Biochemistry and Molecular Biology

“A Study of Tumor Suppressor p53’s Potential Role in the Upregulation of MARCKS Transcription”
Nelly Grigorian
Faculty Advisor: Chris Barton, Ph.D.

Mixed Catechin Solution from Rosa centrifolia Suggests Multiple Avenues for Tyrosinase Inhibition
Felicity Newton
Faculty Advisor: Rachel Rigsby, Ph.D.

“Preventing Cancer By Placement of Special Bacterial Carotenoids in Selected Natural Oils”
Robert Fira
Faculty Advisor: Rachel Rigsby, Ph.D

Synthesis of [2,3-b]Selenophene Pyrrole
Daniel Gilani
Faculty Advisor: Duane Hatch, Ph. D.

Jacob Curry
Faculty Advisor: Duane Hatch, Ph.D.

“Effects of Probiotic Fermentation on Antioxidant Activity in Blueberries”
Adam James
Faculty Advisor: Kimberlee Daus, Ph. D

Environmental Science

“Biodiversity of macroinvertebrates in a first order spring-fed stream on the Belle Forest Cave property, Bellevue TN”
Walter Burn
Faculty Advisor: Darlene Panvini, Ph.D.

“Comparisons of water quality and macroinvertebrate diversity in Richland Creek (Nashville, TN) – an urban stream undergoing riparian restoration”
Alexandria Jeffers
Faculty Advisor: Darlene Panvini, Ph.D.

Neuroscience

“Technological Screen Exposure’s Effect on Danio rerio’s Development”
Samantha Gould
Faculty Advisor: Lori McGrew, Ph.D.

“The subcellular localization of the apoptosis signaling kinases Ask1 and Ask3 influence signalosome formation and composition in response to cellular stress”
Kathryn Hook
Faculty Advisor: Lori McGrew, Ph.D.

“Circadian Rhythm Dependence of Habituation in C. Elegans”
Chase Mackey
Faculty Advisor: Nick Ragsdale, Ph.D.

“The Effect of Caffeine Concentration and Time of Exposure on C. elegans Locomotion towards an Attractant”
Julisa Nunez
Faculty Advisor: Robert Grammer, Ph.D.

“Potential Protective Effects of Nicotine in C. elegans Treated with 6-OHDA”
Miranda West
Faculty Advisor: Nick Ragsdale, Ph.D.

Biology

“Utilization of alpha-lipoic acid as an antioxidant in the presence of 6-OHDA”
Danielle Aument
Faculty Advisor: Nick Ragsdale, Ph.D.
"Chemotaxis Assay of Caenorhabditis elegans to Bacillus thuringiensis strain 4A4 in Vegetative and Sporulated Growth Stages"
Angel Brothers
Faculty Advisor: Robert Grammer, Ph.D.

“The Effects of Stress Due to Increased Immune Response on Working Memory in Danio rerio”
Lindsey Cheek
Faculty Advisor: Lori McGrew, Ph.D.

“p53 Mediated Regulation of CCNH in Response to Paclitaxel-Induced Mitotic Stress”
Taeler Dahm and Morgan Turner
Faculty Advisor: Chris Barton, Ph.D.

“The Effects of Glucose, Saccharine, Aspartame, and Sucralose on Longevity in Caenorhabditis elegans”
Emily Deas
Faculty Advisor: Dr. Grammer, Ph.D.

“The effects of statin drugs on memory in Danio rerio”
Lindsey Dennis
Faculty Advisor: Lori McGrew, Ph.D.

“Caenorhabditis elegans response to hyperglycemic and hypoxic conditions post infection with Staphylococcus aureus.”
Bryan Eoff
Faculty Advisor: Nick Ragsdale, Ph.D.

“Do Tricyclic Antidepressants Affect Working Memory in Danio rerio?”
Araceli Garland
Faculty Advisor: Lori McGrew, Ph.D.

“Implications of Parkinson's Disease in Nematodes Treated with the Insecticide Permethrin.”
Dora Geving
Faculty Advisor: Nick Ragsdale, Ph.D.

“Caenorhabditis elegans and their Habitats”
Jemeilise Guzman
Faculty Advisor: Robert Grammer, Ph.D.

“The relationship between exotic earthworms, exotic plants, and soil and leaf litter invertebrate abundance and diversity”
Sara Haney
Faculty Advisor: Darlene Panvini, Ph.D.

“Abundance of earthworms relative to leaf litter mass and exotic plant coverage”
Laura Horton
Faculty Advisor: Darlene Panvini, Ph.D.

“The Effect of Antioxidants on Working Memory in Danio rerio”
Donald Hoyle
Faculty Advisor: Lori McGrew, Ph.D.

“Effect of p53 Status on S100A13 Expression in Response to Oxidative Stress”
Jeff King
Faculty Advisor: Chris Barton, Ph.D.

“Role of Fatty Acid Metabolism and the Development of Parkinson's Disease.”
Zara Latif
Faculty Advisor: Nick Ragsdale, Ph.D.

“Differences in leaf pack decomposition rate between invasive exotic and native species in a temperate deciduous forest”
Lindsay Millward
Faculty Advisor: Darlene Panvini, Ph.D.

