Cell and Molecular Biology

“The Effects of Nicotine on *Caenorhabditis elegans* Chemotaxis to e. coli”
Khang Tran
Faculty Advisor: Robert Grammer Ph.D.

“Determining the Effect of Invasive Plant Species on Soil Environments with *C. elegans* Chemotaxis”
John Anthony Holt Jr.
Faculty Advisor: Dr. Robert Grammer, Ph.D.

“Blocking of thermotaxis and chemotaxis in *Caenorhabditis elegans*”
Lauryn Bouldin
Faculty advisor: Robert Grammer, Ph.D.

“Carbohydrate Effect Survivability to *Staphylococcus aureus*.”
Christopher Bowen
Faculty Advisor: Nick Ragsdale

“Role of HIF-1 in *Caenorhabditis elegans* Infected with *Salmonella enterica*”
Jacob Dahm
Faculty Advisor: Nick Ragsdale

“The Effect of SKN-1 on 6-OHDA Treated *Caenorhabditis elegans*”
Rezzan Hekmat
Faculty Advisor: Nick Ragsdale

“Adenosine Metabolite Production in *Caenorhabditis elegans* Infected with *Staphylococcus aureus* versus *Pseudomonas aeruginosa*”
Stephanie Ray
Faculty Advisor: Nick Ragsdale

“Differences in DNA exchange upon mutation of the bacterium *Acinetobacter baumannii*”
Justin R. Smith
Faculty Advisor: Jennifer T. Thomas, Ph.D.; Eric P. Skaar (Vanderbilt University)

“The Evaluation of Interferon-Beta Levels in HPV-Positive Cervical Cancer Cell Lines”
Olivia M. Ford
Faculty Advisor: Jennifer T. Thomas, Ph.D.

“The effects of different dosages of α-lipoic acid on the chemotaxis of *Caenorhabditis elegans* at various stages of adulthood”
Alicia Hsu
Faculty Advisor: Robert Grammer, Ph.D.

“Chemotaxis response in *Caenorhabditis elegans* to an olfactory repellent paired with nicotine”
Amanda Bigness
Faculty Advisor: Dr. Robert Grammer

Microbiology

“PVL as an Indicator of the Prevalence of USA300 CA-MRSA on Belmont University's Campus”
Jordan D. Helms
Faculty Advisor: Jennifer T. Thomas, Ph.D.
“Bacterial Fight Club: Do QseBC-PmrAB-T6SS Cross-Interactions Benefit Bacterial Fitness?”
Himesh Zaver
Faculty Advisor: Jennifer T. Thomas Ph.D.; Maria Hadjifrangiskou Ph.D. (Vanderbilt University)

Health and Medical Science

“Analysis of Interferon-alpha Levels in Cervical Cancer Cell Lines Infected with Microbes”
Sarah C. Bonaparte
Faculty Advisor: Jennifer T. Thomas, Ph.D.

“Prevalence of PBP2a in Community-Associated Methicillin-Resistant Staphylococcus aureus Isolates on Belmont University’s Campus”
Rebekah Shepherd
Faculty Advisor: Jennifer T. Thomas, Ph.D.

Zoology

“Investigation of algae-inhabiting Invertebrates as indicators of water quality”
Katelyn B. Keast
Faculty Advisor: C. Steven Murphree, Ph.D.

“A comparison of two pitfall trap designs to determine arthropod abundance and diversity in a deciduous old-growth forest in Davidson County, Tennessee”
Jackson R. Smith
Faculty Advisor: C. Steven Murphree, Ph.D.

“Phenotypic variation, movement and abundance of Vaejovis carolinianus in a middle Tennessee cedar glade”
C. Dillon Oman and Chelsea J. Lee
Faculty Advisor: C. Steven Murphree, Ph.D.

“Preferred microhabitat conditions of Vaejovis carolinianus in a middle Tennessee cedar glade”
Chelsea J. Lee and C. Dillon Oman
Faculty Advisor: C. Steven Murphree, Ph.D.

“The effect of FMRFamide on the contraction rates of the antennal accessory pulsatile organs and the dorsal vessel of Anopheles gambiae”
Talitha H. Jones and Julian F. Hillyer, Ph.D., Vanderbilt University
Faculty Advisor: C. Steven Murphree, Ph.D.

“State dependent anti-predator behavior in Elimia snails”
Raina Burley
Faculty Advisor: John Niedzwiecki, Ph.D.

“Predator-induced behavior in snails by native and a novel crayfish”
Taylor Mills
Faculty Advisor: John Niedzwiecki, Ph.D.

“Predator-induced behavior in snails by native and a novel crayfish”
Sonia Kadakia
Faculty Advisor: John Niedzwiecki, Ph.D.

“Investigating chemical detection of fish predators in heptagenid Mayflies”
Nicole Knowles
Faculty Advisor: John Niedzwiecki, Ph.D.

Botany

“Food quality of and preference for native and exotic plant leaves by the terrestrial isopod, Armadillidium vulgare”
John Gossen
Faculty Advisor: John Niedzwiecki, Ph.D. and Darlene Panvini, Ph.D.