

Grants-in-Aid of Research Awards -October 1, 2019 Grant Cycle

Anthropology			
Name	Education Status	Institution	Study Title
Morgan E. Chaney	Doctoral Candidate	Kent State University	Comparing Renal Expression Levels of Cyanide-Detoxifying Enzymes Among Three Species of Lemur
Marcy Ekanayake-Weber	Doctoral Candidate	Stony Brook University	Inequalities in the Reproductive-Immune Trade-Off in Tufted Gray Langurs
Matthew Greer	Doctoral Candidate	Syracuse University	Identifying Ceramic Production within Virginia's Shenandoah Valley
Alexandra Norwood	Doctoral Candidate	University of Michigan-Ann Arbor	Climate as a Driver of Cultural Change in South Africa at the Last Glacial Maximum
Ashley Shults	Masters Student	University of North Carolina at Charlotte	Ritual Burials at Salango – Local or Not?

Behavioral Ecology			
Name	Education Status	Institution	Study Title
Tara Empson	Undergraduate	Indiana University - Bloomington	Steroid Sensitivity in the Visual System In response to Competition
Melanie Florkowski	Doctoral Candidate	Texas A&M University-College Station	Significance of the Microbiome on Aggression in House Sparrows (<i>Passer domesticus</i>)
Nicholas Herrmann	Doctoral Candidate	Harvard University	Determinants of Success in a Novel Environment: Testing how Morphology and Habitat Use affect Individual Fitness in Anolis Lizards
Emily Nonnamaker	Doctoral Candidate	University of Notre Dame	Do Microbially Produced Scents Signal Ovulation in Baboons?
Ian Rines	Doctoral Candidate	Illinois State University	Accessory-gland Proteins as Purveyors of Reproductive Manipulation: Using RNAi to Explore Sexual Conflict in Crickets
Madison Rittinger	Masters Student	Illinois State University	Sex-Specific Effects of Hatching Order and Synchrony on Nestling Baseline Corticosterone Levels

Cell Biology/Biochemistry			
Name	Education Status	Institution	Study Title
Naureen Aslam	Doctoral Candidate	Indiana State University	Investigating the Sex- segment and Tissue-specific Regulation of the Branchless Gene in <i>Drosophila Melanogaster</i>
Brian Best	Undergraduate	Northeastern University	Investigating Acetyl-CoA-mediated Cell Death in <i>Bacillus subtilis</i>
Anthony Bishay	Undergraduate	University of California-Riverside	Examination of Chronic Fatigue in a Mouse Model of Gulf War Illness
Ailish Hanly	Doctoral Candidate	University of Massachusetts Medical Center	Exploring Targeted Epigenetic Therapy for Melanoma: Using a Novel p300 Histone Acetyltransferase Inhibitor to Treat BRAF Inhibitor-resistant Melanoma Cells

Cell Biology/Biochemistry (cont.)			
Name	Education Status	Institution	Study Title
Brian Hoettels	Doctoral Candidate	Boise State University	Role of Claudin-5 Palmitoylation in Thrombin-mediated Blood-Brain Barrier Endothelial Dysfunction
Onyekachi Idigo	Masters Student	Louisiana Tech University	The Roles of MED12 and the Kinase domain in Adipogenesis of Human Adipose Derived Stem Cells
Uzma Javed	Doctoral Candidate	University of Maryland, College Park	Determining the Role of the Hedgehog Interacting Protein in the Developing Visual Circuit
Matthew Kocher	Doctoral Candidate	Virginia Polytechnic Institute and State University	The Role of a Non-coding RNA Cluster in Neuroendocrine Regulation: Implications for Prader-Willi Syndrome
Virginia McGrath	Undergraduate	Trinity University	Prp8: A Look at the Core of the Spliceosome
Onyekwere Onwumere	Doctoral Candidate	The Graduate Center, The City University of New York	Analysis of Chemotactic Mechanisms of PPC Migration in Microfluidic Ligand Gradients
Meera Patel	Doctoral Candidate	University of Delaware	Functional Characterization of the Human Retina-Specific ABCA4 Transporter in Virus-Like Particles
Max Spehlmann	Masters Student	University of Wisconsin-Milwaukee	Linking Water Age to Bacterial Growth in a Tap Water Distribution System
Joseph Stevenson	Masters Student	University of Delaware	Role of Cholesterol-25 Hydroxylase in Inflammation and Fibrosis Following Cataract Surgery
Sharon Tang	Undergraduate	City University of New York-Baruch College	Motor Neuron Connections and Innervation of Muscles in <i>Drosophila melanogaster</i>
Aslihan Terzi	Masters Student	Indiana: Purdue University-West Lafayette	Reactive Oxygen Species in Axon Development: NADPH Oxidase Regulates Growth Cone Guidance
Nsikan Udoh	Undergraduate	McPherson University	Microbial Relationship Between Poultry Farms, Rivers and Crop Farming, and its Effect on Spread of Antibiotic Resistance in Idi Ayunre-Ogunmakin Community, Oyo State
Anil Upreti	Doctoral Candidate	Miami University Ohio	Retina Regeneration Reprogramming
Andrew Wall	Doctoral Candidate	Saint Louis University	<i>Streptococcus agalactiae</i> Use of Glutathione Synthesis and Import in its Defense Against Stress
Felix Yemanyi	Doctoral Candidate	University of Houston	Crosslinked Cell-derived Matrix Modulates Mechanotransduction in Human Trabecular Meshwork Cells via β -catenin and YAP/TAZ Pathways

