

## 2015 Deans' Summer Research Fellows

Student: Zachary Faircloth

Mentor: Michael Hardt

Faculty Mentor Department: Literature

Project Title: An Analysis of Social Organization and Modes of Leadership in the West Bank

Student: Ziquan Yang

Mentor: Chad Schoen

Faculty Mentor Department: Mathematics

Project Title: Varieties over Finite Fields

Student: Dylan Eiger

Mentor: Stephen Craig

Faculty Mentor Department: Chemistry

Project Title: Mechanosensitive Microspheres for Sensing Constrictive Flow

Student: Emily Kragel

Mentor: Charles Thompson

Faculty Mentor Department: Documentary Studies

Project Title: Health Care In Xela, Guatemala

Student: Grace Hsu

Mentor: Dennis Thiele

Faculty Mentor Department: Pharmacology and Cancer Biology

Project Title: Screening Cryptococcus neoformans transcription factor mutants for copper phenotypes

Student: Daisy Nashipai Mepukori

Mentor: Charles Piot

Faculty Mentor Department: Cultural Anthropology

Project Title: Anti-Female Genital Mutilation Interventions: Evaluating the Alternative Rites of Passage model from a community's perspective

Student: Jake Herb

Mentor: Amy Schmid

Faculty Mentor Department: Biology

Project Title: Characterizing the Function of the Archaeal Transcription Factor TrmB in the Metabolic Regulation of Different Halophiles

Student: Jason Luo

Mentor: Steven Malcolmson

Faculty Mentor Department: Chemistry

Project Title: Palladium-Catalyzed Enantioselective Synthesis of Functionalized Amines from 2-Azaallyl Anion Nucleophiles: Towards the Synthesis of Bioactive Compounds

Student: Drew Korschun

Mentor: Haeyoung Kim

Faculty Mentor Department: Asian and Middle Eastern Studies

Project Title: Exploring Language and Identity Construction among Queer Korean Men in Seoul

Student: Runliang Li  
Mentor: Lillian Pierce  
Faculty Mentor Department: Mathematics  
Project Title: Lattice Points in Spheres and the Gauss Mean-value Formula for Class Numbers

Student: Stella Belonwu  
Mentor: Nimmi Ramanujam  
Faculty Mentor Department: Biomedical Engineering  
Project Title: The Role of Fluorescently Tethered Hsp90 in the Visualization and Treatment of Triple-Negative Breast Cancer

Student: Ted Cho  
Mentor: Robert Lefkowitz  
Faculty Mentor Department: Biochemistry  
Project Title: Validation of putative allosteric ligands of the  $\beta_2$  adrenergic receptor and their biased activities

Student: Eileen Chia Wen Lin  
Mentor: Dirk Bonker  
Faculty Mentor Department: History  
Project Title: Public history and National Division in Post-Unification Germany

Student: Roger Zou  
Mentor: Dan Kiehart  
Faculty Mentor Department: Biology  
Project Title: Early canthus formation and the role of filopodia during the zipping process in *Drosophila* dorsal closure

Student: Avery Silverman  
Mentor: Gleb Finkelstein  
Faculty Mentor Department: Physics  
Project Title: Graphene Sample Preparation Methods and Quality Analysis

Student: Marlee Szabo  
Mentor: Staci Bilbo  
Faculty Mentor Department: Psychology and Neuroscience  
Project Title: Microglial infiltration of the SCN: Sex Differences and Timing

Student: Brendan Ryu  
Mentor: Kevin Franks  
Faculty Mentor Department: Neurobiology  
Project Title: Studying the Effects of Cannabinoid Receptors on an Epileptic Brain with Optogenetics in the Piriform Cortex

Student: Aiwei Yan  
Mentor: Lindsey Glickfeld  
Faculty Mentor Department: Neurobiology  
Project Title: Investigating a mechanism for modulation of brain circuits by behavioral context

