The University of Florida Science for Life program has just named 9 HHMI Graduate Student Awards for 2010. These awards recognize excellence in graduate students who are able to mentor their undergraduates to a point where the undergraduate achieves co-authorship in peer-reviewed publications. These graduate students represent 9 different academic departments university-wide and have published research with 14 different undergraduate students while mentoring far more.

**Yan Chen** is a PhD candidate in the Department of Chemistry under the supervision of Professor Weihong Tan. Her research focuses on the development and applications of Fluorescence Correlation Spectroscopy (FCS) for live cell measurements. She received her HHMI-GSA award based on her work in the instrumentation development and cell membrane receptor studies with the undergraduate student Michael Mavros, which resulted in the publication “Mapping Receptor Density on Live Cells Using Fluorescence Correlation Spectroscopy” in Chemistry, A European Journal. Later on, Yan and Michael continued to work together to update the FCS set-up into a three-channel Fluorescence Cross-Correlation Spectroscopy (FCCS), a state-of-the-art technique with single molecule detection sensitivity for intracellular gene expression studies.

**Amy Non** is a PhD candidate in the Anthropology department at UF working in the genetic anthropology laboratory under the supervision of Dr. Connie Mulligan. Her dissertation research focuses on the integration of data from multiple disciplines—e.g., genetic, biological, and sociocultural—to investigate issues ranging from health disparities in complex disease to the reconstruction of human evolutionary history. Throughout the past six years in the Mulligan genetic anthropology lab, she has supervised the research of nine undergraduate students and interns. Most recently, she has submitted a manuscript about the evolutionary history of Jewish populations in Yemen and Ethiopia to the American Journal of Physical Anthropology based on work conducted with former undergraduate student Luisa Sanchez. She is also currently preparing a manuscript with undergraduate Sydney Ruble on a project to test for geographic structure among genetic variation of the Yemeni population. Amy has also served as a graduate student mentor of an undergraduate from an underrepresented group at the Society of Molecular Biology and Evolution in Barcelona, 2008. She plans to continue working with undergraduate researchers as she completes her dissertation and in her future postdoctoral research as a Robert Wood Johnson Health and Society Scholar at Harvard University.

**Adam Mecca** is a M.D.-Ph.D. student in the College of Medicine his fifth year of the physician scientist training program. His doctoral dissertation is titled "Targeting the ACE2/Ang-(1-7)/Mas axis for cerebroprotection during ischemic stroke." Adam’s dissertation research focuses on activating endogenous biological pathways in the brain to prevent or treat stroke. His research has led to the discovery of a novel cerebroprotective action of the endogenous peptide, Angiotensin-(1-7), during ischemic stroke. In addition, Adam is a Co-Director of the Equal Access Clinic, a student run free medical clinic in downtown Gainesville that serves the under-insured populations of Gainesville and Alachua County. He became interested in medically under-served populations as an undergraduate volunteer at the Equal Access Clinic in 2002. Since then, Adam has worked passionately with faculty and student volunteers across the University of Florida health professions to establish and expand the patient services offered by the Equal Access Clinic. Adam aspires to be an effective physician scientist, educator, and healthcare provider and use these skills to assist patients and health professional students.
Paul Perrin is a PhD candidate in the Department of Psychology under the supervision of Dr. Martin Heesacker. He also works as a pre-doctoral fellow in the Rehabilitation Outcomes Research Center at the Malcolm Randall Veterans’ Affairs Medical Center under the supervision of Dr. Maude Rittman. His project examined the mental health of ethnically diverse stroke caregivers, and the relationship between caregiver mental health and stroke rehabilitation. He received his HHMI-GSA award based on his work primarily with one undergraduate, Catherine Uthe. The publication that resulted from their work was “Identifying At-Risk, Ethnically Diverse Stroke Caregivers for Counseling: A Longitudinal Study of Mental Health,” published in *Rehabilitation Psychology*. This project was also featured in an article in the *Monitor on Psychology*, the flagship magazine of the American Psychological Association which is read by hundreds of thousands of psychologists nationally. Catherine continues to perform research with Paul on culturally sensitive stroke rehabilitation, and she hopes to enter medical school to study psychiatry.

