

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                      |                           |                              |   |
|----------------------|---------------------------|------------------------------|---|
| Brandon S. Carpenter | Cell Biology/Biochemistry | Appalachian State University | Identification and Characterization of a Highly Conserved Meis2 Linked Gene   |
| Wendy Bohon          | Tectonics/Geophysics      | Arizona State University     | Slip rate, recurrence interval and seismic hazards of the Karakoram Fault, Ladakh, NW India   |
| Lynn M. Lucas        | Anthropology              | Arizona State University     | Functional correlates of the primate masticatory system   |
| Sara J. Marsteller   | Anthropology              | Arizona State University     | A Biogeochemical Approach to Highland-Coastal Community Interaction in the Lurin Valley, Peru: Quantifying Regional Strontium and Oxygen Isotope Variation                                    |
| Adrienne M. Zillmann | Ecology                   | Arizona State University     | Environmental iron availability and the outcome of a deadly amphibian disease   |
| Amy Skibiel          | Ecology                   | Auburn University            | Effects of maternal investment in milk quality on juvenile Columbian ground squirrels   |
| Jessica D. Stephens  | Ecology                   | Auburn University            | Elucidating effects of pitcher plant wetland fragmentation: A study of dispersal and genetic connectivity on an arthropod associate, <i>Exyra semicrocea</i> (Lepidoptera: Noctuidae)         |
| Anne E. Gunter       | Cell Biology/Biochemistry | Austin College               | Proteasome Activator PA28gamma inhibits cell survival through degradation of the stress activated protein kinase p38  |
| Nicholas S. Green    | Ecology                   | Baylor University            | Life on the edge: using physiological indicators of diet quality to test the resource-distribution model of boundary effects in the small mammal community of an endangered tallgrass prairie |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                           |                                  |   |  |
|---------------------------|----------------------------------|---|--|
| Katherine F. Stryjewski   | Behavioral Ecology               | Boston University                               | Signalling in Young Birds: Evolution of Elaborate Phenotypic Traits by Parental Choice   |
| Bishwo N. Adhikari        | Behavioral Ecology               | Brigham Young University-Provo                  | Identification of freeze tolerant genes from Antarctic Dry Valley nematode <i>Plectus murrayi</i>  |
| Sandra M. Rehan           | Systematics/Evolutionary Biology | Brock University                                | Social evolution of the small carpenter bees   |
| Abdiel J. Flores          | Psychology                       | California State Polytechnic University, Pomona | An Examination of Moderators and Mediators of Stereotype Threat Effects on First-Generation College Students = Academic Performance                        |
| Erin E. Gottschalk Fisher | Conservation Biology             | California State University-Chico               | Vernal Pool Restoration for two rare grasses, <i>Neostapfia colusana</i> and <i>Tuctoria greenei</i> , at the Sacramento National Wildlife Refuge Complex. |
| Akira Iwami               | Cell Biology/Biochemistry        | California State University-Chico               | Faster transport of synaptic proteins account for an increase in synapse formation.  |
| Heather E. Upton          | Cell Biology/Biochemistry        | California State University-Fresno              | Characterization of Bacillithiol Disulfide Reductase   |
| Denita M. Weeks           | Ecology                          | California State University-Northridge          | Fundamental niche modeling and implications of global climate change for the world's southernmost gecko, <i>Homonota darwinii</i>                          |
| Allen J. Pope             | Hydrology/Geomorphology          | Cambridge University                            | Spectral and physical characterization of glacier facies   |
| Kayla M. Hager            | Cell Biology/Biochemistry        | Cedar Crest College                             | Analysis of the interaction between Pif1p helicase and Replication Protein A by a Yeast 2-Hybrid Assay   |
| Christina A. Matika       | Cell Biology/Biochemistry        | Cedar Crest College                             | Analysis of the Interactions of Replication Protein A with Telomeres in <i>Saccharomyces cerevisiae</i>  |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                    |                                  |  |   |
|--------------------|----------------------------------|--|---|
| Keith J. Miller    | Conservation Biology             | Central Michigan University                                | Assessment of dispersal corridors connecting protected Andean bear ( <i>Tremarctos ornatus</i> ) habitat in the Venezuelan Andes. |
| Samik K. Upadhaya  | Chemistry                        | Central Michigan University                                | Synthesis and characterization of hyperbranched fluoropolymers (HBFP) used for proton exchange membranes (PEMs).                  |
| Sandy M. Kawano    | Physiology/Functional Morphology | Clemson University   | Habitat Transitions in Vertebrates  |
