

**ARTS AND SCIENCES
SPRING SEMESTER 2016
UNDERGRADUATE RESEARCH SCHOLARSHIP COMPETITION**

RECIPIENTS OF \$10,000 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Sophia Friesen, Molecular Genetics, *Blood, Brains, and Backbone: The Role of MicroRNA 125a in Mouse Development*, Professor Susan E. Cole

Massarah Fadel Mikati, International Studies and French, *NOVEMBER 13: A Turning Point for French Muslims?* Professors Danielle Marx-Scouras and Morgan Liu

RECIPIENTS OF \$8,000 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Rachel Arielle Cannata, Astronomy and Astrophysics, *Characterizing Stellar Contamination in the Kepler Field*, Professor Donald Terndrup

Tyler Joseph Dause, Neuroscience, *Ethanol-Induced Inflammation in the Developing Hippocampus: Mast Cell Degranulation and Microglia Activation*, Professor Derick Lindquist

Stephen C. Hadick, Evolution and Ecology, *Can Parents Prepare Their Offspring to Cope with Climate Warming? Exploration of Transgenerational Metabolic Acclimation in a Lake Tanganyika Cichlid*, Professor Stuart A. Ludsin

RECIPIENTS OF \$7,000 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Olivia M. Fitzpatrick, Psychology, *In-Session Cognitive Change as a Predictor of Next-Session Depressive Symptom Reduction in Cognitive Therapy for Depression*, Professor Daniel R. Strunk

Elijah Percy-Jerome Gardner, Microbiology, *Investigating Epithelial-Mesenchymal Transition and Cross Resistance in Cancers Resistant to Fibroblast Growth Factor Receptor Inhibitors*, Professor Sameek Roychowdhury

Nanki Hura, Biology, *The Development and Characterization of Neural-Specific Continuous Cell Lines in Drosophila melanogaster*, Professor Amanda Simcox

Duncan James Kountz, Biochemistry, *Tracking down Methyltransferases: Resolving Quaternary Amine Metabolism in Eubacterium limosum*, Professor Joseph A. Krzycki

Sean Ming Newby, Earth Sciences, *Refining the Geologic History of the Middle Ordovician (~ 465 mya) in Central Virginia Using the Seawater ⁸⁷Sr/⁸⁶Sr Curve*, Professor Matthew R. Saltzman

Kieran Tebben, Microbiology, *Defining an Apicoplast Role of Atg8 in Plasmodium falciparum through Chemical Rescue*, Professor Mark Drew

RECIPIENT OF \$6,500 UNDERGRADUATE RESEARCH SCHOLARSHIP

Alexander Harvey, Political Science, *The Effects of Polarization, Alienation, and Inequality on American Democracy*, Professor Benjamin McKean

RECIPIENTS OF \$6,000 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Cheyenne Madison Jones, Microbiology, *Reversible Anti-Von Willebrand Factor Inhibitor to Treat Thromboembolic Stroke*, Professor Shahid Nimjee

Sheridan Nicole Leistikow, Neuroscience, *Elucidating Loop Tolerance and Dynamics in Alpha-Helical Proteins*, Professor Thomas J. Magliery

RECIPIENTS OF \$5,000 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Alissa Caitlin Cullen, Molecular Genetics, *Functional Complementation of Proteins Critical for the Initiation of Transposable Element Silencing: SDE5 and SGS3*, Professor R. Keith Slotkin

Richard Andrew Heery, Physics, *Optimizing Liquid Crystals as Plasma Mirrors for Ultra-Intense Lasers*, Professor Douglass Schumacher

Seth Eugene Lyon, Biochemistry, *Optimization of a Supplementation Approach for Generating 5'-Chemically Modified RNAs: Application to Introduction of an Internal Chemical Handle in a Long RNA*, Professor Venkat Gopalan

Monica Sarkar, Neuroscience, *A Network Mathematical Model of Ischemic Stroke*, Professor David Terman

Natalie Squires, Neuroscience, *The Role of TGF β -Signaling in the Proliferation and Neurogenic Potential of Müller-glia Derived Progenitor Cells (MGPCs) in the Retina*, Professor Andy Fischer

Cloe D. Watson, English and Psychology, *New York City Creative Writing Trip*, Professor Michelle Herman

RECIPIENTS OF \$4,000 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Danielle Francine Blackfield, Psychology, *The Psychological Impact of Concussion*, Professor Stephen A. Petrill

Yannis Hadjiyannis, Molecular Genetics, *Elucidating the Role of MMS22L on PTEN Regulation*, Professor Gustavo Leone

Lindsey Annamaria Kinderdine, Spanish and International Studies, *Silencing the Media Backlash in Chile: A Research Project on the Effects of Censored Media on Public Opinion in Dictatorship-Era Chile*, Professor Ana Del Sarto

Nathaniel Allen Wesley, Biochemistry, *Structure-Function Studies of an NFU1 Mutation: Implications for Iron-Sulfur Cluster Biosynthesis and Mitochondrial Disease*, Professor James A. Cowan

RECIPIENTS OF \$3,500 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Richa Agrawal, Biochemistry, *Role of Phosphorylation in Regulation of Cancer Biomarker Plastin-2 Function*, Professor Dmitri Kudryashov

Adam Joseph Haines, Neuroscience, *The Effect of Oxytocin on Mammary Tumor Progression and Stress-Related Depressive and Anxiety-Like Behavior in Mice*, Professor A. Courtney DeVries

Robert A. Kaufman, Neuroscience and Psychology, *The Effects of Lavender and Peppermint Aroma on Cognitive Performance*, Professor Christopher T. Simons

Hareesh S. Menon, Physics, *Deep Convolutional Neural Networks in High Energy Physics Analysis*, Professor Richard E. Hughes

