

2019 Auburn Research Student Symposium Undergraduate and Graduate Student Winners

Undergraduate Student Winners

I. University Wide Winners in Science, Technology, Engineering, and Mathematics

Oral Presentations:

- 1st Place – Gabrielle Bradley, Chemical Engineering, “Investigating LAP-initiated photocrosslinking for the formation of engineered cardiac tissue”
- 2nd Place – Luke Anderson, Chemical Engineering, “Varying polymer matrix composition of engineered prostate tumor tissues to mimic the full range of tumor stiffnesses found *in vivo*”
- 3rd Place – Kacie Florus, Biomedical Sciences, “The effects of phosphoprotein enriched in astrocytes-15 (PEA15) on cerebral endothelial and neuronal cell density in domestic cats”

Poster Presentations:

- 1st Place: Mary Claire Carlton, Drug Discovery/Pharmaceutics, “Investigating the neuroprotective effects of dexamethasone against MPTP-induced neurotoxicity”
- 2nd Place: Bryan Holmes, Biosystems Engineering, “Modeling of photosynthetic aeration for energy efficient wastewater treatment”
- 3rd Place: Jamie Cronin, Biological Sciences, “Effects of lifetime exposure of dietary methylmercury in zebra finch pancreatic function”

II. University Wide Winners in Social Science, Creative Scholarship, Arts, and Humanities

Oral Presentations:

- 1st Place: Ian Shannon, Environmental Design, “Urban hygge: Public space, urban design, and their impacts on mental health”
- 2nd Place: Carter Hadley, Architecture, “Elements of incremental architecture and their applications in a broader context”
- 3rd Place: Katherine Ferguson, Architecture, “Rural studio breathing wall mass timber research”

Poster Presentations:

- 1st Place: Casey Littleton, Human Development and Family Studies, “Usefulness of a research-based parenting newsletter: A comparison of child-rearing information sources”
- 2nd Place: Peyton Kuhlert, Nutrition, “Validation of an *in vitro* non-alcoholic steatohepatitis Cas9 model”
- 3rd Place: Hannah Epperson, Communication Disorders, “Neuromuscular development in neonates & post-natal infants: Implications for nmes therapy for dysphagia”

III. College and School Awards

1. College of Agriculture

- Oral Winner: Serena Thompson, Animal Sciences, “Evaluation of summer annual forage mixtures for nutritive quality and sugarcane aphid infestations in Alabama”

- Poster Winner: William Byrd, Entomology and Plant Pathology, “Effect of mixed infestations on plant-mediated host location in the parasitoid *Microplitis croceipes*”

2. College of Architecture, Design, & Construction

- Oral Winner: Louisa McPherson, Victoria Shay, Grace Littlefield, Nicholas Bruno, Shijin Ding, Architecture, “Urban city structures in the pre-modern era”
- Poster Winner: Kyra Stark, Design, “Designing for climate at a fundamental level”

3. Raymond J. Harbert College of Business

- Oral Winner: N/A
- Poster Winner: Carolina Williams, Marketing, “The expected surprise”

4. College of Education

- Oral Winner: Abigail Brittain, Kinesiology, “Psychological states, injury, and functional movement within collegiate students: A relationship analysis”
- Poster Winner: Abigail Putz, Curriculum and Teaching, “Self-efficacy of mainstream pre-service and in-service teachers for English language learners”

5. Samuel Ginn College of Engineering

- Oral Winner: Marisa Rodriguez, Chemical Engineering, “Analyzing the effects of surface energy on algae with specialized attachment mechanisms”
- Poster Winner: Mike Wietstruk, Aerospace Engineering, “Aerodynamic response of a red-tailed hawk to a vertical gust”

6. School of Forestry and Wildlife Sciences

- Oral Winner: Arielle Fay, Wildlife Sciences, “Impacts of wild pigs on acorn availability as a food source for native wildlife”
- Poster Winner: James Shortnacy, Wildlife Sciences, “Estimating illegal take of white-tailed deer over bait in east Alabama”

7. College of Human Sciences

- Oral Winner: N/A
- Poster Winner: Benjamin Cage, Human Development and Family Studies, “Examination of sibling relationships in college-aged adults”