Chemistry			
Name	Education Status	Institution	Study Title
Uyen Dang	Doctoral Candidate	University of Texas at Arlington	Uncovering the Role of Oxygen in Rare-Earth Oxychalcogenide Phosphors
Rachel Davidson	Doctoral Candidate	Texas A&M University-College Station	Development of Mg Metal Anodes for Inhibition of Dendritic Growth in Mg-based Batteries

Chemistry (cont.)			
Name	Education Status	Institution	Study Title
David Fiszbein	Undergraduate	Cornell University	Chelator Development for Bi-213 Targeted Alpha Therapy
Sewon Oh	Undergraduate	Boston College	Synthesis of Branched Poly(lactic Acid) via Redox-Switchable Iron based Catalyst

Climate Science			
Name	Education Status	Institution	Study Title
Derek Gibson	Doctoral Candidate	Indiana University-Purdue University, Indianapolis	Investigating Late Holocene east-west Fluvial Responses to Seasonal Hydroclimate Variability in the Midcontinental United States
Leila Wahab	Doctoral Candidate	University of California-Merced	The Role of Organic Nitrogen Compounds in Soil Organic Matter Stability: Changes in Distribution, Composition, and Mineral Associations Under Altered Precipitation Regimes in California Grasslands

Computer Science/Mathematics			
Name	Education Status	Institution	Study Title
Anne Xuan-Lan Nguyen	Undergraduate	McGill University	The Effect of Socioeconomic, Gender, and Racial Determinants on Preventive care, Diagnosis, Treatment, and Follow-up of Major Ophthalmic Diseases

Conservation Biology			
Name	Education Status	Institution	Study Title
Jay Cooney	Undergraduate	Canisius College	Morphometric Facial Landmark Analysis for Individual Identification of North American Cervids
Ashley Gagnon	Masters Student	Southwest Missouri State University	Ecological Correlates of Bite Performance Among Alligator Snapping Turtles
Maria Camila Latorre	Doctoral Candidate	Universidad Nacional Autonoma de Mexico	Natural and Anthropogenic Landscape Elements Shaping the Genetic Patterns of Neotropical Otter
Jonathan Lopez	Doctoral Candidate	University of Oklahoma	Water Quality Improvements Generated by Freshwater Bivalve Restoration: Removal of Bacterial Pathogens
Stephanie Castro Marquez	Masters Student	Oakland University	Who's the Parr-ent? Conservation Genomics of the Puerto Rican Parrot
Anthony Snead	Doctoral Candidate	University of Alabama at Tuscaloosa	Escaping the Patch: The Role of Ocean Currents in Determining Population Connectivity in <i>Kryptolebias marmoratus</i>

Ecology			
Name	Education Status	Institution	Study Title
Kristy Barnes	Doctoral Candidate	Yale University	Quantifying Nutrient Input from Caribou Calving Sites

