



# Hamilton Undergraduate Research Scholars for the 2018-2019

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**AY 2018-2019**

## **Anthropology**

### **John Berry**

*The History of Megafires and Forest-Shrub Conversion Mentor: Christopher Roos*

### **Ellie Pietsch**

*The History of Megafires and Forest-Shrub Conversion Mentor: Christopher Roos*

### **Katie Tinch**

*Green Burial: The Final Disposition of Human Remains Through Alkaline Hydrolysis Mentor: Maryann Cairns*

## **Biological Sciences**

### **Sarach Bivans**

*"MeCP2 Duplication Syndrome" Mentor: Santosh D'Mello*

### **Kristin Connors**

*"MeCP2 Duplication Syndrome" Mentor: Santosh D'Mello*

### **Jennifer Edgar**

*"Sensitizing drug-resistant tumor cells to oxidative damage induced by anticancer chemotherapies that cause DNA-damage". Mentor: Robert Harrod*

### **Roxana Farokhnia**

*"Determining how kinase pathways regulate antioxidant signaling in virus-induced cancers" Mentor: Robert Harrod*

### **Kasi Holocomb-Webb**

*"Establishment of Epigenetic Gene Silencing". Mentor: Rick Jones*

### **Maxwell Hum**

*"Establishment of Epigenetic Gene Silencing" Mentor: Rick Jones*

### **Madeline Jensen**

*"Redox Signaling in the Endoplasmic Reticulum and Potential Impacts on Alzheimer's Disease (AD)" Mentor: Bill Orr*

### **Olivia Marx**

*"Dissecting the Role of Peroxiredoxin 6 in Alzheimer's Disease." Mentors: Bill Orr, Vladimir Klishko, and Svetlana Radyuk*

### **Rama Mouhaffel**

*"Dissecting the Role of Peroxiredoxin 6 in Alzheimer's Disease." Mentors: Bill Orr, Vladimir Klishko, and Svetlana Radyuk*

### **Dakota Okwuone**

*"Dissecting the Role of Peroxiredoxin 6 in Alzheimer's Disease." Mentors: Bill Orr, Vladimir Klishko, and Svetlana Radyu*

### **Victoria Peters**

*"Optimizing Recombinant Expression of the Human Bresat Cancer Resistance Protein" Mentor: Pia Vogel  
Fall Semester Only*

### **Anika Reddy**

*"Optimizing Recombinant Expression of the Human Multidrug Resistance Protein" Mentor: Pia Vogel  
Spring Semester Only*

### **Samantha Sabour**

*"Reconstituting the Multidrug Resistance P-glycoprotein into Nanodisk Membrane Mimetics" Mentor: Pia Vogel*

### **Marianna Astrid Therailkill**

*"Optimizing Recombinant Expression of the Human Multidrug Resistance Protein" Mentor: Pia Vogel*

### **Brie Vandenburg**

*"Phosphazene Polymers Containing Antimicrobial Groups" Mentor: Patty Wisian-Nielsen*

## **Chemistry**

### **Becky Jenkins**

*"Molecular Mechanisms of Carcinogenesis by HTLV-1 Regulatory Proteins" Mentor: Rober Harrod*

### **Jean Kim**

*"The Design, Synthesis, and Evaluation of New Carbapenem Antibiotics to Treat esistant Infections Caused by Resistant Gram negative Pathogens" Mentor: John Buynak*

### **Alec Mason**

*"Understanding Cu/O<sub>2</sub> activation pathways" Mentor: Isaac Garcia-Bosch*

### **Byron Meshram**

*"A "Chemical Nose" Test for Spice/K2 Cannabinoids and Synthetic Derivatives" Mentor: Alexander Lippert*

### **Nieshi Nformi**

*"Phosphazene Polymers Containing Antimicrobial Groups" Mentor: Patty Wisian-Nielsen*

## **Earth Science**

### **Yasmin Jackson**

*"Dinosaurs and Diamonds: Dating a Caldera Lake Sediment that Contains Mammalian, Crocodylian, and Dinosaur Fossil Footprints" Mentor: Rita Economos*

### **Iosh Sylvester**

*"Result on the Water Table from Earthquake" Mentor: Matthew Hornback*

## **Embry Human Rights**

### **Aarthi Pavathaneni**

*"Embry Human Rights Study in Barriers to Education for Homeless Youth" Mentor: Bradley Klein*

## **Mathematics**

### **Xin Yang**

*"Predicting Electrostatic Properties of Solvated proteins Using Machine Learning". Mentor: Weihua Geng*

## **Physics**

### **Ian Cohen**

*"A Teaching Lab to Illustrate the Concept of Electric Field & A Quality Control Measurement for the ATLAS Liquid Argon Calorimeter Upgrade" Mentors: James Thomas, Andy Lui, Jingbo Ye*

### **Elijah Cruda**

*"A Teaching Lab to Illustrate the Concept of Electric Field & A Quality Control Measurement for the ATLAS Liquid Argon Calorimeter Upgrade" Mentors: James Thomas, Andy Lui, Jingbo Ye*

### **Rebecca Moore**

*"Study of the Feasibility of Identifying the Process  $H_0 \rightarrow gg$  via  $g \rightarrow bb$  using the ATLAS Experiment at the Large Hadron Collider" Mentor: Stephen Sekula*

### **Ahmed Muhammad**

*"A Teaching Lab to Illustrate the Concept of Electric Field & A Quality Control Measurement for the ATLAS Liquid Argon Calorimeter Upgrade" Mentors: James Thomas, Andy Lui, Jingbo Ye*

### **Zhengguang Wang**

*"A Teaching Lab to Illustrate the Concept of Electric Field & A Quality Control Measurement for the ATLAS Liquid Argon Calorimeter Upgrade" Mentors: James Thomas, Andy Lui, Jingbo Ye*

### **Taylor Wallace**

*Exploring the Effects of Environmental Factors on Radon Plate-Out Mentors: Jodi Cooley*

## **Political Science**

### **Polina DeClue**

*Barriers and Opportunities to Expand Russian Food Exports Mentor: Hiroki Takeuchi*

### **Stephen Frantz**

*Global Value Chains, Free Trade Agreements, and Regional Security in the Asia-Pacific Mentor: Hiroki Takeuchi*

## **Psychology**

### **Kathryn Curtis**

*Development and Validation of the Revised Meta-Emotions Scale Mentor: Prescilla Lui*

### **Stejara Dinulescu**

*Self-Referential Memory and Social Cognition Study Mentor: Benjamin Tabak*

### **Page Hurley**

*Couples & Kids with Autism Study Mentor: Chrystyna Kouros*

### **Zenia Jones**

*Couples & Kids with Autism Study Mentor: Chrystyna Kouros*

### **Hannah Massman**

*"Testing the Strength of Associative Networks for Up-Regulation and Down-Regulation of Positive and Negative Affective Expectations for Exercise." Mentor: Austin Baldwin*

### **Brendon Reems**

*Couples & Kids with Autism Study Mentor: Chrystyna Kouros*

## **Sociology**

### **Destiny Rose Murphy**

*"Constructed Political Identities: Candidate Webpages during the 2018 Election" Mentor: Sheri Kunovich*

## **Statistics**

### **Nicole Ng**

*"The Application of Meta-Analysis in Pediatric Cochlear Implants" Mentor: Lynne Stokes*

## **World Language and Literature**

### **Trina Sriram**

*"Spanish Women in the Fields of Art, Literature, Religion, and Science in the 16th and 17th Centuries" Mentor: Alicia Zuese*

