSF-CRUI

Alexander Vlahos
Lincomycin Biosynthesis: Pre-Steady State Kinetic Characterization of L-DOPA-2,3-dioxygenase (LmbB1)
Mentor: Dr. Keri Colabroy
Funded by: Merck/AAAS

Dan Zakheim
Role of FGF-R1 in HIV-1 Neuropathogenesis and Drugs of Abuse
Mentors: Dr. Rajnish Dave & Dr. Kamel Khalili
Funded by: Temple University School of Medicine

This poster session was a culmination of each student’s summer work. All of the students are pleased to have this opportunity to present their research and answer any questions you may have.

Each on-campus summer science research student was awarded an 8-10 week stipend supported by one of several grants. Most grants also provided funds for the purchase of supplies and/or small pieces of equipment to support each student’s research project. The College generously provided free dorm housing and one course credit.