

# Clemson University

## Department of Genetics and Biochemistry

### Recent Dissertations

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#### Doctor of Philosophy in Genetics

| Doctor of Philosophy in Genetics Table |                     |  |                   |
|--|---------------------|--|-------------------|
| Date                                   | Name                | Dissertation Title   | Adviser           |
| November 8, 2018                       | William Poehlman    | High-Throughput Polygenic Biomarker Discover Using Condition-Specific Gene Coexpression Networks | Alex Feltus       |
| April 2, 2018                          | Sophie Altamarino   | Mechanisms of Fluconazole-Based Aneuploidy in <i>Cryptococcus Neoformans</i>                     | Lukasz Kozubowski |
| April 2, 2018                          | Brian Gudenas       | Genomic Data Mining for Functional Annotation of Human Long Non-Coding RNA's                     | LJ Wang           |
| October 30, 2017                       | Jose Guevara Coto   | Development of New Bioinformatic Approaches for Human Genetic Studies                            | LJ Wang           |
| July 10, 2017                          | Jacquelyn Evans     | Identification of Genetic Variants Underlying Simple and Complex Canine Myopathies               | Leigh Anne Clark  |
| April 17, 2017                         | Grace Kisirkoi      | Acetate Transport is Essential for Survival and Virulence of <i>Cryptococcus Neoformans</i>      | Kerry Smith       |
| November 16, 2016                      | Richard Boyles      | Genetic Study of Grain Yield and Quality Traits in Sorghum                                       | Stephen Kresovich |
| July 7, 2016                           | Krystal Cadle       | The Role the N-terminal Domain Plays in Spidroin Assembly  | William Marcotte  |
| June 27, 2016                          | Steven Cogill       | Functional Analysis of Human Long Non-coding RNAs and Their Associations with Diseases           | LJ Wang           |
| October 29, 2015                       | Shuangrong Yuan     | MicroRNA-mediated plant development and response to environmental stress in perennial grasses    | Hong Luo          |
| June 17, 2015                          | Kimberly Kanapeckas | Adaptive Evolution during De-domestication in Weedy Rice   | Amy Lawton-Rauh   |

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|--------------------|----------------|---|------------------|
| February 12, 2015  | Michael Harris | A Survey of Protozoan Parasite Hexokinases: Characterization Studies and Potential for Therapeutic Interventions  | Jim Morris       |
| November 13, 2014  | Caitlin Rinz   | Genetic Dissection of Neuromuscular Diseases Affecting Domestic Dogs  | Leigh Anne Clark |
| April 14, 2014     | Richa Koul     | Functional Characterization of ZBTB20 and the Role of ZBTB20-dependent transcription regulation in Autism Spectrum Disorders and Intellectual Disability              | Anand Srivastava |
| December 12, 2013  | Kristin Beard  | Can Very Rapid Adaptation Arise without Ancestral Variation? Insight from the Molecular Evolution of Herbicide Resistance in Genus Amaranthus                         | Amy Lawton-Rauh  |
| November 22, 2013  | Xinfu Zhang    | Developing and Characterization of Liriodendron SSR Markers and Genetics Composition of two Liriodendron orchards   | Haiying Liang    |
| September 19, 2013 | Rooksie Noorai | Discovery of Variants Underlying Simple and Complex Traits Through Genome-Wide Association Study and Whole-Genome Resequencing  | Leigh Anne Clark |
| November 13, 2013  | Tessema Kassaw | Nikecykar Genetics of Nodule Number REgulation: Cloning Characterization and Functional Studies of the Root Determined Nodulator1 (RDN1) Gene in <i>M. truncatula</i> | Julia Frugoli    |
| November 1, 2012   | Keri Tabb      | The genetic basis of hereditary nephropathy in the English springer spaniel and characterization of two type IV collagen genes  | Leigh Anne Clark |
| March 1, 2012      | Man Zhou       | Genetic Engineering of turfgrass for enhanced performance under environmental stress  | Hong Luo         |

