



# Hamilton Undergraduate Research Scholars for the 2017-2018

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## AY 2017-2018

### Division One

#### History

##### Justin Yao

*"Seyyid Abdulqadir Nehri and the Pursuit of an Independent Kurdistan." Mentor: Sabri Ates*

#### Religious Studies

##### Chloe Clark-Soles

*"Intellectual Humility and Dialogue in Online Settings" Mentor: Jill DeTemple*

### Division Two

#### Anthropology

##### Ekiomoado Olumese

*"Minority Mental Health in Dallas: Challenges for Care Providers" Mentor: Neely A Myers*

#### Economics

##### Visakh Madathil

*"Artificial Intelligence, Robots and US Labor Market Outcomes" Mentor: James Lake*

#### Political Science

##### Fairooz Adams

*"Globalization and Mobility". Mentor: Hiroki Takeuchi*

##### Carter Koehler

*"Mathematical Politics: Polarization and Redistricting" Mentors: Matthew Wilson and Scott Norris*

#### Psychology

##### Hannah Massman

*"Effect of a Self-persuasion Intervention on Individuals' Beliefs and Behaviors about Skin Cancer Risk and Sun Protection Behaviors." Mentor: Austin Baldwin*

##### Shalanda Berkley

*"Acculturation, Diversity and Psychopathology" Mentor: Priscilla Lui*

##### Kathryn Curtis

*"Acculturation, Diversity and Psychopathology" Mentor: Priscilla Lui*

## Susie Kim

*Acculturation, Diversity, and Psychopathology." Mentor: Priscilla Lui*

## Jacob Harris

*"Assertive Resistance and Sexual Violence". Mentor: Lorelei Simpson Rowe*

## Charis Rodgers

*"The Impact of Culture on Relationship Beliefs and Experiences" Mentor: Lorelei Simpson Rowe*

## Brenna Williams

*"Assertive Resistance, Disordered Eating Behaviors, and Sexual Victimization" Mentor: Lorelei Simpson Rowe*

## Rachel Mumaw

*"Social Sensitivity Study". Mentor: Benjamin Tabak  
Fall Semester Only*

## Bret Arata

*"Social Sensitivity Study" Mentor: Benjamin Tabak  
Spring Semester Only*

# Division Three

## Biological Sciences

### Giorgio Ioannou

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

### Nishad Mysore

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

### Louisa Smitherman

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

### Rachel Bergeson

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

### Akanksha Devasigamani

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

### Mickey Glover

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

### Ololade Okunlola

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

## Nathan Drolet

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

## Michael Fowler

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

## Brandon Tran

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

## Jett Ballou-Crawford

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

## Roxana Farokhnia

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

## Dakota Okwuone

*"Optimizing Recombinant Expression of the Human Multidrug Resistance Protein" Mentor: John Wise*

## Beau Bequeaith

*"Searching for Inhibitors of the Human Breast Cancer Resistance Protein: A Cell Culture Approach."  
Mentor: John Wise*

## Kasi Holcomb-Webb

*"Assessing the Level of Expression of Multidrug Resistance Pumps in Human Cancer Cells" Mentor: John Wise*

## Chemistry

### Jean Kim

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

### Melina Cox

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

### Pavlik Polunin

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

### Anthony Spearman

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

## Makenzie Young

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

## Jaden Amilibia

*"Blue Light Photoreception in Agricultural Crops" Mentor: Brian Zoltowski*

## Sydney Schmitt

*"Mechanistic Role of Cryptochrome in Metabolic Disorders". Mentor: Brian Zoltowski.*

## Mathematics

### Sunjoli Aggarwal

*"Expansion and Maintenance of a Software Library to Facilitate the Use of Atomistic Simulations in Statistical Studies". Mentor: Scott Norris*

### Jingzhen Hu

*"PKA Computation for Large Proteins Using Fast and Accurate Numerical Methods". Mentor Weihua Geng*

### Xin Yang

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

## Physics

### Jared Burleson

*"Commissioning and First Studies Using the ORTEC Alpha Particle Counter in the SMU LUMINA Laboratory". Mentor: Jodi Cooley*

### Jasmine Liu

*"Study of Cosmic Distance Ladder from Cepheid Variable Stars". Mentor: Robert Kehoe*

### Christina McConville

*"Sky Subtraction Optimization for Fast Data Reduction of the Dark Energy Spectroscopic Instrument". Mentor: Robert Kehoe*

### Payton Price

*"The Atlas Project". Mentors Jingbo Ye and Andy Liu*

### Lezly A Murphy

*"The Atlas Project". Mentors Jingbo Ye and Andy Liu*

### Taylor Wallace

*"Commissioning and First Studies Using the ORTEC Alpha Particle Counter in the SMU LUMINA Laboratory". Mentor: Jodi Cooley*