

(ADVERTISEMENT)
Assistant Project Scientist
PD

INTRODUCTION:

The Lybrand Lab, through the Department of Land, Air and Water Resources at the University of California Davis, is searching for an Assistant Project Scientist to make significant and creative contributions to research in biogeochemistry, soil mineralogy, and pedology, using closed-loop and field-deployed weathering reactors, high resolution microscopy, biogeochemical technology, and mineralogical approaches. Responsibilities will include: i) designing and implementing research studies, by producing granular rock substrates, pre-characterizing rock materials, selecting sites, and deploying samples in the field; ii) developing bioreactors and controlled environmental systems to perform weathering experiments, and iii) writing original manuscripts. The Assistant Project Scientist, under the supervision of Principle Investigator, Dr. Rebecca Lybrand, and in collaboration with our research team, will engage in all aspects of study design and execution, including the design and development of experimental systems for use in laboratory and field environments; sample analysis; data acquisition; statistical analysis, interpretation of results; preparation of manuscripts, report, and proposal; and presentation of findings at conferences and outreach events. We aim to recruit an outstanding individual, with the appropriate background/experience and creative energy, to interact with project collaborators and work independently with minimal supervision.

Candidate should have a PhD Degree in Biological Sciences, Biogeochemistry, or related field. Experience in developing closed-loop experimental systems in the context of astrobiology or the geosciences is required. Candidate should have demonstrated experience with leading field campaigns in remote areas; performing plant root analyses, grinding and characterizing rock substrates, and strong analytical laboratory skills in microscopy, elemental analysis, and ion chromatography. Candidate should have good interpersonal and organization skills, and strong communication (oral and written) skills. Renewal of the contract will be contingent upon the availability of adequate funding and performance.

POSITION DESCRIPTION

MAJOR RESPONSIBILITIES

I. RESEARCH (90%)

Research activity (50%)

This position requires creative contributions to and collaborative development of an active research program investigating topics relevant to the research areas of biogeochemistry, astrobiology, and soil science. The candidate will help to determine research goals in consultation with the Principal Investigator. He/she will design specific projects, including the selection of appropriate methods and techniques. In some cases, the candidate may supervise students or technicians regarding the technical aspects of the research, including methods development, trouble-shooting problems, interpreting results and planning follow-up experiments.

Grant Acquisition (20%)

The candidate will assist in acquiring proposals for funding from federal and state agencies and other funding organizations. The candidate will prepare and assist in the preparation of reports as required by granting agencies. The candidate will interact with funding agencies and prepare modifications of budgets and other grant components as needed.

Publication activities (20%)

The candidate will publish research results in peer-reviewed journals, books and other outlets either independently or in collaboration with the PI or other members of the research team.

II. PROFESSIONAL COMPETENCE AND ACTIVITY (5%)

The candidate will participate in professional societies and conferences appropriate to his/her specific field and will serve as a reviewer of research proposals and scientific publications as appropriate. The candidate will attend seminars to present research results and may give oral presentations to public and professional interest groups. When appropriate, the candidate may coordinate and/or give presentations at seminars, laboratory meetings or educational functions.

III. UNIVERSITY AND PUBLIC SERVICE (5%)

The candidate will engage in public outreach activities that include presenting scientific research results to the general public and providing relevant advice to individuals and public agencies. The candidate will engage in University service activities such as guest lecturing and committee service. Teaching classroom courses is not an expectation of this position.

BASIC QUALIFICATIONS:

- A PhD degree in Biological Sciences, Biogeochemistry, or other related field (by time of appointment).
- Postdoc experience in applications of biogeochemistry, astrobiology, and soil science in natural ecosystems and controlled laboratory environments,
- Experience in designing and developing closed-loop experimental systems that would be used to conduct controlled abiotic and biotic mineral weathering experiments,
- Demonstrated ability to analyze samples generated from conducting research with closed experimental systems including the use of sequential extractions and mass balance analysis,
- Strong quantitative background,
- Excellent statistical and programming skills, using big data and multivariate analyses of large data sets,
- Experience in planning and leading field campaigns in remote areas including the ability to select sites, collect site data, deploy samples and equipment, use portable XRD and other field instruments, relocate sites following deployment to retrieve samples, and accomplish the established aims of each field expedition in a safe, organized manner,
- Demonstrated ability to develop innovative technologies to address research objectives that involve the design and development of bioweathering reactors for lab and field deployment,
- Experience in performing plant root analysis including the ability to independently develop a microscopy method to assess fungal hyphal length or other related properties associated with samples,
- Demonstrated ability to produce clean, sterile granular rock substrates that will be deployed in mineral weathering experiments,
- Experience in pre-characterizing granular rock materials using high resolution microscopy techniques (e.g., electron microprobe analysis, synchrotron X-ray diffraction),
- Experience working with and mentoring students in a research environment.

PREFERRED QUALIFICATIONS:

- Demonstrated ability to effectively communicate via writing and orally,
- Experience in writing proposals and a good track record in research publications (peer-reviewed and broader audience),
- Expertise in programming, including R and/or MatLab,

- Experiences in image processing and GIS softwares, including Adobe Photoshop, ACDsee Canvas, and ArcGIS,
- Evidence of collaborative, interpersonal- and communication- skills.

SALARY RANGE: Salary dependent upon candidate's qualifications/experience.

TERM OF APPOINTMENT: Starting ASAP. Initial appointment percentage and length will be based on funding and programmatic need; may be part-time. Appointment may be extended dependent upon progress and funding.

TO APPLY: To apply, please go to the following link: <https://recruit.ucdavis.edu/apply/JPF03934>.

Candidates need to submit:

1. **Cover Letter**, describing your research interests,
2. **Curriculum Vitae**,
3. **Publication List**,
4. copies of your **three** most important **publications**,
5. copies of undergraduate and graduate **transcripts** (if within 5 years of either degree), and
6. names, e-mail addresses, and telephone numbers of at least **five** professional references.

The search committee will begin reviewing applications after closing date indicated at the UC-Recruit job link. Applications received after closing date will only be considered if the position has not yet been filled.

This position will remain open until filled.

For technical or administrative questions regarding the application process, please contact metroap@ucdavis.edu.

OTHER QUESTIONS: Please direct questions about the position to Dr. Rebecca Lybrand email to rallybrand@ucdavis.edu.

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age or protected veteran status. For the complete University of California nondiscrimination and affirmative action policy see:

<http://policy.ucop.edu/doc/4000376/NondiscrimAffirmAct>.

Under Federal law, the University of California may employ only individuals who are legally able to work in the United States as established by providing documents as specified in the Immigration Reform and Control Act of 1986. Certain UCSC positions funded by federal contracts or sub-contracts require the selected candidate to pass an E-Verify check. More information is available <http://www.uscis.gov/e-verify>.

UC Davis is a smoke & tobacco-free campus (<http://breathefree.ucdavis.edu/>).

If you need accommodation due to a disability, please contact the recruiting department.