| Kathryn A. Holt    | Psychology                       | College of William and Mary                                | Age-related changes in cognitive control and conflict processing  |
| James A. Kealey    | Behavioral Ecology               | Columbia University  | Genetic and ecological determinants of highly social behavior in <i>Synalpheus</i> snapping shrimp                                |
| Jie Xu             | Engineering                      | Columbia University  | Microfluidic chips for single cell manipulation   |
| Diego C. Fernandez | Physiology/Functional Morphology | Consejo Nacional de Investigaciones Científicas y Técnicas | Induction of ischemic tolerance in experimental diabetic retinopathy  |
| Tyler J. Nielsen   | Cell Biology/Biochemistry        | Des Moines University                                      | Glycogen Storage by Parasitic and Commensal Trichomonads  |
| Karen E. Sullam    | Ecology                          | Drexel University  | The Evolution of Guppy Feeding Ecology and Intestinal Microbial Communities   |
| Viviane Callier    | Physiology/Functional Morphology | Duke University  | Physical and molecular mechanisms of size regulation in the tobacco hornworm, <i>Manduca sexta</i>                                |
| Melissa A. Gottron | Cell Biology/Biochemistry        | Duke University  | A role for beta-amyloid in glaucomatous optic nerve degeneration.   |
| Amanda L. Grusz    | Systematics/Evolutionary Biology | Duke University  | Evolutionary relevance of asexual lineages: examining the potential for recombination in apomictic desert ferns                   |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                          |                                  |                                 |  |
|--------------------------|----------------------------------|---------------------------------|--|
| Cheng-Ruei Lee           | Systematics/Evolutionary Biology | Duke University                 | The role of differential adaptation in incipient speciation  |
| Caitlin Smukowski        | Systematics/Evolutionary Biology | Duke University                 | Variation in regional recombination rates between species  |
| Lindsey N. Fix           | Cell Biology/Biochemistry        | East Carolina University        | Analysis of the Effects of Green Tea Polyphenols on the microRNA expression profile of MCF-7 Breast Cancer Cells                         |
| Whitney Stamey           | Anthropology                     | Eckerd College                  | Essential Crest Bifurcation (ECB) in Maxillary Premolars   |
| Nikia L. Rice            | Physiology/Functional Morphology | Florida Institute of Technology | Comparing Retinal Photoreceptor Organization of <i>C. caretta</i> and <i>C. mydas</i> throughout Developmental Stages                    |
| Anthony Caragiulo        | Conservation Biology             | Fordham University              | Constructing Central American jaguar ( <i>Panthera onca</i> ) population structure using parasite genetics                               |
| Oriana Chan              | Ecology                          | Fordham University              | Integrating vocalization and small-scale radar data to better understand how light and noise affect birds migrating through a major city |
| Suzanne K. Macey         | Conservation Biology             | Fordham University              | Nest site selection in the Bog Turtle ( <i>Glyptemys muhlenbergii</i> ) and implications for sex-determination.                          |
| Katie L. Staab           | Physiology/Functional Morphology | George Washington University    | See the Flow: Measuring Suction Feeding Performance in Cypriniform Fishes Using DPIV   |
| Teresa M. Stoepler       | Ecology                          | George Washington University    | Enemy-free space within defended caterpillar hosts   |
| Lauren E. Ullrich        | Psychology                       | Georgetown University           | Recognition memory in mild cognitive impairment  |
| Devaleena S. Pradhan     | Physiology/Functional Morphology | Georgia State University        | Brain is the major source of androgens in <i>Lythrypnus dalli</i>  |
| Nathaniel L. Erb-Satullo | Anthropology                     | Harvard University              | Analyzing Late Bronze Age production patterns through petrographic analysis of ancient ceramics  |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                             |                                  |                                  |  |
|-----------------------------|----------------------------------|----------------------------------|--|
| Vera Okuneva                | Physiology/Functional Morphology | Iliia State University           | Molecular Changes in Response to Stress Induced by Corticotropin Releasing Hormone Administration and Role of Catecholamines in these Changes  |
| Wesley T. Beaulieu          | Ecology                          | Indiana University - Bloomington | Can mycorrhizal fungi alter apparent competition between plants through modification of defensive chemistry?   |
| Nathalia Chavarro-Rodríguez | Ecology                          | Instituto de Ecología, A.C.      | Genetic Variation and reproductive assembly of <i>Palicourea padifolia</i> at a geographic gradient  |
| Victor Piñeros              | Systematics/Evolutionary Biology | Instituto de Ecología, A.C.      | Phylogeographic patterns at different geographic scales of the marine fish <i>Scartella cristata</i>   |