8. College of Liberal Arts

- Oral Winner: Lauren Allison, Communication Disorders, “Vocal dose for rhythm-based indoor cycling instructors: with and without amplification”
- Poster Winner: Katelyn Day, Foreign Languages and Literature, “Ay, cómo me duele . . . The effects of language barriers in accessing quality health care for Latina women in rural areas”

9. School of Nursing

- Oral Winner: NO PRESENTERS IN THIS CATEGORY

- Poster Winners (group): Taylor Ann Atkins, Ann Marie Dean, Carolanne Spearman, Lindsey McCormick, & Lydia Hafer, "The effects of exercise on adolescent depression"

10. Harrison School of Pharmacy

- Oral Winner: Tyler Lynd, Biomedical Sciences, "Honokiol ameliorates MPP+ induced neurotoxicity in an *in vitro* Parkinson's model"
- Poster Winner: Soorya Gokulan Rajendran, Drug Discovery and Development, "Assessing the pharmacodynamics and pharmacokinetic effects of designer drugs using computational design"

11. College of Sciences and Mathematics

- Oral Winner: Hannah Taylor, Biological Sciences, "Recombination rate plasticity in *Drosophila pseudoobscura*"
- Poster Winner: Noah Gibson, Chemistry and Biochemistry, "Gallium (III) catalyzed formation of Cu₂O nanocrystals as a potential pathway for controlled growth and morphology via a hot injection synthesis"

12. College of Veterinary Medicine

- Oral Winner: N/A
- Poster Winner: Karly Laprocina, Anatomy, Physiology and Pharmacology, "Identifying a novel population in the adrenal gland cortex"

13. Auburn University at Montgomery

Poster: Carolina De Bovi Pontes, Chemistry and Biochemistry, "Cloning, expression and purification of human mitochondrial molecular chaperone Tid1"

Graduate Student Winners

I. University Wide Winners in Science, Technology, Engineering, and Mathematics

Oral Presentations:

- 1st Place - Sharay Setti, Drug Discovery and Development, "Effect of LEC-specific P301L Tau on synaptic transmission and learning and memory"
- 2nd Place - Michael Alcorn, Computer Science and Software Engineering, "Strike (with) a pose: Neural networks are easily fooled by strange poses of familiar objects"
- 3rd Place - Anne Maguire, Anatomy, Physiology, and Pharmacology, "Current image analysis techniques to quantify adipocyte area"

Poster Presentations:

- 1st Place: Jeminiwa Bamidele, Anatomy, Physiology, and Pharmacology, "Soy isoflavones regulate testicular androgen secretion at all stages of development in the male rat"
- 2nd Place: Warren Smith, Drug Discovery and Development, "Intranasal pramlintide administration for the dissection of metabolic and cognitive outcomes of amylin-based therapies in a transgenic mouse model of Alzheimer's disease"
- 3rd Place: Grace Hoffman, Drug Discovery and Development, "Extra virgin olive oil as a medical food enhances donepezil effect against Alzheimer's disease"

II. University Wide Winners in Social Science, Creative Scholarship, Arts, and Humanities

Oral Presentations:

- 1st Place: Lauren Woodie, Nutrition, "Memories of rhythms past: Evidence for hippocampal core clock disruptions in a murine model of Western diet-induced obesity"
- 2nd Place: Shaniel Bernard, Hospitality Management, "Personal values and their impact on HospiQuality and customer satisfaction"
- 3rd Place: Julio Yanes, Psychology, "Pressure-based pain tolerance and cannabis: A neuropsychological assessment of pain processing in recreational cannabis users"

Poster Presentations:

- 1st Place: Lisa McManus, Communication Disorders, "The effect of repeated measurements and varying conditions on the reliability of the English version of the acceptable noise level test"
- 2nd Place: Qiang Qi, Industrial and Graphic Design, "Methods for collecting design inspirations: A research about how designers gain inspirations"
- 3rd Place (tie): Britney Kirksey, Margaret Killen, & Stephanie Burchill, Building Science, "Evidence-based design patient room typicals across hospital specialties"
- 3rd Place (tie): Alejandro Ramos, Architecture, "Landscape architecture theory and practice: Three case studies"

