Elizabeth Sanchez Nelsen

esanchezbaut@usf.edu
Graduate Research Assistant at The Byrd Alzheimer's Insitute at University of South Florida
PhD Candidate, Department of Molecular Medicine

EDUCATION

Associates of Arts **2019**
Polk State College, Lakeland, Florida
Cumulative GPA = 4.0
Graduated with Honors

Semester Abroad **2022**
Wycliffe Hall, University of Oxford, Oxford, England
Hilary Term

Bachelors of Science in Biology with a Concentration in Medical Sciences **2023**
Southeastern University, Lakeland, Florida
Cumulative GPA = 3.9
Minor in Chemistry
School of Honors
Thesis Advisors: *Ralph N. Salvatore, Ph. D., Todd Schraw, Ph. D.*
Honors Thesis Title: *Various Synthetic Pathways Towards Efavirenz and Its Analogs; The Replacement of the Side Chain*

PhD in Medical Sciences with a Concentration in Neuroscience **2023 - Current**
University of South Florida, Tampa, Florida
McKnight Doctoral Fellowship
Principal Investigator: *Danielle Gulick, Ph. D.*

RESEARCH EXPERIENCES

Southeastern University, Department of Natural Health and Sciences, Lakeland, FL
Project: "*Various Synthetic Pathways Towards Efavirenz and Its Analogs; The Replacement of the Side Chain*
Research Faculty Advisor: Ralph N. Salvatore, Ph.D.
Years Completed: 2021-2023

Lakeland Regional Health, Lakeland, FL
Program: Clinical Research Residency
Clinical Research Coordinator: Kellcee Jacklin, M.S.
Year Completed: Summer 2022

Byrd Alzheimer's Institute, University of South Florida, Tampa, FL
Project: "*The Role of Adolescent Alcohol Exposure on Amyloid and Tau Phenotypes in Circadian Disrupted ALDH2*2 Mice*"
Department: Molecular Medicine
Principal Investigator: Danielle Gulick Ph.D.
Years Completed: 2023-Current

PRESENTATIONS

College of Natural Health & Sciences Fall Symposium (poster)
Southeastern University
“Efficient Synthesis of Cyclopropylacetylene, a Crucial Synthetic Intermediate for Efavirenz Using a Mild Chlorinating Reagent (Ph3PCl2)”
Dec. 2021, 2022,2023

Gamma Sigma Epsilon 49th Biennial Convention (poster)
Florida Gulf Coast University
“Synthesis of Various Structural Analogs of Efavirenz”
Nov. 2022

Inaugural Central Florida Research Symposium (poster)
Lakeland Regional Health
“Synthesis of Various Structural Analogs of Efavirenz.”
Jan. 2023

Florida Undergraduate Research Conference (poster)
St. Thomas University
“Synthesis of Various Structural Analogs of Efavirenz”
Feb. 2023

USF Health Research Day (poster)
University of South Florida
”Various Synthetic Pathways of Efavirenz and Its Analogs; The Replacement of the Side Chain”
March 2023

CASTLE Conference (poster)
University of South Florida
”Various Synthetic Pathways of Efavirenz and Its Analogs; The Replacement of the Side Chain”
March 2023

Florida Academy of Sciences (poster)
Florida Polytechnic University
“Various Synthetic Pathways of Efavirenz and Its Analogs; The Replacement of the Side Chain”
March 2023

American Chemical Society Spring Conference (poster)
Virtual
”Various Synthetic Pathways of Efavirenz and Its Analogs; The Replacement of the Side Chain”
March 2023

New England Science Symposium (poster)
Harvard Medical School
“Various Synthetic Pathways of Efavirenz and Its Analogs; The Replacement of the Side Chain”
April 2023

The Interchange (oral)
Southeastern University
”Various Synthetic Pathways of Efavirenz and Its Analogs; The Replacement of the Side Chain”
April 2023

USF Health Research Day (poster)
University of South Florida
”The Role of Adolescent Alcohol Exposure on Amyloid and Tau Phenotypes in Circadian Disrupted ALDH2*2 Mice”
March 2025 and 2026