Ecology (cont.)			
Name	Education Status	Institution	Study Title
Erin Bergen	Masters Student	University of Minnesota Duluth	Restoration Plantings and Forest Hydrology
Hannah Cole	Undergraduate	University of North Georgia	Spread and Ecological Impacts of an Invasive Spider in Georgia
Amy Ehrhart	Doctoral Candidate	Portland State University	Effects of Exposure to Coastal Wastewater Treatment Plant Effluent on Pacific Oyster Health and Survival
Samantha Jalkowski	Undergraduate	Unity College	Effects of Invertebrate Diversity and Abundance on Decomposing Eelgrass (<i>Zostera marina</i>)
Lara Jansen	Doctoral Candidate	Portland State University	The Effects of Temperature, Nutrients and Non-native Fish on Harmful Algal Blooms in Mountain Lakes
Corinne Klohmann	Masters Student	University of Washington	The Filtration Capability of Eelgrass, a Coastal Seagrass
Margaret Maloney	Masters Student	University of Dayton	A Trial of Fire and Ice: Experimental Assessment of Novel Ecological Restoration Techniques in Midwestern Prairies invaded by <i>Pyrus calleryana</i>
Christopher Moore	Doctoral Candidate	East Carolina University	Parasites as Long-term Indicators of Biodiversity in Restored Coastal Habitats
Colin Morrison	Doctoral Candidate	University of Texas at Austin	Passion Vine Chemistry and Survival of Specialist Herbivores Against Different Predator Guilds
Conner Owens	Masters Student	Mississippi State University	Backwater Food Webs: Exploring the Role of Flooded Forests as an Energy Source to Aquatic Communities
Emily Palmquist	Doctoral Candidate	Northern Arizona University	Interactions Between Climate and Flood Adaptations in a Woody Riparian Species
Daniel Swann	Masters Student	University of Denver	Understanding How Hurricane-fire Interactions Impact Ecosystem Resilience in a Tropical Montane Forest
Ann Wassick	Doctoral Candidate	Florida Institute of Technology	Is There a Bias for Invasive Species on Vertically-oriented Surfaces?
Vicki Mengyuan Zhang	Masters Student	University of Toronto at Mississauga	Invasive Species in the Subarctic

Engineering			
Name	Education Status	Institution	Study Title
Yu-Chun Chang	Doctoral Candidate	Ohio State University	Effects of Cell Seeding on Short- and Long-Term Tissue Engineered Vascular Graft Occlusion
Gokhan Gunay	Doctoral Candidate	University of Oklahoma	Targeted Drug Delivery into Size-Controlled Ovarian Cancer Spheroids
Aditya Jangid	Undergraduate	California Polytechnic State University San Luis Obispo	3D Printed Microfluidics: Rapid Prototyping of Low-Cost Biosensors
Patrick Mulcahey	Masters Student	University of Pennsylvania	An Integrated System for Monitoring High Frequency Oscillations in a Chronic Mouse Model of Epilepsy
Megan Parsons	Masters Student	Boston University	Elucidating EEG Correlates of Brain States

Engineering (cont.)			
Name	Education Status	Institution	Study Title
Muhammad Usman	Doctoral Candidate	Rowan University	Inexpensive Wearable Congestive Heart Failure Predictor
Hsien Chang (Patrick) Yeh	Undergraduate	University of California-Los Angeles	Double Network Hydrogel for Repair and Sealing Corneal Injuries

Hydrology/Geomorphology			
Name	Education Status	Institution	Study Title
Jenny Bower	Doctoral Candidate	University of Vermont	Lateral Weathering Gradients Create Unique Weathering Signatures Partitioned Across Young, Postglacial Landscapes
David Rogers	Undergraduate	Missouri University of Science and Technology	Investigating Sources of Heavy Metal Contamination in the Tri-State Mining District

Paleontology/Sedimentation			
Name	Education Status	Institution	Study Title
Dirley Cortés	Doctoral Candidate	McGill University	Excavation and description of a new ichthyosaur (Reptilia: Ichthyosauria) taxon from the Early Cretaceous (130 million years ago) of Colombia
Nadia Moschen	Doctoral Candidate	Universidad Nacional de La Plata	Chronology and Extinctions of the Patagonian Megafauna: the case of Sanguinetti Bay
Victor Rodriguez-Ruano	Doctoral Candidate	Florida Institute of Technology	Using Reef-sediment Composition as a Geo-ecological Indicator of Coral-reef Degradation

Petrology/Geochemistry			
Name	Education Status	Institution	Study Title
Laura de Sousa	Masters Student	East Carolina University	Constraint on Incremental Assembly of Upper Crustal Igneous Intrusions, Henry Mountains, Utah