III. College and School Awards

1. College of Agriculture

- Oral Winner: Steven Ksepka, School of Fisheries, Aquaculture, and Aquatics Sciences, “Cryptic species of *Myxobolus* (Myxozoa: Myxobolidae): An intercellular cnidarian that parasitizes the central nervous system of native brook trout (*Salvelinus fontinalis*) in western North Carolina”
- Poster Winner: Joshua Flees, Poultry Science, “Effect of different basal culture media and sera combinations on primary broiler chicken muscle satellite cell proliferation and heterogeneity”

2. College of Architecture, Design, & Construction

- Oral Winner: NO PRESENTERS IN THIS CATEGORY
- Poster Winner: STUDENTS IN THIS CATEGORY EARNED UNIVERSITY WIDE AWARDS

3. Raymond J. Harbert College of Business

NO PRESENTERS FROM THIS COLLEGE

4. College of Education

- Oral Winner: Shane Colquhoun, Curriculum and Teaching, “A survey of in-service music teacher preparedness for teaching nontraditional music courses and ensembles in secondary-level schools”
- Poster Winner: Gunnar Hulebak, Kinesiology, “Distinguishing the effects of verbalizing a motor skill on performance and retention in novices and skilled populations”

5. Samuel Ginn College of Engineering

- Oral Winner: Jung Min Kim, Chemical Engineering, “Solute sorption and transport behavior of methanol and acetate in Selemion® AMV-N”
- Poster Winner: Sultan Zaman Mahmud, Electrical and Computer Engineering, “Combined measurement of perfusion and T2 star in calf muscle at 7 Tesla MRI with dynamic exercise using projection based image reconstruction method”

6. School of Forestry and Wildlife Sciences

- Oral Winner: Benjamin McKenzie, Wildlife Sciences, “Mosquito surveillance in Alabama highlights regions of arboviral risk”
- Poster Winner: Maria Celeste Iglesias, Forestry, “Investigation of the interactions between cellulose nanofibrils (CNF) and wood adhesive (pMDI) for its application in wood composites”

7. College of Human Sciences

- Oral Winner: Kara Terry, Nutrition, “Extension empowers Alabama youth and parents to eat better and move more”
- Poster Winner: Jamilah Page, Nutrition, “Using intermediary relationships to support school wellness promotion”

8. College of Liberal Arts

- Oral Winner: Megan Schaefer, Psychology, “Healing the hearts of bereaved caregivers: Impact of legacy artwork on grief in caregivers whose children died of cancer”
- Poster Winner: Taylor Esco, Political Science, “Heart of the wiregrass: Dothan, AL”

9. School of Nursing

- Oral Winner: NO PRESENTERS IN THIS CATEGORY
- Poster Winner: Amy Starling, “Mitigating wounds after war: A telephone follow-up program for patients with traumatic brain injuries”

10. Harrison School of Pharmacy

- Oral Winner: Ihab Abdallah, Drug Discovery and Development, “Combined etodolac and α -tocopherol as a novel therapeutic approach for Alzheimer disease treatment”
- Poster Winner: Ahmed Al Saqr, Drug Discovery and Development, “Cytotoxicity of hispolon in melanoma (B16BL6) cell lines”

11. College of Sciences and Mathematics

- Oral Winners (TIE):
 - Anabelle Kline, Geosciences, “Ore mineralogy, geochemistry, and genesis of the Hog Mountain orogenic gold deposit, southwestern Appalachians, USA”
 - Leticia De Marchi, Geosciences, “Hydrocode simulations of formation of Wetumpka impact crater, Alabama”
- Poster Winner: Megha Shrestha, Geosciences, “Urban vulnerabilities of Kathmandu Valley: A case study of urban flooding in the most populated city of Nepal”

12. College of Veterinary Medicine

- Oral Winner: Amanda Gross, Anatomy, Physiology, and Pharmacology, “Intravenous delivery of AAV gene therapy in GM1 gangliosidosis”
- Poster Winner: Claudia Reyner, Clinical Sciences, “Effect of tumor necrosis factor alpha on equine colony forming cell function in culture”