
BIOGRAPHICAL SKETCH

DO NOT EXCEED FIVE PAGES.

NAME: Simmons-Gonzales, Leilani

POSITION TITLE: Medical Student, Graduate Student Research Assistant

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postbaccalaureate training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
Purdue University	BA	08/2017	05/2021	Biological Chemistry
University of Maryland	MD	08/2023	05/2027 (Expected)	Medicine

A. Personal Statement

Briefly describe why your experience and qualifications make you particularly well-suited for your role as a student and as a researcher. What health issues are you interested in researching and why?

I first became interested in human health and disease in high school when I was awarded an NIH Diversity Supplement to work as a research technician for two summers in Dr. Indira Creative's lab at the University of Hawaii. I continued to pursue this interest as an undergraduate at Purdue University, where I conducted research with Dr. Daniel Richardson on the mechanisms of action of a new class of small molecules for cancer treatment. This resulted in a co-authorship publication, as well as an invitation to present a poster at the annual Oncological meeting in Denver, Colorado. I learned many molecular techniques and helped with studies involving mouse models. I have some basic understanding of statistics and used SPSS in some of my classes at Purdue.

For my medical student research project, I am interested in learning more about infectious diseases and public health. I plan to spend the summer doing research and would like to be able to continue my work while I am back at school to get the most out of my research experience. I would be interested in combining laboratory and clinical research.

B. Positions, Scientific Appointments, and Honors

List in chronological order previous positions and honors or special recognition.

Positions and Scientific Appointments

2023 – 2024 Robertson Fellowship for Outstanding Medical Students, University of Maryland
2023 – Present Graduate Research Assistant, University of Maryland
2019 – 2021 Lab Technician, University of Hawaii
2018 – 2019 President of Undergraduate Honor Society, Purdue University
2017 – Present Member, Association for Women in Science
2017 – Present Member, Sigma Xi
2017 – 2019 Diversity Supplement, National Institutes of Health

Honors

2021 Paula F. Laufenberg award for best senior project in the Biology Department, Purdue University
2017 – 2021 Scholarship, National Merit Scholarship Program
2017 Scholarship, Daughters of Hawaii Society

C. Contributions to Science & Research Experience

List all projects you've been involved in, the broad objectives, major findings, and any presentations or publications that resulted from that research.

1. **Project Title:** *Testing for Toxicity of Antifungal Drugs*

Start/End Dates: 2019-2021

Principal Investigator: Dr. Indira Creative

Major Goals: Conducting a wide range of toxicity assays on in vitro cultures of skin cell lines.

Major Findings: We were excited to find that one of the new agents showed almost no toxicity, even at fairly high doses. Dr. Creative is now testing the drug in animals exposed to different types of fungal infections, including *Candida albicans*. See presentation #1.

Publications & Presentations:

- a. Footman B, Eisser JK, **Simmons-Gonzales, L**, Creative IM. Testing XXH for toxicity in vitro. Accepted for poster presentation at: University of Hawaii Research Symposium; May 2020; Manoa, HI.

2. **Project Title:** *Mechanisms of Action of Small Molecules for Cancer Treatment*

Start/End Dates: 2023-

Principal Investigator: Dr. Daniel Richardson

Major Goals: To study the mechanisms of action of a new small molecule, Gen Y, to target cancerous cells.

Major Findings: It looks like the mechanism of action of Gen Y might be completely novel, making it a potential candidate for treating patients afflicted with colon cancer. Dr. Richardson was recently awarded a patent for this new drug. See publication # 1 and presentation #2.

Publications & Presentations:

- a. Nieman PY, **Simmons-Gonzales L**, Richardson, D. Gen Y: a novel small molecule with cytotoxic abilities targeting colon cancer cells. *Cellular and Molecular Biology*. 2022 June. 7(20):13672-78.
- b. **Simmons-Gonzales, L**, Richardson, D. Testing the ability of a small molecule, Gen Y, to target colon cancer cells. Accepted for poster presentation at: Advances in Cancer Research and Therapy; September 2022; Denver, CO.

D. Skills

List your specific laboratory and analysis skills (if applicable) and other skills.

Laboratory Skills

- Cell culture
- Flow cytometry
- Protein chemistry
- HPLC

Analysis Skills

- SPSS

Other Skills

- Technical Writing
- Grant writing and review
- Teaching at graduate and professional levels
- Mentoring students from middle-school through undergraduate levels
- Leadership

E. Other Activities

List your current/previous jobs, work experience, leadership, outreach, volunteer, etc. (if not already listed in Section B). Give dates (month and year) for specific activities.

Work Experience

- 2017 – 2023 Metro Family Physicians
Receptionist/Office Assistant
- Filed medical charts
 - Scheduled physician appointments
 - Registered patients
 - Verified insurance eligibility
 - Completed medical record transfer

Volunteer Experience

- 2023 SNMA Student Day, University of Maryland
- Organized annual event where local elementary, high school, and college students interested in the sciences were invited to UC San Diego, SOM for an afternoon of activities.
 - Led a session on the basics of radiology interpretation.
- 2023 Dinner Service, St. Vincent de Paul Village; San Diego, CA
- The shelter provides safety, food, clothing, hygiene products and educational programs for women.
 - Assisted with the soup kitchen at the homeless shelter for women.
- 2021-2023 Prison to College Pipeline, Western Region Detention Facility; San Diego, CA
- Mentored incarcerated youth on setting goals, post-secondary education planning, as well as enhancing social and cultural awareness.
 - Assisted with various workshops including poetry and résumé writing