“Investigation of the Regulation of CST6 by p53 During Cellular Stress”
Jasmin Mohn and Robin Weyman
Faculty Advisor: Chris Barton, Ph.D.

“The Effect on ATP levels of Caenorhabditis elegans from a Staphylococcus aureus Infection.”
Parin B. Patel
Faculty Advisor: Nick Ragsdale, Ph.D.

“Biomass and diversity of earthworms is affected by presence of exotic shrubs”
Ayda Porkar-Rezaieh
Faculty Advisor: Darlene Panvini, Ph.D.

“Transcriptional Regulation of RGS2 by p53 in Colorectal Cancer Cells”
Vian Pulous
Faculty Advisor: Chris Barton, Ph.D.
“The Effects of Increasing Dosages of α-Lipoic Acid on the Chemotaxis Index of Caenorhabditis elegans at Adulthood”
Ambrose Rice
Faculty Advisor: Robert Grammer, Ph.D.

“The Effects of Bupropion on the Working Memory of Anxious Danio rerio”
Tessa Shupe
Faculty Advisor: Lori McGrew, Ph.D.

“Transcription Factor p53 and its Regulation of Pro-Apoptotic Gene BNIP3L During Heat Shock”
Eeleayah Singh Tanwar
Faculty Advisor: Chris Barton, Ph.D.

“Decomposition of Acer saccharum and Lonicera maackii leaf litter in a first order stream”
Katlin Stodard
Faculty Advisor: Darlene Panvini, Ph.D.

“The Effectiveness and Precision of Capillary Assays for Caenorhabditis elegans”
Alyssa Tidwell
Faculty Advisor: Robert Grammer, Ph.D.

“Appetite-Stimulating Effects of Herbal Root, Gentiana lutea, on Caenorhabditis elegans”
Sarah Trippett
Faculty Advisor: Robert Grammer, Ph.D.

Determining C. elegans Chemotaxis to Cervical Cancer to Expand On the Nematode Scent Detection Test – A Cancer Screening System
Parker Tumlin
Faculty Advisor: Robert Grammer, Ph.D.

“The addictive effects of nicotine on Caenorhabditis elegans”
Jud Wisdom
Faculty Advisor: Robert Grammer, Ph.D.

“Effects of Triclosan Exposure on Embryonic Development, Sensory Functioning, and Working Memory in Zebrafish”
Melissa Wolf
Faculty Advisor: Lori McGrew, Ph.D.

Honors- Psychology

The Effect of Primers on Types of Semantic Satiation
Devon Corcoran, Saniha Lakhani, Morgan McAuley, Riley Wymer
Faculty Advisor: Lonnie Yandell, Ph.D.

Effects of Arousing Stimuli on Change Blindness
Ciara Hauber, Lindsey Knapp, Reed Priest, and Caroline Snellman
Faculty Advisor: Lonnie Yandell, Ph.D.

The Effect of Adding a Congruent Auditory Stimulus to the Standard McGurk
Charlotte Payne, Sarah Maxwell, Dean Adams
Faculty Advisor: Lonnie Yandell, Ph.D.

Creativity and its Effect on Ambiguous Figure Detection
Sean Rossettie, Jacqueline Skokna, Lauren Weber
Faculty Advisor: Lonnie Yandell, Ph.D.

Physics

“Fabrication Protocol of Silver Ion Exchange Glasses”
Rachel N. Evans*, Sarah A. Cannavino, Christy A. King, Joe LaMartina, Robert H. Magruder, Davon W. Ferrara (*Indicates presenter)
Faculty Advisor: Davon W. Ferrara, Ph.D.

“Fabrication Techniques for Gold Nanoparticles in Solution”
Sarah A. Cannavino*, Christy A. King, Davon W. Ferrara (*Indicates presenter)
Faculty Advisor: Davon W. Ferrara, Ph.D.
Chemistry

“Sarcinaxanthin’s Effects in Sunscreen”
Kris Howard
Faculty Advisor: Rachel Rigsby, Ph.D.

“A Kinetic Study of the Dependence of Ascorbic Acid Concentration on Temperature and Time”
Ilyana Ilieva
Faculty Advisor: Danielle Garrett, Ph.D.

“Towards the Concise Synthesis of a Tellurium-Containing Tryptophan Analog for the Elucidation of Protein Structure and Function”
Ryan Agh
Faculty Advisor: Duane Hatch, Ph.D.

“Synthesis, Characterization and Reactivity of a Copper(II) Imine Complex with Biomimic Properties”
Caroline Williams, Michelle Leatherwood, Justin Stace
Faculty Advisor: Justin Stace, Ph.D.

“Characterization of Imine Nickel(II) Complexes and Their Reactivity with Various Solvents”
Daniel Beagan, Michelle Leatherwood, Jeanette Krause, (b) Tasneem Siddiquee, (c) Justin Stace (b: University of Cincinnati, c: Tennessee State University)
Faculty Advisor: Justin Stace, Ph.D.

“Antioxidant Activity in Matcha and Leaf-Brewed Green Teas”
Shekinah Baum
Faculty Advisor: Kimberlee Daus, Ph.D.