| Jeanine M. Refsnider        | Ecology                          | Iowa State University            | Can maternal nest-site choice compensate for the effects of global climate change on reptiles with temperature-dependent sex determination? A common-garden experiment using a model species |
| Leslie Parker               | Physiology/Functional Morphology | James Madison University         | BIOMECHANICS OF QUADRUPEDALISM IN MAMMALS  |
| Stephanie A. Wolf           | Physiology/Functional Morphology | James Madison University         | An ontogenetic study of lower limb morphology and leaping behavior in two captive Strepsirrhine primates   |
| Michael D. Martin           | Systematics/Evolutionary Biology | Johns Hopkins University         | Historical genetic structure in native range of invasive common ragweed  |
| Colbey W. Freeman           | Ecology                          | Lebanon Valley College           | Sediment-Oxidizing Capabilities of Two Isoetid-Like Species Compared to the Rhizosphere Oxidation Associated with Prototypical Isoetids  |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                      |                                  |  |  |
|----------------------|----------------------------------|--|--|
| Jeremy M. Brozek     | Systematics/Evolutionary Biology | Lehigh University                      | Understanding modes of selection promoting the evolution of character displacement in North American Calopteryx damselflies.                               |
| Tara A. Redding      | Hydrology/Geomorphology          | Lehigh University                      | Mercury and Dissolved Organic Carbon Interactions during Base and Storm Flow Events in the Little Lehigh Watershed   |
| Amanda K. Accamando  | Ecology                          | Louisiana State University-Baton Rouge | The efficacy of an induced defense strategy for plants among neighbors   |
| Benjamin Akih Kumgeh | Engineering                      | McGill University                      | Investigation of vapour liquid equilibria of bio-jet fuel surrogates   |
| Hannah J. Munro      | Ecology                          | Memorial University of Newfoundland    | Ecology of ectoparasites in Crested Auklets ( <i>Aethia cristatella</i> )  |
| Steven M. Castellano | Ecology                          | Miami University Ohio                  | Use of <sup>15</sup> N Stable Isotope to Label <i>Lonicera maackii</i> (Amur Honeysuckle) Propagules: A New Method to Track Seed Dispersal and Recruitment |
| Darcy Dayhoff        | Behavioral Ecology               | Miami University Ohio                  | Effect of male parental care in <i>Microtus pinetorum</i> due to the microsatellite length for the <i>avpr1a</i> gene                                      |
| Jun Zheng            | Cell Biology/Biochemistry        | Miami University Ohio                  | Identification of protein factors of a novel in vitro pre-mRNA cleavage and polyadenylation system in <i>Arabidopsis</i>                                   |
| Patricia A. Nadeau   | Tectonics/Geophysics             | Michigan Technological University      | Confirmation of the source of tremor at Kilauea volcano by integration of geophysical and geochemical evidence   |
| Erik W. Skau         | Physics/Astronomy                | North Carolina State University        | Engineering Omniphobic Surfaces from Beaded Nanofibers   |
| Chiung-Yun Chang     | Psychology                       | Ohio State University                  | Time-course of perception of Mandarin Chinese tones  |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                            |                           |                                  |   |
|----------------------------|---------------------------|----------------------------------|---|
| Amie Robison               | Ecology                   | Oklahoma State University        | Influence of Predation-based Chemical Cues on Contaminant Sensitivity in Fathead Minnows ( <i>Pimephales promelas</i> )                       |
| Arielle Shanahan           | Behavioral Ecology        | Oklahoma State University        | Effects of immunization on song quality in male zebra finches   |
| Lindsay M. Biga            | Conservation Biology      | Oregon State University          | It Depends: A study of context dependence in pesticide toxicity to amphibians   |
| Katherine M. Phillips      | Cell Biology/Biochemistry | Pennsylvania State University    | An In Vitro Study of the Effects of Metastatic Breast Cancer on Megakaryocytes  |
| Christina Ragan            | Cell Biology/Biochemistry | Pennsylvania State University    | Investigation of the SERT gene in a rodent model of neophobia.  |
| Sophia T. Trieu            | Engineering               | Portland State University        | Increase of adhesive bond strength between composite and enamel by active application of acid etchant   |
| Rebecca S. Levin           | Cell Biology/Biochemistry | Princeton University             | Determining In vivo Histone Modification Dynamics with Quantitative Proteomics  |
| Nicholas L. Swanson-Hysell | Tectonics/Geophysics      | Princeton University             | Evaluating the carrier of an antiparallel magnetization in 1.1 billion-year-old basalt flows through microscopy and rock magnetic experiments |
