

Students Graduating with Distinction in Biology

Hiruni Amarasekara, Inclusion of Green Fluorescence Protein for Targeted AAV gene therapy design in GSD-1a, (Dr. Dwight Koeberl, Department of Pediatrics, Division of Medical Genetics, Duke University Medical Center)

Seayoon An, Investigating primate enamel genotype, (Dr. Chris Wall, Department of Evolutionary Anthropology)

Arun M. Augustine, Building a Literature Curation Algorithm To Classify Primary Literature Studying The Epithelial to Mesenchymal Transition, (Dr. David McClay, Department of Biology)

Michelle Bao, The Role of Calcium Signaling and Heart Contractility in Developmental Ventricular Hypertrophy, (Dr. Mary Hutson, Duke Neonatal Perinatal Research Institute)

Emily Bates, MyRIP interaction with ck/Myosin VIIA in *Drosophila melanogaster*, (Dr. Daniel Kiehart, Department of Biology)

Tyler Bray, Temporal Distribution of Predation Pressure on Yellow Baboons, (*Papio cynocephalus*) in Amboseli National Reserve, Kenya, (Dr. Susan Alberts, Department of Biology)

Steven Canon Brodar, An In-Vivo Assay Shows Effects of Autism-Related ASPM Variants, (Dr. Nico Katsanis, Department of Cell Biology, Duke University School of Medicine)

Emily Chang, Evolution of Anchor Cell Invasion across rhabditid nematode species, (Dr. David Sherwood, Department of Biology)

Lydia Chow, Male Killers: Immigrant males as causes of fetal losses and infant deaths in a long-term primate study, (Dr. Susan Alberts, Department of Biology)

Margaret Chu, A novel treatment for Hurler disease: using β 2-agonists in conjunction with enzyme replacement therapy to facilitate neuronal correction, (Dr. Dwight Koeberl, Department of Pediatrics, Duke University Medical Center)

Elizabeth Clark, A Phylogenetic Analysis of Paleozoic Protasterid Ophiuroids, (*Phylum Echinodermata*), (Dr. Alexander Glass, Department of Earth and Ocean Sciences)

Giuseppe Crosti, An in vivo imaging approach to understand network dynamics regulating stem cell identity, (Dr. Philip Benfey, Department of Biology)

Mark C. Dougherty, A Possible Role of Matrix Metalloproteinases in Basement Membrane Remodeling of the *L. variegatus* Blastula, (Dr. David McClay, Department of Biology)

Russell S. Dulman, Effects of a β -Arrestin-Biased Compound on Schizophrenia-Like Social Behaviors, (Dr. William C. Wetsel, Department of Psychiatry and Behavioral Sciences, Duke University Medical Center)

Amy Flis, PAH-mediated cardiac deformity in medaka (*Oryzias latipes*), (Dr. David Hinton, Nicholas School of the Environment)

Josh Foromera, Comparison of HIV Envelopes produced from Human Embryonic Kidney (HEK)-293 T cells and Chinese Hamster Ovarian (CHO) Cells, (Drs. Barton F. Haynes and Larry Liao, Duke Human Vaccine Institute)

Miriam Fox, Modeling the correspondence between early gene expression patterns and adult color patterns in Heliconius butterflies, (Dr. H. Frederik Nijhout, Department of Biology)

David Corley Gibbs*, Modeling developmental plasticity in variable environments through gene duplication: a case for phytochromes and gibberellin 3-oxidases' role during temperature-dependent seed germination, (Dr. Kathleen Donohue, Department of Biology)

Ryan Gimple, Katanin-p60: How a microtubule severing protein impacts nervous system development in *Drosophila melanogaster*, (Dr. Nina Sherwood, Department of Biology)

Meredith A. Gunder, Endocytosis by cardiac neural crest cells regulates arch artery re-patterning and outflow tract alignment during chick embryonic development, (Dr. Mary R. Hutson, Department of Pediatrics, Duke University Medical Center)

Jonathan Haskel, Arabidopsis HEMERA genetically interacts with key players in the light signaling pathway to establish photomorphogenesis in plants, (Dr. Meng Chen, Department of Biology)