“Quantification of Polyphenols and Assessment of Antioxidant Activity of Polyphenols Present in Organic and Non-Organic Raspberries from Different Sources”
Sofia Elmaliki
Faculty Advisor: Kimberlee Daus, Ph.D.

“Surface-Active Properties of Bis-Quaternary Ammonium Cationic Gemini Surfactant Mixed with Conventional Ionic and Nonionic Surfactants”
Sarah Heacock
Faculty Advisor: Kimberlee Daus, Ph.D.

“Cationic Gemini Surfactants for Enhanced Oil Recovery”
Adam Woods, Morgan McCauley
Faculty Advisor: Kimberlee Daus, Ph.D.

Psychology Oral Presentations

Attention Modifies Emotional Response: A Study on the Effects of Shifting Attention
Chase Mackey, Ragan Clark, Shelby Willard, Carson Ward, and Matthew Williams
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

The Effects of Food Preferences on Learning Performance in Rats
Austin Arnold, Courtney Canady, Hunter Foltz, Sydney Omweg, and Matthew Williams
Faculty Advisor: Dr. William Bailey, Ph.D.

Media Exposure and Religiosity
Sydne Richardson, Madi Lausten, Ashton Judy, and Bayli Alexander
Faculty Advisor: Dr. Seraphine Shen-Miller, Ph.D.

Evaluating the Validity and Reliability of a New Scale for Uniqueness Seeking
Ashton Judy, Hunter Foltz, Margaret Rittler, Bethany Strother, and Lauren Weaver
Faculty Advisor: Dr. Pete Giordano, Ph.D.

The Effects of Emotion and Color on Sensitivity to Impurity
Kyle Mclean, Brittany McGavic, Scarlet Sanders, and Mary Elizabeth Sorci
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

The Relationship Between Personality Types and an Athlete’s Satisfaction with their Sport
Sydney Omweg
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

Does the Attitude of Facebook Profiles Change Self-Perception?
Courtney Canady
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

Political Ideology and Interpersonal Attraction
Bianca Flury
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.
A Validation Study of the Belmont University Measure of Adaptive and Maladaptive Absorption
Madlin Lausten, Katy Coffer, Scarlet Sanders, and Brittany Yaeger
Faculty Advisor: Dr. Pete Giordano, Ph.D.

Perception of Intelligence Depends on Voice Intonation
Katy Coffer, Blair Ferguson, Kathryn Graeff, and Kathryn Hook
Faculty Advisor: Dr. Lonnie Yandell

Does Belief in a Just World and In-Group/Out-Group Membership Affect Perceptions of Suffering
Mikayla O'Malley, Blair Ferguson, Jacob Huffman, Megan Kibby, Justin Lang, and Mallory McDonald
Faculty Advisor: Dr. Seraphine Shen-Miller, Ph.D.

Under Pressure: The Effects of Emotion and Anxiety on the Phonological Loop
Jacob Huffman
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

The Effect of Mood Priming and Extroversion on the Perceived Pain of Spending Money
Carmen Davisson, Lauren Fox, Emy Gildea, Amber Lowe, Diana Neculcea, and Bri Widmer
Faculty Advisor: Dr. Seraphine Shen-Miller, Ph.D.

The Differential Effects of Artificial Sweetener and Natural Sugar on Memory in Rats
Morgan Turner, Lauren Weaver, Lindsey Dennis, Ali Miller, and Stephane Morin
Faculty Advisor: Dr. William Bailey, Ph.D.

The Role of Mind Wandering in Incubation: The Effects of Incubation on Problem-Solving
Stephane Morin, Bethany Strother, Miranda West, and Brianna Widmer
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

Schadenfreude: Developing and Validating an Effective Measure
Alexandria Gumucio, Emily Fernandez, Faith Pollard, Christina Sorentino, and Miranda West
Faculty Advisor: Dr. Pete Giordano, Ph.D.

Validation of the Jealousy in Generalized Terms Scale
Kayla Evans, Haley Foutch, Marlee Graham, Heather Jelonek, and Brittany Lebhar
Faculty Advisor: Dr. Pete Giordano, Ph.D.

Gaze and Fixation Time on People with a Handicap
Heather Jelonek
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

The Relationship Between Racial Bias and Memory of Medical Information
Courtney Bright
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

Voice Pitch Effects on Auditory Working Memory
Nicole Canes, Kayla Evans, Samantha Gould, and Courtney Bright
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

The Effects of Continuous vs. Intermittent Reinforcement on Learning and Retention in Rats
Allison Ramsey, Haley Foutch, Lyn Deters, Iris Chiang, and Briana Anderson
Faculty Advisor: Dr. William Bailey, Ph.D.

Attitude and Religiousness Towards Homosexuality
Noelle Browne
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

The Relationship Between Parenting Styles and College Students' Alcohol Abuse
Robert Bond
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.

Young Adults and the Comorbidity Between Social Anxiety Disorder and Cannabis Use Disorder
Caroline Moore
Faculty Advisor: Dr. Lonnie Yandell, Ph.D.