

Kaylie Chrismon

Elon College Fellow

Major: Exercise Science, BS

Minors: Spanish

Research Mentor: Paul Miller, *Exercise Science*

The Effectiveness of Chocolate Soymilk on Muscle Recovery

Chocolate soymilk was compared to chocolate milk in muscle recovery following high intensity endurance exercise. Twenty participants completed two bouts of cycling, separated by two hours and the consumption of a recovery beverage. It was determined that chocolate soymilk is comparable to chocolate milk on muscle recovery.

‡ Presented SEACSM

Tara Corbett

Major: Psychology, BS

Minors: Spanish

Research Mentor: Kimberly Epting, *Psychology*

Linguistic Relativity

We had bilingual participants complete two essays, one in Spanish and one in English. Using a tracking program, we measured everything from the vocabulary they used to the pauses between keystrokes. We were interested to see if participants "thought" differently while writing in different languages, an idea that would support the language relativity hypothesis: language influences thought.

Devon Clark

Major: Human Service Studies, Public Health Studies, BA

Research Mentor: Cynthia Fair, *Public Health Studies*

Perspectives of Parents/Guardians on the future aspirations of their adolescents/young adult Children living with PHIV

Many children with perinatally acquired HIV are living a lot longer than originally expected. My research looks to better understand the perspectives of their guardians with regard to their children's future aspirations, specifically their engagement in romantic relationships and childbearing.

Jordan Cottle

Major: Exercise Science, BS

Minors: Neuroscience

Research Mentor: Eric Hall, *Exercise Science*

Elon Brain Care

Through our research, we want to learn more about concussions, specifically the effect they have on college and high school athletes. We also try to provide support to people who are concussed and help them with their return-to-play protocol.

James Carter

Elon College Fellow

Major: Public Administration, Political Science, BA

Minors: Business Administration

Research Mentor: Sharon Spray, *Political Science*

An Evaluation of the State of the State Speeches of Southern Governors'

My research will analyze the rhetoric of Southern governors' State of the State speeches in hopes of finding connections between different variables such as party, election, etc.

Hayley D'Antuono

Major: Psychology, BA

Research Mentor: Kimberly Epting, *Psychology*

Linguistic Relativity: Writing and Editing of Bilingual Students

Linguistic relativity suggests that the language we speak influences the way we think. This study evaluated linguistic relativity in terms of writing and self-editing processes in students that were bilingual in English and Spanish. We predicted that writing and self-editing processes would differ between participants language, providing evidence for a form of linguistic relativity.

Cristina DiCostanzo

Major: Exercise Science, BS

Minors: Spanish, Public Health Studies

Research Mentor: Dr. Svetlana Nepocatych, *Exercise Science*

Dietary Intake, Body Composition and Fitness Among College Female Athletes During In-and-Off Season

We examined dietary intake through food logs, body composition from DEXA scans, and fitness from VO2 MAX tests among division I female athletes that play either soccer, softball, tennis, or basketball during in-and-off season.

‡ Presented at ACSM Southern Conference

Shannon Diehl

SURE

Major: Exercise Science, BS

Minors: Biology, Public Health Studies

Research Mentor: Dr. Caroline Ketcham and Dr. Diane Duffy, *Exercise Science*

Physical Activity, Nutrition, And Self-concept Intervention at a Week-long Girl Scout Camp

This study examined aspects physical activity, nutrition, and self-concept to develop a healthy lifestyle intervention in adolescent girls. Curriculum surrounding these aspects was implemented at a week-long Girl Scout Camp.

‡ Presented at SEACSM

Kelsey Evans

Glen Raven Scholar

Major: Exercise Science, BS

Minors: Biology

Research Mentor: Dr. Caroline Ketcham, *Exercise Science*

Relationship Between Information Processing and Postural Stability in Collegiate and High School Athletes

The purpose of this research is to observe the effects of concussions on collegiate and high school athletes, specifically looking at balance and reaction time. I will observe how balance and reaction time are affected but also examine the relationship between these variables in concussed and non concussed athletes.

‡ Presented at Concussion in Athletes: From Brain to Behavior

Andrew Fischer

Elon College Fellow

Major: Biochemistry, Applied Math, BS

Minors: Neuroscience

Research Mentor: Karen Yokley, *Mathematics*

Optimization of a mathematical model of action potential propagation

We are currently investigating an ordinary differential equation model describing the rate of change of membrane potential in groups of cells in the hippocampal portion of the temporal lobe of the brain. Using the computational software Mathematica the sensitivity of the model parameters are being investigated and refined. The goal of the project is to optimize the model to mimic the behavior of neuronal networks seen in biological literature.

Research Mentor: Dr. Kathryn Matera, *Chemistry*

Investigation into the mechanism of alpha synuclein disaggregation by dopamine derivatives

Many forms of neurodegenerative diseases such as Alzheimer's, Parkinson's, and Huntington's disease are characterized by the aggregation of misfolded protein. I am currently looking into the mechanism of how alpha synuclein, the protein specific to Parkinson's disease, is disaggregated and the consequences of the resulting species. As a fundamental piece of the disease pathology, identification of this mechanism could provide a future therapeutic target for those with dementia.

‡ Presented at SURE, ACS Regional Conference (SERMACS) in Ralleigh, NC, and SOURCE at Elon University

Grant Fisher

Major: Public Health Studies, BA

Research Mentor: Amanda Tapler, *Health and Human Performance*

Healthy Mouths Promote Healthy Bodies

Through the Bruns Scholarship, I had the opportunity to participate in service and research in a disadvantaged population in the underdeveloped region of Burundi, Africa. The research entailed an investigation of 2nd graders (n=30), evaluating the students' understanding of dental health and willingness to comply with a simple hygiene protocol.