Steffen Rebennack is a PhD candidate in the Industrial & Systems Engineering department at the University of Florida. He got his diploma degree in 2006 in mathematics from the University of Heidelberg, Germany. His thesis is guided by Prof. Pardalos and deals with energy systems research. Steffen investigates certain aspects of hydro-thermal energy systems and their optimal operation when taking into account uncertain fuel prices and CO2 emission prices. He earned the HHMI-GSA for his work with Josh Grasso which lead to the paper “Short-term Electricity Price Forecasting: Time Series and Neural Network Benchmarking.” More broadly, Steffen’s research interests are in power systems modeling and optimization, stochastic programming, global optimization, integer programming and combinatorial optimization.

Yoko Tanimura is pursuing her Ph. D. degree in the behavioral neuroscience program (Psychology) under the supervision of Dr. Mark H. Lewis. Her dissertation research focuses on the neurobiological mechanism associated with the development of restricted repetitive behaviors in neurodevelopmental disorders using an animal model. She received the HHMI-GSA award for her work with an undergraduate student in her laboratory Sasha Vaziri, which resulted in a co-authored publication in *Behavioural Brain Research* in 2010 entitled “Indirect basal ganglia pathway mediation of repetitive behaviors: Attenuation by adenosine receptor agonists”. This work elucidated that the expression of repetitive behaviors is associated with altered activity of cortico-basal ganglia circuitry and pharmacological manipulation to normalize this activity ameliorates repetitive behaviors in our animals. This work may suggest a novel therapeutic target for the treatment of abnormal behaviors in autism and related neurodevelopmental disorders.
Joanna Tucker Lima will receive her Ph.D. in Interdisciplinary Ecology in May 2010. Her dissertation evaluated the ecology of native oil-producing palm species in the Brazilian Amazon and their potential as a regional source of biofuels. This research evolved as a collaboration with professors and students at a local university in Brazil—the Federal University of Acre (UFAC). She was awarded the HHMI-GSA for her work with Brazilian undergraduate student, Anelena Lima de Carvalho. During two years of fieldwork in Brazil she mentored Anelena, serving as co-advisor on her senior thesis committee. Under Joanna’s guidance, Anelena published work from her senior thesis as first author in *Acta Amazonica*, a Brazilian peer-reviewed scientific journal. This co-authored work entitled, “Floristic and structural comparisons among palm communities in primary and secondary forest fragments of the Raimundo Irineu Serra Environmental Protection Area – Rio Branco, Acre, Brazil”, examined the impacts of tropical forest fragmentation on palm tree diversity and survival. Our results exposed the threatened status of palm tree species within the area, and serves as an example for further research on other plant and animal species conservation within peri-urban protection areas.

Myung-Heui Woo is a Ph.D. candidate in Environmental Engineering Sciences department working in the laboratory of Dr. Chang-Yu Wu. Her research focuses on improvement of protection against viral aerosols through development of novel decontamination methods and characterization of viral aerosol. Myung-Heui has worked with James Welch on the biocidal effect of the specific filter. Their manuscript titled “the evaluation of the performance of dialdehyde cellulose filter against airborne and waterborne bacteria and virus” was submitted to Journal of Applied Microbiology. Myung-Heui is continuing her work with Adam Grippin and Tamara Smith.

Bing Yao is a Ph.D. candidate in Molecular Cell Biology Concentration of the IDP program and in the Department of Oral Biology. Under the supervision of Professor Edward K.L. Chan, his study focuses on molecular mechanisms in microRNA mediated gene regulation by performing detailed mapping of human GW182 repression-domain functions and their comprehensive roles in interacting with the Ago family. Bing received the HHMI GSA for his working with Grant X. Abadal on his project and has a manuscript entitled “Divergent GW182 functional domains in the regulation of translational repression”. Bing enjoys research and working with other undergraduate and graduate students.