Physics/Astronomy			
Name	Education Status	Institution	Study Title
Cuncheng Chen	Doctoral Candidate	University of Chicago	Tomographic Mapping of Distant Baryonic Dark Matter Halos
Natalia Kucharczyk	Undergraduate	Rockford University	Studying the Immediate Effects of High Impact Collisions in College Football
Prajwal Mohanmurthy	Doctoral Candidate	Massachusetts Institute of Technology	NStar: Revisiting the search for Mirror Neutron - Neutron Oscillations
Daniel Rybarczyk	Doctoral Candidate	University of Wisconsin-Madison	Investigating the Formation and Survival of Planets and Other Low-Mass Companions around Pulsars
Eliot Vrijmoet	Doctoral Candidate	Georgia State University	Orbital Architectures of the Nearest M Dwarf Systems
Charlotte Wood	Doctoral Candidate	University of Notre Dame	Searching for Light Echoes around Type Ia Supernovae

Physiology/Functional Morphology			
Name	Education Status	Institution	Study Title
Victoria Coutts	Doctoral Candidate	Auburn University	Epigenetic Mechanisms of Nutritional Stress Tolerance in the Zebra Finch
Emily Evans	Undergraduate	University of North Carolina at Wilmington	GenX Exposure and its Effect on Neurological Development
James Griner	Undergraduate	Clemson University	Using Geometric Morphometrics to Quantify Waterfall Climbing in Hawaiian Goby Fishes
Paula Giménez Mínguez	Doctoral Candidate	Achucarro Basque Center for Neuroscience	Modelling Microscale Diffusion Through Geometrically Resolved Brain Extracellular Space
Anthony Oppong-Gyebi	Doctoral Candidate	University of North Texas Health Science Center at Fort Worth	Effect of Dietary Genistein on Age-dependent Differences in Cerebral Ischemia in Ovariectomized Rats
Candice Stefanic	Doctoral Candidate	Stony Brook University	Comparative Vertebral Morphology in Crocodylomorphs: An Investigation into the Relationship of Form and Function Across Ecological Transitions
Mikayla Struble	Doctoral Candidate	Northern Arizona University	Evolutionary Origins of Gait Transitions in Tetrapods
Emily Webb	Doctoral Candidate	Arizona State University	Biochemical Quantification of Whole-organism Resource Allocation Patterns in Birds
Bethany Williams	Doctoral Candidate	Ohio State University	The Effect of Hypoxia on Reproduction and Color in an African Cichlid

Psychology			
Name	Education Status	Institution	Study Title
Hayley Fisher	Doctoral Candidate	Kansas State University	Alterations in Functional Neural Activity Following Neural Dysfunction in a Devaluation Test in Rats
Andrew Lee	Undergraduate	University of Colorado at Boulder	Effects of <i>Mycobacterium vaccae</i> Treatment on Fear Extinction in Female Rats in the Fear-potentiated Startle Paradigm
Mark Namba	Doctoral Candidate	Arizona State University	Behavioral and Neuroimmune Mechanisms Underlying Comorbid HIV/AIDS and Cocaine Use Disorders
Kelsey Panfil	Doctoral Candidate	Kansas State University	The Impact of Estradiol on Impulsive Decision-making and Timing
Nathaniel Shepard	Undergraduate	Northeastern University	Investigating the Role of Estrogen Signaling on Memory and Learning in the Rat Prefrontal Cortex

Systematics/Evolutionary Biology			
Name	Education Status	Institution	Study Title
Sarah Medley	Undergraduate	Oakland University	Quantifying Sequencing Accuracy for Repetitive and Low Complexity DNA Regions in Humans
Julianne Pelaez	Doctoral Candidate	University of California-Berkeley	Unraveling the Evolution of Taste: Genome-editing to Uncover the Role of Chemosensory Gene Duplications in Diet Shifts
Brooke Washburn	Doctoral Candidate	University of Denver	Seeing Things in a Different Light: Evaluating Visual Perception of Threespine Stickleback in Differing Light Environments

Tectonics/Geophysics			
Name	Education Status	Institution	Study Title
Nancy Duque	Masters Student	University of Wisconsin-Milwaukee	Analyzing Kinematic Partitioning and Fluid Flow in the Pulo do Lobo Metasedimentary Rocks Along the Southern Iberian Shear Zone in Andalusia, Spain