| Zeran Li                   | Cell Biology/Biochemistry | Purdue University-West Lafayette | The Role of Phenylthiourea on Zebrafish Eye Growth Regulation - A Model for Human Refractive Errors.  |
| Michelle DiLeo             | Conservation Biology      | Queens University                | Landscape and Conservation Genetics of the Threatened Eastern Massasauga Rattlesnake ( <i>Sistrurus c. catenatus</i> ).                       |
| Jacob G. Henderson         | Cell Biology/Biochemistry | Saint Louis University           | Comparison of adult and neonatal airway epithelial cells  |
| Daniel J. Ironside         | Engineering               | Saint Louis University           | Experimental Verification of Coupled Structural Dynamic and Aerodynamic Wing Simulation   |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                       |                           |  |  |
|-----------------------|---------------------------|--|--|
| Talina H. Konotchick  | Ecology                   | Scripps Institution of Oceanography  | Gene expression studies in the Giant Kelp, <i>Macrocystis pyrifera</i>   |
| Kimberly G. Konka     | Psychology                | St. Mary's College of Maryland   | Effects of Postnatal Exposure to Prozac on Adult Rat Motor and Emotional Behavior  |
| Zuzana Chovanec       | Anthropology              | State University of New York at Albany                                     | Analysis of Residues of Ancient Artifacts for Non-Subsistence Plant Substances in Prehistoric Cyprus   |
| Kathryn Dorst         | Engineering               | State University of New York at Stony Brook                                | Effects of Surface Topography on Osteoblast Adhesion, Migration and Biomineralization  |
| Yan Leyfman           | Cell Biology/Biochemistry | State University of New York at Stony Brook                                | Development of the Stem Cell-Targeted Treatment of Colon Carcinoma   |
| Jennifer A. Segui     | Engineering               | State University of New York at Stony Brook                                | Self assembly of ordered bulk heterojunction solar cells via nanoparticle confinement in polymer blend thin films  |
| Kapil Mandrekar       | Ecology                   | State University of New York College of Environmental Science and Forestry | Ecological Energetics of the Giant Fish <i>Arapaima</i> : Management Implications  |
| Daniel J. Gurdak      | Conservation Biology      | SUNY College of Environmental Science and Forestry                         | Butterfly Diversity and Conservation in Assam, India   |
| William D. Helenbrook | Conservation Biology      | SUNY College of Environmental Science and Forestry                         | Emerging zoonoses: Effects of anthropogenic disturbance on parasitic disease, chronic stress, and pathogen transmission between human and nonhuman primate populations |
| Kristen J. Epp        | Behavioral Ecology        | Texas State University-San Marcos  | Does predation and cannibalism on juveniles by adults influence community stability in a unisexual-bisexual fish complex?  |



Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                         |                              |   |   |
|-------------------------|------------------------------|---|---|
| Lixia Chen              | Cell Biology/Biochemistry    | Texas Tech University                   | Gene expression changes accompanying p53 activation after NNK treatment in human lung bronchial epithelial cells BEAS-2B                                    |
| Jennifer M. Cole        | Cell Biology/Biochemistry    | Texas Tech University                   | CYP1A1 and CYP1A2 Induction in Benzo[a]pyrene-Exposed Skin/Blubber Organotypic Cultures of the Bottlenose Dolphin   |
| Pramila Khatri Chhetri  | Ecology                      | Tribhuvan University                    | An Analytical Study of Carbon Sequestration in Coniferous and broadleaf forests of Nepal  |
| Xiao He                 | Computer Science/Mathematics | Tsinghua University                     | Fault Detection and Fault-tolerant Control for Networked Control Systems  |
| Vanina A. Fernandez     | Behavioral Ecology           | Universidad de Buenos Aires             | INFLUENCE OF NUTRITIONAL, ECOLOGICAL AND SOCIAL FACTORS ON FOOD SELECTION IN BLACK AND GOLD HOWLERS MONKEYS ( <i>Alouatta caraya</i> ).                     |
| Cristina Jasso del Toro | Behavioral Ecology           | Universidad Nacional Autonoma de Mexico | Kinship and social interactions of young howler monkeys ( <i>Alouatta palliata</i> ) in continuous and fragmented habitats in Los Tuxtlas Veracruz, Mexico. |
| Richard I. Horn         | Behavioral Ecology           | University of Akron                     | Aseptic architecture in an avian system   |
| Christopher J. Freeman  | Ecology                      | University of Alabama at Birmingham     | Using stable isotopes to evaluate the importance of symbiont derived nutrition to marine sponges  |
| Julie G. Price          | Ecology                      | University of Alabama at Birmingham     | Plant Selection for Stormwater Mitigation in the Southeastern U.S.  |
| Stephanie Wong          | Behavioral Ecology           | University of Alabama at Tuscaloosa     | The impact of elaborate ornamentation, hormones, and parasites on male mate choice in convict cichlid fish ( <i>Amatitlania nigrofasciata</i> )             |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                      |                                  |   |  |
