



Hamilton Undergraduate Research Scholars for the 2016-2017

SUMMER 2016

Anthropology

Caroline Jones

Interventions for Latino/a Individuals with Psychosis. Mentor: Nia Parson

Biology

Joseph DiPane

The Molecular Mechanisms of Neurodegeneration. Mentor: Santosh D'Mello

Abraham Hwang

The Modular Assembly of Respiratory Complex I. Mentor: Steven Vik

Stefanie Lohse

Optimizing Growth and Purification of Human P-Glycoprotein for Use in Inhibitor Discovery. Mentor: Pia Vogel

Vinita Mundluru

The Impact of Peroxiredoxins on Physiology. Mentor: William Orr

Alexis Sunshine

Correlating the reversal of Multidrug Resistance in Cancers by Novel Efflux Pump Inhibitors to the Expression of ABC Transporters. Mentor: John Wise

Vicki Wong

Molecular Mechanisms by which PcG-mediated Gene Repression is Established. Mentor: Rick Jones

Chemistry

Maureen Lohry

Chemiluminescent Reagents for Detecting Superoxide Using an Acyl Transfer Reaction. Mentor: Alexander Lippert

Mathematics

Arya McCarthy

Tackling the Accuracy Scaling Tradeoff for Simulating Gap Junctions in Neural Networks. Mentor: Scott Norris

Jevon Shaw

Quantifying the Neuronal Representation of a Large Space: A Mathematical Model. Mentor: Kathryn Hedrick

Physics

Moez Janmohammad

Application of the Higgs Dijet Likelihood Ratio to Production of Single Higgs Bosons at the Large Hadron Collider. Mentor: Stephen Sekula

Jasmine Liu

Search for Rapidly Varying Transients with ROTSE-IIIb Telescope. Mentor: Robert Kehoe

Snigda Smriti

Continual Studies of Environmental Factors Affecting Material Storage for Next Generation Dark Matter Experiments. Mentor: Jodi Cooley

AY 2016-2017

Division One

World Languages

Alejandra Colbert

*Philosopher Maria Zambrano: Crossing Border's in Antigone's Tomb. Mentor: Denis DuPont
Fall Semester Only*

Division Two

Anthropology

Gillian Wright

Pathways Through Care: Treatment Decisions and Drop-Out in Early Psychosis. Mentor: Neely Myers

Political Science

Claire Huitt

Asia's Contested Waters: The East and South China Seas. Mentor: Hiroki Takeuchi

Madeleine Case

Comparative Authoritarianism of State-Society Relations. Mentor: Hiroki Takeuchi

Stefanie Lohse

Infectious Disease Preparedness within Public Health Settings: Establishing a Set of Best Practices. Mentor: Katherine Bliss

Psychology

Valerie Becker

Analyzing God as a Social Support Construct. Mentor: Lorelei Rowe

Page Hurley

My Family Study. Mentor: Chrystyna Kouros

Rebecca Kim

Cardiorespiratory Activation Deficits in Reward and Stress Reactivity in Anhedonia: T-Wave Amplitude, Respiratory Sinus Arrhythmia and Heart Rate as Diagnostic Markers. Mentor: Alicia Meuret

Candace Johnson

The Examination of the role of Nitric Oxide Expression in Predicting Cold Symptoms in Potential national PanHellenic Members. Mentor: Thomas Ritz

Skylar Jayes

Does Conscientiousness Moderate the Relationship between Anticipated Regret and Eating Behavior. Mentor: Austin Baldwin

Sociology

Ella Mathews

*Innovation Districts and Cities. Mentor: Matthew Keller
Fall 2016 Only*

Dominique Earland

Neighborhood variance in late preterm birthrates. Mentor: Sheri Kunovich

Division Three

Biology

Jake Oien

In Silico Combinatorial Optimizations for Inhibitors of the Multidrug Resistance Transporter P-glycoprotein. Mentor: John Wise

Alexis Sunshine

*Gene Expression in Multidrug Resistant Cancers. Mentor: John Wise
Fall 2016 Semester Only*

Michael Fowler

Optimizing Yeast Growth Conditions and yield of P-glycoprotein Expression. Mentor: Pia Vogel

Joseph DiPane

Role of DBCI in Huntington Disease and Other Neurodegenerative Disorders. Mentor: Santosh D'Mello

Hope Johnson

Understanding MeCP2 Duplication Syndrome: Immunohistochemical Analyses. Mentor: Santosh D'Mello

Giorgio Ioannou

Contribution of FUS in MeCP2 Duplication Syndrome. Mentor: Santosh D'Mello

Nishad Mysore

HDRP in the Regulation of MeCP2-induced Neurodegeneration. Mentor: Santosh D'Mello

Evan Caston

Polycomb-group (PcG) Proteins and Human Cancer. Mentor: Rick Jones

Vicki Wong

Polycomb-group (PcG) Proteins and Human Cancer. Mentor: Rick Jones

Noah Earland

Peroxiredoxins and Aging. Mentor: Bill Orr

Katherine Nelson

Interplay between p53 and NF-kappaB-Signaling in HTLV-1-induced Cancers. Mentor: Robert Harrod

Katie Smith

Determining how NF-kappa B-signaling by the HTLV-1 Transactivator Protein, Tax, influences Cellular Motility and the Epithelial-to-mesenchymal Transition during Viral Carcinogenesis. Mentor: Robert Harrod

Chemistry

Patricia Nance

Polyphosphazenes as Antimicrobial Surface Coatings for Breast Implants. Mentor: Patty Wisian-Neilson

Edward (Teddy) Hauptman

Exploring Azide-Alkyne Reactions on Polyphosphazenes to Prepare Inorganic Polymers with Antimicrobial Activity. Mentor: Patty Wisian-Neilson

Shreya Patel

Volumetric 3D Digital Light Photoactivatable Dye (3D Light PAD) Displays. Mentor: Alexander Lippert

Pauline Nguyen

Design, Synthesis, and Evaluation of New Carbapenem Antibiotics to Treat Resistant Gram-negative Pathogens. Mentor: John Buynak

Mathematics

Jacobus (Jake) Jordaan

Solving Large Eigenvalue Problems with Mathematical Transforms and with Modern Scripting Language. Mentor: Yunkai Zhou

Jingzhen Hu

Modeling, Algorithms, and Simulations for Implicitly Solvated Biomolecules. Mentor: Weihua Geng

Aleena Taufiq

Mesh Generation for Modeling the Human Lymph Node. Mentor: Daniel Reynolds

Margot Tollefsen

Dynamics and Computation in near-symmetric random networks. Mentor: Andrea K Barreiro

Ian Johnson

Expansion and Maintenance of a Software Library to Facilitate the use of Atomistic Simulations for Statistical Studies. Mentor: Scott Norris

Physics

Jasmine Liu

Rapid Variable Backgrounds to Stellar Death Events. Mentor: Robert Kehoe

Jasmine Kim

Computer Simulation of Quantum Mechanics in Undergraduate Physics. Mentor: Thomas Coan