Position Summary

The Department of Biology at the University of New Mexico invites applications for a one year Postdoctoral Scientist position (with possible 2y extension) in support of a USDA-funded project investigating the importance of compost additions and soil microbial communities in driving productivity and resilience of dry rangelands.

Starting salary $47,500. Anticipated start date 1 April 2021. Post-doctoral scientists are eligible for benefits such as health insurance, vacation and sick leave, and 403b Tax Shelter Annuity plans (complete information here: https://ofas.unm.edu/post-doctoral/index.html), and cost of living adjustments.

Project summary
The project is at the intersection of agriculture and dryland ecology, and explores fundamental questions about functions of microbial communities, with an emphasis on outreach to land managers. Overall, this project aims to provide best-practice guidance regarding when and where compost applications are most effective for dryland soil health and livestock forage, so that agricultural producers can reach their land stewardship and financial goals. We will explore questions related to whether compost applications are effective for increasing productivity and soil health for arid and semi-arid rangelands and how microbial communities shift in response to compost applications, examining soil characteristics, plant productivity and forage quality. We will conduct a field experiment that compares additions across environmental and climate gradients and evaluate soil microbial community composition, soil health, and rangeland productivity. Additionally, we will use meta-analysis techniques and open source data to complement the field experiment.

The postdoctoral scientist will work directly with lead PI Dr. Eva Stricker to manage and direct day-to-day project activities and prepare publications and other deliverables. The postdoctoral scientist will

1. characterize fungal and bacterial communities in the compost and in the soils over time to track microbial community change;
2. collect data on soil chemistry and plant traits and use statistical models to explore connections between microbial communities and the soil and plant characteristics.
3. identify commercially available assays (eg. PLFA, Haney test) for microbial and microbially-derived biogeochemical processes associated with compost applications in rangelands.
4. assist with outreach to land managers with the partner non-profit, Quivira Coalition, to train regional producers to assess and implement land management approaches that includes compost applications and other practices aligned with the healthy soil principles.

The successful applicant will be responsible for communication with project partners such as landowners and Quivira staff, logistics and activities of field and lab work, managing samples and data, conducting bioinformatic and statistical analyses, sharing results in scientific

conferences and publishing those results, and assisting with outreach activities such as in-field workshops for ranchers and agriculture professionals.

The University of New Mexico is the flagship university in New Mexico and the Biology Department houses diverse and cutting edge science. The successful applicant will have the opportunity to work with faculty members, summer graduate students, and undergraduate assistants. Additionally, due to the close collaborations with the non-profit Quivira Coalition, the successful applicant will work with educators and planners to produce educational content for adult professionals in agriculture.

Required Qualifications:
• Must have completed all requirements for a PhD in biology or related discipline by the time of employment.
• Demonstrated experience with microbial community analysis, fungal metabarcoding and bioinformatics
• Have, or be willing to obtain by the start date, a valid driver's license
• Must relocate or live in or near Albuquerque, NM, or make arrangements to conduct field and lab work in New Mexico
• Applicants who are appointed to a UNM position are required to provide documentation for eligibility for employment with UNM

Preferred Qualifications:
• Demonstrated experience leading field experiments and data and sample collection in remote areas.
• Demonstrated experience with lab work associated with plant, soil, and microbial research.
• Demonstrated experience in bacterial metabarcoding and bioinformatics
• Ability to plan and implement efficient and robust sampling protocols and manage datasets
• Experience working with ranchers and agriculture professionals
• Experience with education and outreach outside of university settings
• A demonstrated commitment to diversity, equity, inclusion, and student success, including experience working with broadly diverse communities, including Tribal entities.

Letter of Interest Instructions

For best consideration, please provide the letter of interest materials by **28 February 2021** to evadr@unm.edu. This position will remain open until filled.

Potential applicants must submit a Letter of Interest package which includes a) a two page (maximum) cover letter, b) a CV, and c) references.
   a) In the cover letter, please specifically address 1) experience with microbial community analyses and data, 2) experience or strategy for working with diverse land stewards, and 3) other qualifications and interests that you would like to highlight.
   b) Please include a list of publications (published and in prep.) in the CV

c) Applicants must specify the names, affiliations, phone numbers, and e-mail addresses of three references. No letters are needed at the time of application.

Qualified applicants will be invited for a Zoom interview (closed captioning and other accommodations can be available) and will be asked to provide a two page project proposal outline that relates to the grant goals.

Knowing its importance to the success of our work, we are committed to diversity and inclusion, and we aspire to build a diverse staff team and community, including groups that are traditionally underrepresented in this work.
The University of New Mexico is committed to hiring and retaining a diverse workforce. We are an Equal Opportunity Employer, making decisions without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, veteran status, disability, or any other protected class.We continually seek to create an inclusive work culture where talented people of widely different backgrounds are welcome and can thrive.
http://policy.unm.edu/university-policies/2000/2720.html#:~:text=The%20University%20adheres%20to%20all,and%20access%20to%20educational%20opportunities