|----------------------|----------------------------------|---|--|
| Roberta Newbury      | Ecology                          | University of British Columbia Okanagan | Winter food habits of bobcats ( <i>Lynx rufus</i> ) in northwest Montana.  |
| Maha N. Haji         | Engineering                      | University of California-Berkeley       | Human Power Generation in Fitness Facilities   |
| Sarah A. Laredo      | Behavioral Ecology               | University of California-Davis          | Neural and hormonal variation between populations of California ground squirrels ( <i>Spermophilus beecheyi</i> ) facing different predation pressures |
| Monica D. Ramstetter | Systematics/Evolutionary Biology | University of California-Irvine         | Pinpointing the origins of a novel wing color in mimetic butterflies   |
| Kara L. Thorsen      | Psychology                       | University of California-Irvine         | Early Detection of Autism: An Evaluation of a Parent Training Program  |
| Neil Losin           | Behavioral Ecology               | University of California-Los Angeles    | Evolution of interspecific territoriality in invasive <i>Anolis</i> lizards  |
| Claire L. Narraway   | Behavioral Ecology               | University of California-Los Angeles    | A test of kin selection theory in honeybees: Using worker policing to distinguish between nepotism and group benefits.                                 |
| Hilton Oyamaguchi    | Ecology                          | University of California-Los Angeles    | The Role of the Rainforest-Savanna Gradient in the Diversification of Amazonian Frogs  |
| Stephanie E. Steele  | Ecology                          | University of California-Los Angeles    | Genetic and Adaptive Impact of Seed Dispersal by Lekking Manakins  |
| Marisa Tellez        | Ecology                          | University of California-Los Angeles    | Assessing patterns of host-parasite distribution of <i>Alligator mississippiensis</i> in Louisiana by investigating annual environmental impacts       |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                       |                                  |  |  |
|-----------------------|----------------------------------|--|--|
| Jeffrey A. Wolf       | Ecology                          | University of California-Los Angeles   | Testing predictions of resource-based competition theory for tree species richness in a tropical forest: The fine-root distribution of tropical trees in relation to soil nutrients on Barro Colorado Island (BCI), Panama |
| Priya Balasubramaniam | Ecology                          | University of California-Riverside     | Environmental correlates of avian life history variation along elevational gradients   |
| Andrew D. Somerville  | Anthropology                     | University of California-San Diego     | A Methodological Study of Lagomorphs as Paleoclimate Monitors in Archaeological Contexts   |
| Caitlin R. Fong       | Systematics/Evolutionary Biology | University of California-Santa Barbara | The Evolution of Phototaxia  |
| Abraham Borker        | Conservation Biology             | University of California-Santa Cruz    | A test of acoustic sensors for monitoring breeding seabird populations size  |
| Rachel E. Brown       | Paleontology/Sedimentation       | University of California-Santa Cruz    | The B/Ca proxy for deep-water carbonate ion concentration: A new species-specific calibration for <i>Nuttallides umbonifera</i>  |
| Michelle A. Lelièvre  | Anthropology                     | University of Chicago                  | Bridging the Pre-historic/historic divide: Archaeological investigations of post-contact activity in an Atlantic coast shell midden (Maligomish - BJC0-02)   |
| Whitney Howard        | Chemistry                        | University of Cincinnati               | New Nano-materials for chemical sensing  |
| Premraj Rajkumar      | Physiology/Functional Morphology | University of Cincinnati               | Visual coding by the photoreceptor cells in fiddler crab, <i>U. pugilator</i>  |
| Frank W. Smith        | Systematics/Evolutionary Biology | University of Connecticut              | The genetics of appendage development in the tardigrade species <i>Hypsibius dujardini</i> and the origin of the arthropod appendage   |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                             |                                  |                       |  |
|-----------------------------|----------------------------------|-----------------------|--|
| Meghan L. Bills             | Physiology/Functional Morphology | University of Florida | The West Indian manatee, <i>Trichechus manatus</i> , chemosensory system: Reproductive use of taste and smell by an aquatic mammal                     |
| Maria F. Checa              | Ecology                          | University of Florida | Temporal and spatial patterns of diversity and abundance in butterfly communities (Lepidoptera: Nymphalidae): a case study in an Ecuadorian dry forest |
| Scott W. Fleming            | Physics/Astronomy                | University of Florida | New Eyes for Rosemary Hill Observatory   |
| James C. Nifong             | Ecology                          | University of Florida | Can Trophic Cascades be affected by Trait-Mediated Indirect Interactions (TMII/Es)?  |