Andrew Hickey*, Inhibition of Antibody-Dependent Cellular Cytotoxicity-Mediating IgG Antibodies by IgA During Response to HIV-1 Infection, (Dr. Guido Ferrari, Department of Surgery, Duke University Medical Center)

Kenneth Hoehn*, What's in a genus? Using permutation tests to detect genus-level selection in fossil data, (Dr. V. Louise Roth, Department of Biology)

Caroline Howes, Phytoplankton populations as indicators of global ocean change: examining Prochlorococcus and Synechococcus densities across environmental gradients in the North Pacific (Dr. Zackary Johnson, Duke University Marine Laboratory)

Laura Hubbard, Consequences of cryptosporidiosis in members of the species *Propithecus coquereli* housed at the Duke Lemur Center, (Dr. Leslie Digby, Department of Evolutionary Anthropology)

Fangda Jiang, Investigating the presence of senescence in the frog genus, *Hyla*, (Dr. Cliff Cunningham, Department of Biology)

Ruiji Jiang, Protein Co-localization of FSGS7 a Novel Gene in Nephrotic Syndrome, (Dr. Rasheed Gbadegesin, Department of Pediatrics and Center for Human Genetics, Duke University Medical Center)

Anne K. Johnson, How does breeding system influence the geographic distribution of cheilanthoid ferns (Pteridaceae)? (Drs. Michael Windham and Kathleen Pryer, Department of Biology)

Allison Khoo, Functional analysis of molecular evolution in an anti-herbivory enzyme from *Boechera stricta*, (Dr. Thomas Mitchell-Olds, Department of Biology)

Han Jun Kim, Investigating Somatosensory Signaling Abnormalities in Parkinson's Disease, (Dr. Miguel Nicolelis, Department of Neurobiology, Duke University School of Medicine)

Jina Jiwan Kim, Effects of *atl-1*, *atm-1*, and *csb-1* mutations on larval arrest induced by DNA damage from ultraviolet radiation in *Caenorhabditis elegans*, (Dr. Joel N. Meyer, Nicholas School of the Environment)

Halina Krzystek, Transcriptome profiling reveals lincRNAs in the embryonic gonad, (Dr. Blanche Capel, Department of Cell Biology, Duke University School of Medicine)

Claire Li, Nonhomologous end joining as a mechanism for generating de novo tandem repeats in the *Saccharomyces cerevisiae* genome, (Dr. Sue Jinks-Robertson, Department of Molecular Genetics and Microbiology, Duke University School of Medicine)

Shu Liu, Development of highly specific recombinant antibodies against *Salmonella enterica*, (Dr. Michael Gunn, Department of Immunology, Duke University School of Medicine)

Emily Matoon, Maintenance of flower color polymorphisms in a self-pollinating species: the effects of soil pH, soil water content, and heritability on flower color in *Boechea stricta*, (Dr. Tom Mitchell-Olds, Department of Biology)

Hooney Min, Characterization of MAPK signaling pathway dependent regulation of miRNA biogenesis in a mouse model of soft tissue sarcoma, (Dr. David Kirsch, Department of Pharmacology and Cancer Biology, Duke University School of Medicine)

Cinnamon Mittan, Biogeography of *Sphagnum fimbriatum* in eastern North America: Influence of spore dispersal and life history, (Dr. Jonathan Shaw, Department of Biology)

Michael Moverman, Sustained Intra-articular Delivery of IL-1Ra and sTNFRII from a Thermally Responsive Polypeptide Depot Following Knee Fracture in Mice, (Dr. Steven Olson, Duke Orthopaedic Research Laboratory)

Charmaine Mutucumarana, Relationships Between Sickle Red Blood Cell Adhesion, Soluble Laminin and Vascular Endothelium, (Dr. Marilyn Telen, Department of Medicine, Duke University Medical Center)

Divya Natesan, Prenatal Diesel Exposure Impacts Microglial Colonization in the Amygdala, (Dr. Staci Bilbo, Department of Psychology and Neuroscience)

Suvarn Neupane, YopH, a pathogenic factor of plague bacteria *Yersinia pestis*, suppresses Mast Cell Degranulation, (Dr. Soman Abraham, Department of Pathology, Duke University School of Medicine)

