

Representative Thesis Projects of Current Plant Biology Graduate Students

Student	Advisor	Thesis Title
Erica Fishel	Ram Dixit	Single-Molecule Analysis of the Arabidopsis Microtubule Plus-End Binding Protein EB1
Junchen Gu	Toni Kutchen	Expression of Salutaridine Reductase in Pichia system
Brian San Francisco	Robert Kranz	A quinol-based mechanism for heme iron reduction in CcmF
Margaret Wilson	Elizabeth Haswell	Identifying interactions between plastid division machinery and mechanosensitive ion channels.
Chuanmei Zhu	Ram Dixit	Characterization of FRA1, a kinesin from Arabidopsis
Silvano Ciani	Elizabeth Haswell	How putative mechanosensitive channels affect and plastid morphology and division in Arabidopsis thaliana
Andrew Mutka	Barbara Kunkel	Investigating roles of elevated auxin levels during Pseudomonas syringae pathogenesis
Jeanne Sheffield	Bob Blankenship	Photosynthesis in Acaryochloris marina
Wan Shi	Mark Running	Functional study of a putative protein prenyltransferase subunit in Arabidopsis
Ashley Galant	Joe Jez	Crystallization and Characterization of Glycine max Homogluthione Synthetase
Soon Goo Lee	Joseph Jez	A Plant-like Methyltransferase Pathway for Phosphatidylcholine Biosynthesis in the Parasitic Nematode Haemonchus contortus
Jeffrey Cameron	Himadri Pakrasi	Mechanisms of redox homeostasis in a model photosynthetic organism.
JiYul Jung	Daniel Schachtman	Identification and characterization of factors that are involved in nutrient deprivation response and plant growth
Kimberly Wegener	Himadri Pakrasi	Function of Photosystem II Extrinsic Proteins in Complex Assembly
Agnes Demianski	Barbara Kunkel	Identification of novel jasmonate signaling components and/or downstream genes important in susceptibility to <i>P. syringae</i>
Elaine Frawley	Robert Kranz	In vivo and in vitro analysis of the system II cytochrome c biogenesis pathway
Sarah Tucker	Craig Pikaard	Involvement of RNA directed DNA methylation in nucleolar dominance.

Ph.D. Thesis Projects of Previous Plant Biology Students

Ph.D. Thesis Projects of Previous Plant Biology Students Student	Academic year Ph.D. completed	Advisor	Thesis Title
Eggenberger, Alan	93-94	R. Beachy	Molecular Genetic Analysis of Soybean Mosaic Virus
Fenczik, Csilla A.	93-94	R. Beachy	Characterization of Two Tobamovirus Movement Proteins and Their Role in Host Range Determination
Orr, Elizabeth	93-94	U. Goodenough	Molecular Characterization of the Transposable Element Gulliver in <i>Chlamydomonas reinhardtii</i>
Shen, Qing-xi	93-94	Tuan-hua David Ho	Molecular Mechanism of Gene Regulation by the Phytohormone Abscisic Acid
Karin Nyhus	94-95	Himadri Pakrasi	Biochemistry and Genetics of the Photosystem I Complex of the Filamentous Cyanobacterium, <i>Anabaena variabilis</i> ATCC 29413
Zhenghua Ye	94-95	Joseph Varner	Gene Expression Patterns Associated with Lignin Biosynthesis in <i>Zinnia elegans</i>
Shukla, Vipula	95-96	Himadri Pakrasi	Genetic and Biochemical Analysis of Cytochrome b559
Doelling, Jedediah	96-97	Craig Pikaard	Minimal Sequence Requirements for rRNA Gene Promoter Function in <i>Arabidopsis thaliana</i>

J. Scott Gens	98-99	Barbara Pickard	A Plasmalemmal Reticulum with Specialized Vertices
Dennis Milanowski	99-00	Walter Lewis	Benzylisoquinoline Alkaloid Chemistry and Biology of Croton section Cyclostigma
Wing-On Ng	99-00	Himadri Pakrasi	Genetics and Biochemical Analysis of the Functions of DNA Photolysase Homologues in the Cyanobacterium <i>Synechocystis</i> sp. PCC 6803
Steven Casper	01-02	Walter Lewis	Biodirected Isolation and Characterization of Antimalarial Compounds from American Lauraceae
Trevor Stokes	01-02	Eric Richards	Epigenetic Variation in Arabidopsis Disease Resistance
Alexander Brands	02-03	Tuan-hua David Ho	Examining the Function of HVA22, a Stress Induced Gene with Homologs in Diverse Eukaryotic Organisms
Jose Casaretto	02-03	Tuan-hua David Ho	Abscisic Acid Regulated Gene Expression in Barley: Transcription Factors Interacting with ABA-Responsive Promoters
Roldolfo Zentella-Gomez	02-03	Tuan-hua David Ho	Molecular Dissection of Hormone Signaling Pathways in Barley Aleurone Cells
Zhong-ying Chen	03-04	Barbara Kunkel	Investigating Activities of the <i>Pseudomonas Syringae</i> Type III Effector AVRPT2 in Promoting Disease in <i>Arabidopsis thaliana</i>
Richard Lawrence	03-04	Craig Pikaard	Epigenetic Control of