| Steve Anthony Noutong Njapo | Engineering                      | University of Florida | Quantification of astrogenesis in the Internal Capsule and the Corpus Callosum of adult mice.  |
| Schuyler G. van Montfrans   | Ecology                          | University of Florida | Do grazers and drought stress interact to drive die-off and foundation plant species shifts in salt marshes?   |
| Doug Aubrey                 | Ecology                          | University of Georgia | Annual importance of root-derived CO <sub>2</sub> efflux via xylem stream  |
| Jessica L. Gonynor          | Conservation Biology             | University of Georgia | Population Health and Disease Ecology of the Gopher Tortoise ( <i>Gopherus polyphemus</i> ) in Georgia   |
| Kameka L. Johnson           | Cell Biology/Biochemistry        | University of Georgia | Identification of quorum sensing regulated genes in the seedborne bacterium <i>Acidovorax avenae</i> subsp. <i>citrulli</i> using microarray analysis  |
| Shafkatul I. Khan           | Ecology                          | University of Georgia | Effects of climatic variables on tropical tree species growth in secondary communities along an elevational gradient                                   |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                         |                                  |  |   |
|-------------------------|----------------------------------|--|---|
| Sayali S. Kukday        | Cell Biology/Biochemistry        | University of Georgia                    | Small-molecule activators of Insulin Degrading Enzyme activity: Relevance to Alzheimer's disease  |
| Peter M. Lanzarone      | Anthropology                     | University of Georgia                    | Stratigraphic and Geophysical Investigations at Two Ethiopian Prehistoric Archaeological Sites  |
| Megan B. Machmuller     | Ecology                          | University of Georgia                    | The consequences of climate change-driven soil warming on biogeochemical processes along a latitudinal gradient: How will forest carbon and nitrogen dynamics change with time? |
| Hongyu Guo              | Ecology                          | University of Houston                    | Effects of interactions between mangroves and salt marshes on species distribution under global warming   |
| Hongan Long             | Systematics/Evolutionary Biology | University of Houston                    | Accumulating spontaneous mutations in germline and somatic nuclei of the ciliate <i>Tetrahymena thermophila</i> : mutation rates and fitness effects                            |
| Ekaterina A. Khramtsova | Cell Biology/Biochemistry        | University of Illinois at Chicago        | Regulation of Zinc Transport by miR-182 in Human Prostate Cells   |
| Alexandra M. Hurst      | Ecology                          | University of Kentucky                   | Effects of sexually dimorphic traits on the competitive ability of the sexes  |
| Nicholas R. Friedman    | Systematics/Evolutionary Biology | University of Maryland, Baltimore County | The Chemistry of Elaborate Coloration: Carotenoid Pigments in the New World Blackbirds  |
| Michael D. Martin       | Systematics/Evolutionary Biology | University of Maryland, Baltimore County | Speciation in Darters ( <i>Percidae</i> : <i>Etheostoma</i> ): Testing the Sensory Bias Hypothesis  |
| Olyssa S. Starry        | Ecology                          | University of Maryland, Baltimore County | The effects of maintenance practices on water retention by greenroofs   |
| Gerald G. Carter        | Behavioral Ecology               | University of Maryland, College Park     | Reciprocal food sharing in vampire bats revisited: do they punish cheaters?   |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                     |                                  |  |   |
|---------------------|----------------------------------|--|---|
| Randy C. Daum       | Anthropology                     | University of Massachusetts<br>Amherst   | Comparative Analysis of Geophysical Techniques at a 17th-Century Colonial Village Site.   |
| Igor Aharonovich    | Physics/Astronomy                | University of Melbourne                  | Fabrication of single photon emitters in nanodiamonds   |
| Sean M. Beckmann    | Systematics/Evolutionary Biology | University of Miami                      | Effects of urbanization on the genetic diversity of a small mammal habitat generalist, the Key Largo Cotton Mouse, <i>Peromyscus gossypinus allapaticola</i>                            |
| David K. Weinstein  | Paleontology/Sedimentation       | University of Miami                      | Rates of coral substrate bioerosion across a depth range of modern Caribbean reefs: Implications for past and future reef growth and development  |
| Daniel S. Kasprick  | Cell Biology/Biochemistry        | University of Michigan<br>Medical School | Development and regeneration of extraocular muscles in zebrafish  |
| Ashley J. Craig     | Ecology                          | University of Mississippi                | Illuminating the Black Box of Ectomycorrhizal Fungal Diversity: characterizing Ectomycorrhizal community response to restoration treatments in Northern Mississippi                     |
| Bridget J. Piculell | Ecology                          | University of Mississippi                | Genetic correlation of Loblolly pine traits and the potential for conflicting selection pressures   |
