

Meghan Sleeper

Graduate student and aspiring bioinformatic scientist

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PROFILE

I am a self motivated, detail oriented grad student researching DNA methylation patterns associated with colorectal cancer. I have experience with a wide variety of wet lab methodologies and data analysis techniques. I approach every project I work on with a sense of curiosity and strive to provide thoughtful analyses. I am a team player and derive pleasure from collaborative growth.

PROJECTS

[Msleeper1/dmr workflow](#) — *DNA methylation analysis*

A workflow for identifying differential methylation between sample groups using next-generation sequencing data analysis. This pipeline utilizes workflow and resource management software to improve reproducibility and ease of large scale data analysis from start to finish.

Professional development mentor — *Python learning*

Mentor for a student project focussed on building a "choose your own adventure" game using Python.

EDUCATION

California State University Chico, Chico, CA

MS in Biology - Focus in Bioinformatic analysis

Researching differentially methylated regions (DMRs) associated with colorectal cancers through whole genome bisulfite sequencing data analysis. HPC cluster access provided by Titus Brown at UC Davis has made this project possible.

2022 - PRESENT

Butte College, Oroville, CA

Coursework in Biology and Chemistry

2021 Bruce McCulloch Memorial Academic Scholarship recipient.

2020 - 2021

California Polytechnic State University, San Luis Obispo

BS in Biology - Concentration in Marine Science and Fisheries

Senior project - Operation Wallacea, Hoga Island, Indonesia
Designed and implemented research investigating the relationship between coral coloration and photo physiological characteristics of associated *Symbiodinium sp.* Final results were presented to an academic audience and the final report was submitted to the Indonesian Institute of Sciences (LIPI report). Supervised high school students in collection of data through *Symbiodinium spp.* and Chlorophyll counts using a hemocytometer in a laboratory setting.

CLASS OF 2011

SKILLS

Next generation sequencing data analysis

Python & R

Shell/Bash scripting

Git/Github

Snakemake

High Performance Computing (HPC)

Micropipetting & Aseptic techniques

DNA isolation

PCR amplification & assembly

Gel electrophoresis

Nanopore spectrophotometry

RELEVANT COURSEWORK

Cellular and Molecular Biology

Bioinformatics

Genetics

Human Anatomy & Physiology

Chemistry

RESEARCH INTERESTS

Epigenomics

Bioinformatics

Human Pathology

SCHOLARSHIPS / GRANTS

O. and Libbie Stansbury Scholarship - 2023

Student Awards for Research and Creativity (SARC) - 2022

Bruce McCulloch Memorial Academic Scholarship - 2021

TEACHING EXPERIENCE

California State University Chico, Chico, CA *Teaching Associate*

SPRING 2023 - PRESENT

Teaching laboratory sections of biology courses including Human Anatomy and Human Physiology. Additional duties include preparation for labs,, maintaining a safe lab environment, leading student engagement with cadavers, and guiding students through experimental protocols and animal dissections.

California State University Chico, Chico, CA *Student Learning Center Tutor*

SUMMER 2022 - FALL 2022

Responsible for hosting Human Anatomy (BIOL 103) tutoring sessions at the SLC, remotely on Zoom, and in the Anatomy Lab (Holt Hall). Help students solidify understanding of laboratory and lecture material. Provide students with tips and tools to encourage growth as independent learners.

Butte College, Remote *Supplemental Instruction (SI) Leader*

AUGUST 2020 - JUNE 2021

Developed lessons and hosted Supplemental Instruction sessions for Human Anatomy students to form a better understanding of course material through integration of multiple learning styles.

MarineQuest UNCW, Wilmington, NC *Marine Science Instructor and Specialty Dive Instructor*

JANUARY 2015 - AUGUST 2019

Taught a variety of laboratory, field, classroom, and in-water lessons for marine science programs at University of North Carolina Wilmington

Catalina Island Marine Institute (CIMI) *Marine Science Instructor, Aquarist and Auspice Diver*

JANUARY 2012 - NOVEMBER 2014

Responsible for teaching students science in the laboratory and in the field. Performed scientific diving to collect specimens for use in educational aquariums.

SEASONAL TEACHING EXPERIENCE

Mammoth Mountain Ski School, Mammoth Lakes, CA *Level II Ski Instructor (Full Time Seasonal)*

NOVEMBER 2016 - APRIL 2020

Taught beginning to advanced-intermediate skiing to students of all ages in both private and group lessons. Responsible for assessing ski abilities of students and grouping students accordingly for group classes.

VOLUNTEER EXPERIENCE

Blue Oak Charter- *Mentor for student learning Python*

Make a Wish Foundation (San Diego, CA)
- *Volunteer wish granter, assisted in granting a wish for a bedroom makeover*

Kiwanis Club (San Diego, CA)- *Assists annually in food preparation for the Kiwanis pancake breakfast*

North Carolina Aquarium at Fort Fisher
- *Education, Diving and Aquaristing Volunteer*

Reef Check Foundation - *Civilian Scientific Diver*

Marine Mammal Rescue at Morro Bay, CA- *Marine Mammal Rescue Volunteer*

Charles Paddock Zoo - *Animal Husbandry and Education Intern*

Avila Beach Sea Life Center - *Education intern*

PROFESSIONAL TEACHING CERTIFICATIONS

PADI Divemaster since 2011
San Luis Obispo, CA

Emergency First Response Instructor since 2012 - *San Diego, CA*
Primary and Secondary Care, Care for children, and Automatic External Defibrillator (AED)

PADI Open Water Scuba Instructor since 2012 - *San Diego, CA*
#290948

PADI Master Scuba Diver Trainer since 2016 - *Wilmington, NC*
#290948

PADI Instructor Development Course Staff Instructor since 2017- *San Diego, CA*
#290948

PSIA Level I Ski Instructor since 2016 - *Mammoth Mountain, CA*

PSIA Level II Ski Instructor since 2018 - *Mammoth Mountain, CA*

Sail Caribbean Science Instructor, Tortola, BVI
Marine Biologist, Dive Instructor and First Mate (Full Time Seasonal)

JUNE 2013 – AUGUST 2013

Taught science, diving, and sailing lessons including hands-on in-water lessons in sea turtle tagging and REEF Fish count surveys.

ADDITIONAL WORK EXPERIENCE

En Route Winery, Sebastopol, CA
Harvest Intern (Full Time Seasonal)

AUGUST 2019 - NOVEMBER 2019

Responsible for receiving, processing, and maintaining grapes throughout the development of wine. Daily duties included lab analysis of fermenting wine samples with refractometer and pH meter. Duties also included sanitizing harvest equipment, as well as performing pump overs and punch downs.

Vibrant Horizons, Mammoth Lakes, CA
Web Developer

MARCH 2018 - MARCH 2019

I was a freelance web developer working with small businesses to develop their web presence. Worked with HTML and CSS.

SCUBA EMPLOYMENT

Aquatic Safaris Scuba Center

Wilmington, NC

Dive instructor and crew

Sail Caribbean Divers

Tortola, BVI

Dive Instructor and Crew

Marissa Dive Charters

San Diego, CA

Crew member

Sport Chalet

La Jolla, CA

Sales rep. and Divemaster

SLO Ocean Currents

San Luis Obispo, CA

Sales rep. and Divemaster

PADI INSTRUCTOR AWARDS

2018 Elite Instructor Award

150 Certifications

2017 Elite Instructor Award

100 Certifications

2016 Elite Instructor Award

200 Certifications

2015 Elite Instructor Award

150 Certifications