			Nucleolar Dominance and Ribosomal RNA Gene Dosage Control
Michelle Lewis	03-04	Craig Pikaard	Chromosomal Influences on Gene Silencing in Nucleolar Dominance
Leeann Thornton	03-04	Himadri Pakrasi	Components of the Functionally Stable Water Oxidation Center of Photosystem II in <i>Synechocystis</i> 6803
Melisa Tin Siong Lim	03-04	Barbara Kunkel	Analysis of the functional relationships between the multiple activities of AvrRpt2, an effector from the bacterial phytopathogen <i>Pseudomonas syringae</i>
Phil Harries	04-05	Ralph Quatrano	The Role of the Arp2/3 Complex in Tip Growth of Plant Cells
Weidong Tian	04-05	Jeffrey Skolnick & Barbara Kunkel	The Study of Enzyme Function Conservation and its Application for Genome-scale Enzyme Function Inference and Metabolic-Pathway Reconstruction
Edward Turk	04-05	Michael Neff	Brassinosteroid Catabolism Modulates Photomorphogenesis in <i>Arabidopsis</i>
Robert Feissner	05-06	Robert Kranz	Heme Delivery in the System I and System II Cytochrome c Biogenesis Pathways
Hui-Fen Kuo	05-06	Eric Richards	Natural variation and cytosine methylation landscape of a subtelomeric region in <i>Arabidopsis thaliana</i>
Heather Marella	05-06	Ralph Quatrano	A Comparative Analysis of the Structure and

			Function of VP1/AB13 in Moss and Seed Plants
Jason Ward	05-06	Michael Neff	Analysis of Two Transcription Factors with Distinct Roles in <i>Arabidopsis thaliana</i> Seedling Development
Keith Earley	06-07	Craig Pikaard	The Regulation of Ribosomal RNA Gene Transcription by Histone Deacetylase HDA6 in <i>Arabidopsis</i>
Cawas Engineer	06-07	Robert Kranz	The nitrogen starvation response in <i>Arabidopsis thaliana</i> and expression of AtAmt1.1, a high affinity ammonium transporter
Jae-Hyoek Lee	06-07	Ursula Goodenough	Sexual development of <i>Chlamydomonas</i> and its path to the evolution of land plants
Huawen Lin	06-07	Ursula Goodenough	Characterization of Two Minus-Specific Genes, MID and MTD1, and a Sex-Limited mutant, iso1, involved in <i>Chlamydomonas</i> gametogenesis
Jason Londo	06-07	Barbara Schaal	Genetic and Physiological Variation in Cultivated and Wild Rice: Domestication, Phylogeography, and Aluminum Stress Resistance
Travis Dittmer	07-08	Eric Richards	Role of the LINC (LITTLE NUCLEI) Proteins in Nuclear Morphology, Organization and Dynamics
Michelle Liberton	07-08	Himadri Pakrasi	Membrane Systems in Cyanobacteria

Ian Street	07-08	Michael Neff	The AT-hook Containing proteins SOB3/AHL29 and ESC/AHL27 are Negative Modulators of Hypocotyl Growth in Arabidopsis
Julie Thole	07-08	Erik Nielsen	The Roles of PI4K β 1, RHD4, and SAC6 in Regulating PI(4)P Pools in Root Hairs and Pollen Tube
Hankuil Yi	07-08	Eric Richards	The Molecular Characterization of the bal Varieant in Arabidopsis thaliana
TOM REAM	08-09	Craig Pikaard	Subunit compositions of Arabidopsis DNA-dependent RNA polymerases and the roles of the plant-specific RNA Polymerases IV and V in Gene silencing
Jeremy Haag	09-10	Craig Pikaard	Determination of the template and activity of RNA Polymerase IV