NSI Seminar (oral)
Byrd Alzheimer’s Institute at USF
”The Role of Adolescent Alcohol Exposure on Amyloid and Tau Phenotypes in Circadian Disrupted ALDH2*2 Mice”
March 2025, April 2026

UF Center for Addiction Research & Education Symposium (poster)
University of Florida
”The Role of Adolescent Alcohol Exposure on Amyloid and Tau Phenotypes in Circadian Disrupted ALDH2*2 Mice”
April 2026

Society for Research on Biological Rhythms (poster)
Omni Resort Amelia Island
”The Role of Adolescent Alcohol Exposure on Amyloid and Tau Phenotypes in Circadian Disrupted ALDH2*2 Mice”
May 2026

TEACHING EXPERIENCES

Biology I Lab TA, Southeastern University (Fall 2021)
Duties: Explain experiment, assist students, and grade assignments

Academic Center of Enrichment Tutor, Southeastern University (2020-2023)
Level 3 College Reading & Learning Association (CRLA)
Duties: 1 to 1 tutoring, group tutoring, and workshops for Organic Chemistry, Cellular and Molecular Biology, Anatomy and Physiology, Biology, and Genetics

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VOLUNTEER

Lakeland Volunteers in Medicine (2019-2020)
Medical Assistant
Clinical Coordinator: Sandy Puretz, RN

Pre-Health Service Organization/PHSO (2020-2023)
Secretary, Vice President, President
Volunteer projects at Parker Street Ministries, Lakeland Dream Center, and One More Child
Supervisor: Brittany McConchie, Ph. D.

Florida Organic Chemistry Conference (2022)
Volunteer and Tour guide

One More Child Medical Missions Trip (2023)
Dominican Republic

USF Neuroscience Presentation (2024-current)
Judged Medical Students Group Project on Microsoft Teams

HONORS, AWARDS, & FELLOWS

Polk State College:

- Honor's Graduate
- Summa Cum Laude
- President's List

Southeastern University:

- Honor's Student
- Summa Cum Laude
- Dean's List
- Florida Medallion Scholarship
- Honors Program Scholarship
- Chancellors Scholarship
- National Hispanic Scholarship
- W.S. Badcock Academic Scholarship
- Watson Family Scholarship

University of South Florida:

- Mcknight Doctoral Fellowship
- BSCP Education Relief Laptop Fund
- Edith Wright Hartley Scholarship
- UF CARE Travel Award

MENTORSHIPS

University of South Florida:

- Gabrielle Dotti = Undergraduate Volunteer to Lab Technician (2024-current)
- Anvitha Makkena = Undergraduate Honors Volunteer (2024-2025)
- Taylor Thomson = Lab Technician (2024-2025)
- Elizabeth Boss = Undergraduate Volunteer (2025)
- Md Iftekhar Islam = Biomedical Engineer PhD Student (2025)
- Saptashwa Banerjee = High School Virtual Volunteer (Summer 2025)
- Tala Haddad = Biomedical Engineer Intern (Summer 2025)
- Jamara Chery = Biomedical Engineer Intern (Summer 2025)
- Sudeep Mondal = Biomedical Engineer PhD Student (2025-current)
- Ananya Prakhya = Undergraduate Honors Volunteer (2025-current)
- Jordan Hamburg = Undergraduate Volunteer (2025-2026)
- Stanley Huang = Honors Undergraduate Volunteer (2025-2026)
- Trever Brown = Lab Technician (2025-current)
- Youssef Azer = Virtual Undergraduate Volunteer (2026)
- Sarisha Arun = Undergraduate Volunteer (2026-current)
- Victoria Locklin = Masters Volunteer to Remote Volunteer(2026-current)
- Marina Lira = Virtual International Medical Student Volunteer (Summer 2026)
- Debra Ross = Biomedical Engineer Intern (Summer 2026)
- Henry Word = Undergraduate Remote Volunteer (2026)
- Neha Vachaparambil = Remote Undergraduate Volunteer (2026-current)
- Grisha Yelisetty = Remote Undergraduate Volunteer (2026-current)