Student: Rachel Fraade

Mentor: Christy Lohr Sapp

Faculty Mentor Department: Religion

Project Title: Moral Motivation: The Influence of Faith on Activist Politics in the Moral Mondays Movement

Student: Mariana Calvo

Mentor: Charles Thompson

Faculty Mentor Department: Cultural Anthropology

Project Title: The Continuing War: The Effects of the Guatemalan Civil War on Current Immigration Patterns from Guatemala to the United States

Student: Sangwon Yun

Mentor: Benny Chen

Faculty Mentor Department: Department of Medicine

Project Title: Investigating the Therapeutic Efficacy of Fibrinogen-Coated Albumin Nanospheres as a Treatment for Thrombocytopenia

Student: Yizhou Jiang

Mentor: Antonio Bogaert

Faculty Mentor Department: Art, Art History, Visual Studies

Project Title: Ying Guo - Documentary Photographs of New Chinese Immigrants Living in the U.K. (Ying Guo is the Chinese word for the U.K.)

Student: Komal Kinger

Mentor: Raphael Valdivia

Faculty Mentor Department: Molecular Genetics and Microbiology

Project Title: Chlamydia trachomatis: Verifying candidate substrate localization to the periplasm via the type II secretion system

Student: Zachary Fowler

Mentor: Sherryl Boverman

Faculty Mentor Department: Global Health

Project Title: Determinants of Secondary School Attrition and Reproductive Health among female students in rural Kenya

Student: Matthew Farnitano

Mentor: John Willis

Faculty Mentor Department: Biology

Project Title: Association mapping of parallel adaptation to serpentine soils across species boundaries in Mimulus

Student: Brittany Glassberg

Mentor: Marty Woldorff

Faculty Mentor Department: Psychology and Neuroscience

Project Title: Effect of Reward Associations on Auditory Attention

Student: Catherine Chen  
Mentor: Sonke Johnsen  
Faculty Mentor Department: Biology  
Project Title: Advertisement signals of cleaner shrimp in the genus *Lysmata* and perception of those signals by reef fish visual systems

Student: Jacob Miller  
Mentor: Ahmad Hariri  
Faculty Mentor Department: Psychology and Neuroscience  
Project Title: Neurogenetic basis of individual differences in human intelligence

Student: Thomas Meister  
Mentor: Michael Boyce  
Faculty Mentor Department: Biochemistry  
Project Title: The Role of O-GlcNAcylation in COPII Vesicle Trafficking

Student: Abdul Latif  
Mentor: Abdullah Antepi  
Faculty Mentor Department: Divinity School  
Project Title: Islam, Creationism, and Evolution in Modern Istanbul

Student: Elizabeth Djinis  
Mentor: Martin Eisner  
Faculty Mentor Department: Romance Studies  
Project Title: Depictions of Odysseus' Death in Literature: A Study in Myth Reception and Reinterpretation

Student: Lijia Zhang  
Mentor: Emily Derbyshire  
Faculty Mentor Department: Biochemistry  
Project Title: Targeting PfPK9 Kinase to Treat Malaria

Student: Michael Shih  
Mentor: Jennifer Roizen  
Faculty Mentor Department: Chemistry  
Project Title: Developing a Catalytic Enantioselective and Site-Selective Cyclopropanation Reaction

Student: Alcida Karz  
Mentor: Ann Pendergast  
Faculty Mentor Department: Pharmacology and Cancer Biology  
Project Title: Investigating Abl kinases as drivers of the Cancer Stem Cell phenotype in breast cancer

Student: Taylor Trentadue  
Mentor: Daniel Schmitt  
Faculty Mentor Department: Evolutionary Anthropology  
Project Title: Investigating Musculoskeletal Health and Limb Biomechanics in Mandena, Madagascar

Student: Rebecca Reibman  
Mentor: Thomas Robisheaux  
Faculty Mentor Department: History  
Project Title: Anti-Judaism and Anti-Semitism--A Comparative Study