RECIPIENT OF \$2,500 UNDERGRADUATE RESEARCH SCHOLARSHIP

Rebecca Rose Martin, Geography, *Berlin Residents' Attitudes and Perceptions towards the Refugee Crisis*, Professor Carmen Taleghani-Nikazm

RECIPIENTS OF \$2,000 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Elizabeth Diane Auckley, Biochemistry, *The Role of Dre2 and Erv1 in Iron-Sulfur Cluster Transport*, Professor James A. Cowan

Anna Beatrice Callahan, Biochemistry, *The Contribution of Estrogen Receptor Signaling to the Differential Response of Males & Females to Ultraviolet Light Exposure*, Professor Tatiana Oberyszyn

Clare Anthony Carlisle, Psychology, *Visual Perspective and the Accuracy of Recalled Interest*, Professor Lisa Libby

Anthony Nicolas Ciavarella, Physics, *Search for New Scalar Particles in the DiHiggs Channel at the LHC*, Professor Harris Kagan

Samantha Lynn D'Agostino, Speech and Hearing Science, *Immediate Effects of Resistance Training on Velopharyngeal Function*, Professor Youkyung Bae

Macon Alexander Derleth, International Studies, *Attachment to Place and Territorial Claims by Mexican Self-Defense Forces*, Professor Alexander Wendt

Jennifer E. Eidemiller, Psychology, *The Role of Self-Control in Confronting One's Own Sexist Beliefs*, Professor Kentaro Fujita

Derrick A. James, Astronomy and Astrophysics, *The Green Valley: Separating Galaxy Populations in Color-Magnitude Space*, Professor Barbara Ryden

Skyler Daniel Maurer, Neuroscience, *Investigation of GABA Mediated Anxiolysis in the Postpartum Medial Prefrontal Cortex*, Professor Benedetta Leuner

Caitlin Marie Post, Neuroscience, *Linking Oxytocin Receptors in the Medial Prefrontal Cortex to Reduced Anxiety during the Postpartum Period*, Professor Benedetta Leuner

Spencer Ernest Talentino, Biology, *Reversible Aptamer in Translational Porcine Model of Stroke*, Professor Shahid Nimjee

Anh Thanh Thuy Tran, Biochemistry and Microbiology, *To Evaluate the Efficacy of p38 MAPK Target Peptide to Modulate Osteoclast Differentiation*, Professor Sudarshana M. Sharma

RECIPIENTS OF \$1,500 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Marina David, Mathematics, *A Study on the Henon-Heiles System*, Professor Rodica D. Costin

John Edward Engle, Psychology, *The Role of Construal Level in Preconscious Awareness of Temptation*, Professor Kentaro Fujita

William T. Hines, Biology, *Retrograde tRNA Nuclear Import as a Novel Mechanism for tRNA Quality Control in Saccharomyces cerevisiae*, Professor Anita K. Hopper

Morgan Elizabeth Oates, Linguistics and Speech and Hearing Science, *Competence and Performance in Distributive/Collective Interpretation of Quantifiers in Child English and Spanish*, Professor John Grinstead

Joshua Lee Ong, Biochemistry, *A Multidisciplinary Approach to Brain Cancer Treatment: Computational-Guided Discovery of PRMT5 Inhibitors*, Professor Chenglong Li

RECIPIENTS OF \$1,000 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Michael E. Behrendt, Psychology, *Evaluating Gender Differences in the Effectiveness of Different Emotion Regulation Strategies*, Professor Amelia Aldao

Ruoran Cheng, Geographic Information Science, *Explore the Party Competition and Elite Networks Using Geographic and Network Analysis: A Case Study during the Song Dynasty in China*, Professor Daniel Sui

Mikayla Elizabeth Dantuono, Biology, *Evaluation of Acquired Resistance to BGJ398 in FGFR-altered Ba/F3 Cells*, Professor Sameek Roychowdhury

Lydia Jiaen Kwong, Neuroscience, *The Relationship between Auditory and Visual Speech Processing*, Professor Vladimir Sloutsky

Tiffany Diem Le, Psychology, *Visual Imagery Perspective and the Integration of Affective Feelings with Knowledge*, Professor Lisa Libby

Tracy Okine, Neuroscience, *Differences in Depressive- and Anxiety-like Behavior as Predicted by Stress-induced PFC-Amygdala Alterations*, Professor Laurence Coutellier

Paul Kinsman O'Neill, English, *New York City Creative Writing Trip*, Professor Michelle Herman

Jessica Lynn Parker, Psychology, *Inverse Effectiveness and Aging in Multisensory Integration*, Professor Chris Robinson

Brandon J. Springer, Neuroscience, *Gestational Stress Effects on Oxytocin Neuron Activity: Implications for Postpartum Depression*, Professor Benedetta Leuner

Andrew Stephen Vidalis, Biochemistry, *The Relaxation of Palmitic Acid Monolayers on Complex Subphases*, Professor Heather C. Allen

RECIPIENTS OF \$500 UNDERGRADUATE RESEARCH SCHOLARSHIPS

Summer Rose Fair, Neuroscience, *Mechanisms of Phox2B-derived Non-polyalanine Repeat Expansion Mutations*, Professor José Javier Otero

Cody James Klinker, Biochemistry, *Dosimetry Comparison of Gamma Knife and External Beam Radiation Therapy on Brain Tumors/Functional Diseases*, Professor Lanchun Lu

Note: Arts and Sciences faculty who served on the Research Scholarship Subcommittee of the Arts and Sciences Honors Committee included Professors Bryan Carstens (Evolution, Ecology, and Organismal Biology), Danielle Marx-Scouras (French and Italian), Jennifer Mitzen (Political Science), and Laura Wagner (Psychology).