| Anthony J. Rietl    | Ecology                          | University of Mississippi                | Belowground effects of ecological restoration practices in a deciduous forest in northern Mississippi: Year round patterns in microbial enzyme activities and leaf litter decomposition |
| Timothee Pale       | Physiology/Functional Morphology | University of Missouri-<br>Columbia      | Enhancement of axonal regeneration of reticulospinal neurons after spinal cord injury in lampreys   |
| Katherine E. Pelch  | Physiology/Functional Morphology | University of Missouri-<br>Columbia      | Altered DNA Methylation in the Pathophysiology and Diagnosis of Endometriosis   |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                    |                                  |   |   |
|--------------------|----------------------------------|---|---|
| Mitch A. Tucker    | Behavioral Ecology               | University of Missouri-Columbia             | Effects of Polyploidy on Female Preference in Gray Treefrogs, <i>Hyla chrysoscelis</i> .  |
| Sarah Pinto        | Ecology                          | University of Montana                       | Diversity and compositional stability: the influence of dominant vs. rare species on community assembly   |
| Christy L. Strong  | Cell Biology/Biochemistry        | University of Montana                       | Effects of a 5'UTR long distance interaction on HIV-2 replication   |
| Mark S. Burger     | Physiology/Functional Morphology | University of Nevada-Las Vegas              | Anaerobic Metabolism in Hibernating Mammals   |
| Kaitlin M. Daniel  | Ecology                          | University of North Carolina at Asheville   | Effects of Removal of a Small Dam in the Toe River on Fish and Macroinvertebrate Populations and Water Chemistry.                                   |
| Yang Cui           | Physics/Astronomy                | University of North Carolina at Chapel Hill | Commissioning the first fiber bundles for Integral Field Unit (IFU) on the SOAR Telescope   |
| Kathleen D. Eckert | Physics/Astronomy                | University of North Carolina at Chapel Hill | The Problem with Dwarf Galaxies: Why Do they Form Stars Inefficiently?  |
| Jane Lee           | Petrology/Geochemistry           | University of North Carolina at Chapel Hill | Investigation of the combined effects of temperature and pCO <sub>2</sub> on rates of calcification of the temperate coral <i>Oculina arbuscula</i> |
| Ryan D. Mills      | Petrology/Geochemistry           | University of North Carolina at Chapel Hill | CALIBRATING AND TESTING AN APLITE BAROMETER FOR PLUTONIC ROCKS  |
| David V. Stark     | Physics/Astronomy                | University of North Carolina at Chapel Hill | What We Don't See: Tracking the Missing Baryons in the Local Universe   |
| Robert S. Bowen    | Physiology/Functional Morphology | University of North Carolina at Charlotte   | Sex Steroid Regulation of Physical Activity in Mice   |
| Joshua R. Stokell  | Cell Biology/Biochemistry        | University of North Carolina at Charlotte   | Metagenomic Approach to Determine Bacterial Diversity in Cystic Fibrosis  |
| Ana G. Jimenez     | Physiology/Functional Morphology | University of North Carolina at Wilmington  | The influence of fiber size on the cost of ion transport  |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                    |                                  |  |   |
|--------------------|----------------------------------|--|---|
| Meagan N. Schrandt | Behavioral Ecology               | University of North Carolina at Wilmington | Linking habitat, behavior, and physiology: examining habitat associated variation in the behavior and stress reactivity of the bicolor damselfish ( <i>Stegastes partitus</i> )   |
| Sean P. Hartnett   | Cell Biology/Biochemistry        | University of Northern Iowa                | The Effects of Metolachlor Exposure on Human Cells  |
| Natalie Griffiths  | Ecology                          | University of Notre Dame                   | Decomposition of corn leaves and native and invasive grasses in the floodplains of restored agricultural streams  |
| Darshana C. Patel  | Physics/Astronomy                | University of Notre Dame                   | To study the effect of Mutually Enhanced Magicity effect on nuclear incompressibility by investigating the Giant Monopole Resonance in the Lead (Pb) isotopes and to explore in detail the effect of superfluidity in the nuclear compressibility of the open-s |
| Eric Vaillancourt  | Physiology/Functional Morphology | University of Ottawa                       | The metabolic fuel selection and lipid mobilization capacity of a long-distance migrant, the Greater Snow Goose ( <i>Chen caerulescens atlantica</i> )  |
| Amber L. Weekes    | Anthropology                     | University of Pennsylvania                 | An Excavation and Bioarchaeological Analysis of the remains from an Iron Age kurgan at Oglanqala, Azerbaijan  |
| Eric A. Griffin    | Ecology                          | University of Pittsburgh                   | Are tree-fall gaps an engine for reproduction in tropical forests: testing a key but forgotten prediction of the gap hypothesis   |
| Marnin D. Wolfe    | Systematics/Evolutionary Biology | University of Pittsburgh                   | Does HSP101 lead to thermal-tolerance at the expense of drought-tolerance? Implications for adaptation to simultaneous heat and drought stress.   |



Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                        |                                  |                                      |  |
|------------------------|----------------------------------|--------------------------------------|--|
| Joshua P. Atwood       | Ecology                          | University of Rhode Island           | Evolution of Invasive Plant Species on New England Islands: a Test of the ERCA Hypothesis  |
| Courtney A. Coon       | Ecology                          | University of South Florida          | Are invasive House Sparrows ( <i>Passer domesticus</i> ) released from their natural pathogens?  |
| Jennifer L. Sliko      | Paleontology/Sedimentation       | University of South Florida          | Investigating Pliocene El Nino: Nutrient dynamics from marine phosphate levels in <i>Siderastrea</i> corals                                  |
| Patrick J. Hudson      | Physiology/Functional Morphology | University of Tennessee-Knoxville    | Sun versus shade acclimation and plasticity in ecophysiological performance of <i>Canella winterana</i>                                      |
| Megan C. Todd-Thompson | Ecology                          | University of Tennessee-Knoxville    | Molecular analysis of a Ranavirus strain involved in a die-off of amphibians in Great Smoky Mountains National Park                          |
| Jacob J. Eby           | Ecology                          | University of Toledo                 | The Abundance of Antibiotic Resistant Bacteria Present on Mosquitoes Caught at a Recreational Park.  |
| Robert C. Hanlon       | Chemistry                        | University of Toledo                 | Chemical degradation study of poly(lactic acid) and lactic acid copolymers   |
| Kathie L. Swan         | Petrology/Geochemistry           | University of Toledo                 | Environmental Fate of Monensin, Lasolocid and Ivermectin in Soils  |
| Brandon Campitelli     | Physiology/Functional Morphology | University of Toronto                | The ecophysiological consequences of a leaf shape polymorphism in Ivyleaf morning glory ( <i>Ipomoea hederacea</i> )                         |
| Norman Lee             | Behavioral Ecology               | University of Toronto at Scarborough | The geography of group sex: a test of alternative models to describe male spacing and female preference in a lek-mating subterranean insect. |
| Daniel M. Evans        | Conservation Biology             | University of Washington             | Habitat Fragmentation, Habitat Corridors and Seed Dispersal by Birds   |

Grants-in-Aid of Research Awards  
October 15, 2009 Grant Cycle

Alphabetical by Institution

|                       |                                  |   |   |
|-----------------------|----------------------------------|---|---|
| Adam F. Kowalski      | Physics/Astronomy                | University of Washington                            | Spectral Properties of Optical Stellar Flares on Very Short Timescales: Solving the Mystery of Blue Flare Light                     |
| Ryan C. Keenan        | Physics/Astronomy                | University of Wisconsin-Madison                     | The Galaxy Mass Assembly History of the Universe  |
| Brittany S. Ahuja     | Psychology                       | University of Wisconsin-Milwaukee                   | Effects of Modulation to the Cerebellothalamocortical Pathway   |
| Todd C. Peterson      | Psychology                       | University of Wisconsin-Milwaukee                   | Effort Based Decision Making: Before, During and After Brain Injury   |
| Saad Hasan            | Chemistry                        | Vanderbilt University                               | Solid-state NMR of colloidal graphene and graphitic precursors  |
| Katherine A. Allport  | Physiology/Functional Morphology | Villanova University                                | The Effect of Diet and Training on the Migratory Flight Performance of the European Starling  |
| Erik J. Scully        | Behavioral Ecology               | Villanova University                                | Sociality and cooperative reproduction in herbivorous spider <i>Bagheera kiplingi</i>   |
| Michael B. Meyer      | Paleontology/Sedimentation       | Virginia Polytechnic Institute and State University | New insights into the extinction of the Ediacara Biota through high-resolution isotopic sampling in the Dengying Formation, China.  |
| Marie B. Perez Rivera | Psychology                       | Virginia Polytechnic Institute and State University | Dichos and Consejos, Ethnic Identity, and Emotion Socialization in Latina Mothers   |
| John D. Welsh         | Cell Biology/Biochemistry        | Virginia Polytechnic Institute and State University | Modulation of platelet function by protein lipid interaction  |
| Genevieve K. Croft    | Systematics/Evolutionary Biology | Washington University in St. Louis                  | The interplay of ecological and genetic change in the early domestication of a Neotropical fruit tree, <i>Byrsonima crassifolia</i> |
| Krystal N. Seibert    | Cell Biology/Biochemistry        | Western Michigan University                         | Developing an Oncolytic Virus Using Tanapox   |
| Taylor S. Esformes    | Physics/Astronomy                | Worcester Polytechnic Institute                     | Sample-Independent Friction Force Calibration   |