Student: Rebecca Culver  
Mentor: Amanda Hargrove  
Faculty Mentor Department: Chemistry  
Project Title: Synthesis and Screening of RNA-Targeted Small Molecule Library

Student: Gopi Neppala  
Mentor: Katherine Franz  
Faculty Mentor Department: Chemistry  
Project Title: Optimization of the Boronate-Masked Prochelator BSIH for Peroxide-Triggered Metal Chelation

Student: Alexander Merriman  
Mentor: Kenneth Poss  
Faculty Mentor Department: Cell Biology  
Project Title: Characterization of zebrafish fin regeneration mutants

Student: Rishav Adhikari  
Mentor: Susan Gurley  
Faculty Mentor Department: Nephrology  
Project Title: The renal proximal tubule in hypertension and renal injury: interaction of the renin-angiotensin system and nitric oxide

Student: Gabrielle Weiss  
Mentor: Diane Nelson  
Faculty Mentor Department: Cultural Anthropology  
Project Title: Reforming Development: an examination of Bhutan's Gross National Happiness Index

Student: Michael Rogers  
Mentor: Don Fox  
Faculty Mentor Department: Pharmacology and Cancer Biology  
Project Title: Codon Bias in Stem Cells: A Drosophila Model

Student: Toyokazu Endo  
Mentor: Kenneth Poss  
Faculty Mentor Department: Cell Biology  
Project Title: Mechanism of Spinal Cord Regeneration

Student: Kyle Smith  
Mentor: Charles Nunn  
Faculty Mentor Department: Evolutionary Anthropology  
Project Title: Effects of water quality on lemurs' daily travel and home range

Student: Laura Lewis  
Mentor: Anne Pusey  
Faculty Mentor Department: Evolutionary Anthropology  
Project Title: Adaptive Significance of Social Bonds in Chacma Baboons

Student: Miguel Anderson  
Mentor: Warren Warren  
Faculty Mentor Department: Physics  
Project Title: Developing methods for separating nonlinearities of transient-absorption pump-probe spectroscopy

Student: Carolyn Peterseim  
Mentor: Charmaine Royal  
Faculty Mentor Department: African and African American Studies  
Project Title: Ethics of Caregiving in Low-Resource Settings in Cameroon

Student: John Lu  
Mentor: David Toole  
Faculty Mentor Department: Global Health  
Project Title: Developing and scaling a time- and cost-effective education campaign model against schistosomiasis in Tanzania

Student: Gwen Hawkes  
Mentor: Cathy Shuman  
Faculty Mentor Department: English  
Project Title: Upon the Face of the Deep: Humanity and the Oceans

Student: Suhani Jalota  
Mentor: Michelle Connolly  
Faculty Mentor Department: Economics  
Project Title: Impact of Slum Redevelopment and Migration on Health: Evidence from Toilet Use and Child Health

Student: Kelly Tomins  
Mentor: Susan Murphy  
Faculty Mentor Department: Pathology  
Project Title: Transgenerational Effects of Tobacco Smoke on the Methylome Using a Zebrafish Vertebrate Model

Student: Tianyu Bai  
Mentor: Hashim Al-Hashimi  
Faculty Mentor Department: Biochemistry  
Project Title: Using UV melting to examine sequence-dependence of Hoogsteen stability

Student: Bradley Cahn  
Mentor: Warren Meck  
Faculty Mentor Department: Psychology and Neuroscience  
Project Title: Interactive Roles of the Cerebellum and Basal Ganglia in Sub-Second and Supra-Second Timing

Student: Fan Zhang

Mentor: Kate Scholberg

Faculty Mentor Department: Physics

Project Title: Supernova neutrino directionality: Method of raising accuracy to locate supernovae by detecting supernovae neutrinos in water or argon detectors

Student: Ruici Ong

Mentor: John French

Faculty Mentor Department: History

Project Title: Esprito Santo, Brazil and Vietnam: The World's Coffee Giants