

Undergraduate field research: amphibians and microbes in the Sierra Nevada Mountains, CA.

OVERVIEW

An NSF Research Experience for Undergraduates (REU) fellowship is open for one student to participate in a project studying Sierra Nevada amphibians affected by a chytrid fungal pathogen, and the role of the skin microbiome in disease resistance. The aim of this research is to understand if symbiotic microbes on the skin of frogs explain why some frog populations are able to co-exist with the fungal pathogen, *Batrachochytrium dendrobatidis* (Bd), while other frog populations suffer catastrophic declines. The successful candidate will work closely with a senior researcher to conduct surveys of frog population persistence, pathogen infection status, and symbiotic microbes. This work entails strenuous long-distance hiking, back-packing, handling of sensitive amphibians, and collection of microbial skin swabs. The incumbent will receive experience and training in field ecology, disease ecology, and microbial ecology.

QUALIFICATIONS AND ELIGIBILITY

To be considered for this position, you must have have extensive backpacking experience, including backpacking at high elevations (>10,000 feet). Must be able to safely carry a heavy pack long distances over rugged terrain, be comfortable spending days to weeks in the backcountry, working in remote areas often in uncomfortable conditions (e.g., inclement weather, mosquitoes, no access to phone, internet, running water while in the backcountry) and be in excellent physical condition. You must have a strong work ethic and a passion for field research, as well as the sensitivity and attention to detail required for handling fragile amphibians. Must have own backpacking equipment, including broken-in boots, tent, and pack. The ideal candidate will have a passion for field research and a strong interest in microbial ecology or disease ecology.

You must be an undergraduate student (enrolled in a degree program in biology, ecology, or related field, part-time or full-time, leading to a baccalaureate or associate degree); students graduating in Spring 2017 generally are not eligible. Must be a U.S. citizen, U.S. national, or permanent resident. Students from underrepresented groups and institutions with limited research opportunities are especially encouraged to apply.

SUPPORT, DATES, LOCATION

This fellowship includes a stipend of \$500/week. Housing is provided at the Sierra Nevada Aquatic Research Lab (SNARL). Some funds to assist with travel to SNARL are available. Dates of the field work are approximately July 12 through August 30. Exact dates to be determined based on snow pack conditions and field site accessibility.

APPLICATIONS

Applications should include the following: current transcripts (unofficial OK), resume, 2-3 references (include reference's name, position, affiliation, and context from which he/she knows you), and a statement of interest specifically describing (1) why you are interested in the position, (2) your qualifications, including field research and experience backpacking at high elevations and in remote areas, and (3) your professional goals. Also specify your dates of availability.

Where to send applications:

Send all application materials, PREFERABLY AS A SINGLE PDF FILE, to Andrea Jani (jania-at-hawaii.edu). Subject line for all application emails should include "summer REU" and your name.

ALL APPLICATION MATERIALS MUST BE RECEIVED BY WEDNESDAY, APRIL 19.
Incomplete applications will not be considered.