## Doctor of Philosophy in Biochemistry and Molecular Biology

| Doctor of Philosophy in Biochemistry and Molecular Biology Table |                      |  |                     |
|--|----------------------|--|---------------------|
| Date   | Name                 | Dissertation Title   | Adviser             |
| November 11, 2019  | Mufida Ammar         | Role of <i>Cryptococcus neoformans</i> pyruvate decarboxylase and aldehyde dehydrogenase enzymes in acetate productions and virulence  | Kerry Smith         |
| May 9, 2019  | Logan Crowe          | Glucose Adaptation and Glycosome Import Machinery of <i>Trypanosoma brucei</i>   | Meredith Morris     |
| March 27, 2018   | Yijian Qiu           | Glucose Sensing in <i>Trypanosoma Brucei</i>   | James Morris        |
| November 28, 2017  | Peipei Wu            | Towards a Better Understanding of the Molecular Mechanisms Underlying Plant Development and Stress Response  | Hong Luo            |
| November 13, 2017  | Stephen Nowak        | Interplay Between the RHF Family of Arabinosyltransferases and CLE Signaling Peptides Affects Nodule Regulation in <i>Medicago truncatula</i> and Lateral Root formation in <i>Arabidopsis thaliana</i> and <i>Medicago truncatula</i> | Julia Frugoli       |
| September 29, 2017   | Jing Li              | Evolutionary Diversity of Uracil DNA Glycosylase Superfamily   | Weiguo Cao          |
| May 31, 2017   | Thanh Dang           | Acetate Metabolism: The Physiological role of Acetate Kinase and ADP-forming Acetyl-CoA Synthetase   | Cheryl Ingram-Smith |
| March 22, 2017   | Drew Kelso           | Understanding Homologous Recombination Through the Biochemical Characterization of Eukaryotic Recombinases and Accessory Proteins  | Michael Sehorn      |
| November 15, 2016  | Sarah Bauer          | Glycosome Heterogeneity, Dynamics, and ER Association in <i>Trypanosoma Brucei</i>   | Meredith Morris     |
| April 5, 2016  | Cheryl Jones         | Investigating the Role of ADP-forming Acetyl-CoA Synthetase from the Protozoan Parasite <i>Entamoeba histolytica</i>   | Cheryl Ingram-Smith |
| November 18, 2015  | Congyue "Annie" Peng | Creating Biomaterials from Plant-derived Recombinant Spider Silk-like Proteins   | William Marcotte    |
| October 21, 2015   | Ashley Crook         | Interacting Partners of the SUNN Symbiotic Kinase  | Julia Frugoli       |

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|-------------------|----------------|--|-----------------|
| April 7, 2015     | Tonya Taylor   | Phosphotransacetylase and Xylulose 5-Phosphate/Fructose 6-Phosphate Phosphoketolase: Two Eukaryotic Partners               | Kerry Smith     |
| November 12, 2014 | Dong-Hoon Lee  | Plasma Mediated DNA Damage and Deaminated DNA Repair   | Weiguo Cao      |
| November 11, 2014 | Katie Glenn    | Allosteric Regulation of Bacterial and Fungal Xylulose 5-phosphate/ Fructose 6-phosphate Phosphoketolases (Xfps)           | Kerry Smith     |
| October 30, 2014  | Bo Xia         | Specificity and Catalytic Mechanism of DNA glycosylases in UDG superfamily   | Weiguo Cao      |
| June 16, 2014     | Shivani Shah   | Understanding the role of reulators of homologous recombination  | Michael Sehorn  |
| April 22, 2014    | LeAnna Ledford | Contributions of the Human SSB Complex and MEI5-SWI5 Complex in Homologous Recombination                                   | Michael Sehorn  |
| July 12, 2013     | Sunayan Ray    | Biochemical Investigation into the African Trypanosome's Initiation of Fatty Acid Synthesis                                | Kim Paul        |
| June 27, 2013     | Amrita Koushik | Role of phosphoinositide-based signaling in cirulence in <i>Entamoeba histolytica</i>                                      | Lesly Temesvari |
| July 2, 2012      | Yi Xu          | Lignin modification in <i>Arabidopsis</i> and <i>Populus</i> for studies of gene function and improving lignin degradation | Haiying Liang   |
| March 29, 2012    | April Joice    | An Investigation of <i>Trypanosoma brucei</i> Hexokinases: Localization, Oligomerization, and Inhibition                   | James Morris    |
| March 15, 2012    | Amanda Say     | Regulation of the <i>Saccharomyces cerevisiae</i> meiotic homologous recombination pathway by Mei5-Sae3, Hed1 and Srs2     | Michael Sehorn  |