Daniel Pelzman, Expression and Regulation of Vinexin-family Proteins in Trabecular Meshwork Cells, (Dr. Vasanth Rao, Department of Ophthalmology, Duke University Medical Center)

Mason English Reynolds, Population structure of community-based pen shell (*Atrina tuberculosa*) fisheries in the Gulf of California, Mexico characterized by RAD Sequencing, (Drs. Daniel Rittschof and Thomas Schultz, Duke University Marine Lab)

Faith Robertson*, Alternative Energy: Elucidating the Role of Cell Metabolism in the Development of Therapeutic Resistance to Lapatinib in HER2+ Breast Cancer, (Dr. Neil Spector, Department of Pharmacology and Cancer Biology, Duke University School of Medicine)

Tullia Rushton, Investigating the Underlying Genetics of Varying Leaf Shape Among Species of *Mimulus* and the Role of Parallel Evolution in Leaf Adaptation, (Dr. John Willis, Department of Biology)

Soyoung Ryu, Histone Deacetylase HDCA4 Implicated in Muscle Regeneration by Regulating Satellite Cell Proliferation, (Dr. Tso-Pang Yao, Department of Pharmacology and Cancer Biology, Duke University School of Medicine)

Evan A. Schwartz*, The effects of small molecule MEK1/2 inhibitors on vaso-occlusion in sickle cell disease, (Dr. Dr. Rahima Zennadi, Department of Medicine - Division of Hematology, Duke University Medical Center)

Justine Sinnaeve, Elucidating the underlying cell biology of primary mouth development in a basal deuterostome, *Lytechinus variegatus*, (Dr. David McClay, Department of Biology)

Clara Kwon Starkweather, Elucidating auditory circuitry critical to vocal performance in the songbird, (Dr. Richard Mooney, Department of Neurobiology, Duke University School of Medicine)

Carter Suryadevara*, Chimeric Antigen Receptors Are Efficacious Against Human Glioma, (Dr. John H. Sampson, Department of Surgery, Brain Tumor Immunotherapy Program, Duke University Medical Center)

Breann Tisano, Neuronal Stimulation and the DNA Methylation Patterning of the Autism Shank3 gene, (Dr. Yong-Hui Jiang, Department of Pediatrics, Duke University Medical Center)

Kate Toth, The Use of Whole Exome Sequencing in nonBRCA1/BRCA2 Familial Breast Cancer, (Dr. David Goldstein, Department of Molecular Genetics and Microbiology, Duke University School of Medicine)

Praveen Tummalapalli, Promoter Activity of Haplotypes of Ancestral and Derived LCT cis-Regulatory Alleles and Implications for the Evolution of Lactose Persistence, (Dr. Gregory Wray, Department of Biology)

Donald Vineyard, Modeling the effects of understory fire and hydrologic gradient on the annual growth of *Pinus palustris* and *Pinus serotina* in a longleaf pine savannah using tree core analysis, (Dr. Justin Wright, Department of Biology)

Jessica S. Wang, Non-autonomous death of rod photoreceptor neurons upon cone-specific ablation of *RanBP2*, (Dr. Paulo A. Ferreira, Department of Ophthalmology, Duke University Medical Center)

Yiping Wang, Computational discovery and in vivo validation of motifs Involved in *Drosophila* olfactory neuron differentiation, (Dr. Pelin Volkan, Department of Biology)

Zehui Wang, Cyld mutant mice display multiple skin abnormalities, (Dr. Jennifer Zhang, Department of Dermatology, Duke University Medical Center)

Eli Wilber, Investigation of Cell Division Associated Proteins in *Halobacterium salinarum*, (Dr. Daniel Kiehart, Department of Biology)

Eunice Yim*, Characterization of mitotic gene conversions in *Saccharomyces cerevisiae*, (Dr. Tom Petes, Department of Molecular Genetics and Microbiology, Duke University School of Medicine)

Ruth Zhang, Identifying adhesion proteins mediating anchor cell invasion of vulval cells in *C. elegans*, (Dr. David R. Sherwood, Department of Biology)

*High Distinction