The University of Arizona, Tucson

Cluster Hire in Ecosystem Genomics

Some of the most challenging issues in understanding the components and processes of natural and managed ecosystems have a common foundation in gene-environment interactions. We are hiring five new faculty members to contribute to the development of a new program in ecosystem genomics at the University of Arizona. We are searching for new colleagues at all appointment ranks who share an interest in developing active teaching and research programs in the structural, functional and/or evolutionary genomics of ecosystems. All appointments will be tenured or tenure-eligible. More information on the Ecosystem Genomics Initiative and resources on the University of Arizona and the City of Tucson can be found at **egi.arizona.edu**.

Appointees will teach courses at the graduate and undergraduate levels and contribute to mentoring students, including those from underrepresented backgrounds. Appointees will also participate in outreach and contribute to departmental/college/university service. In these and other ways, the appointees will develop innovative approaches to enhancing student engagement, increasing diversity and expanding the university's collaborations with community and business partners.

The positions to be filled will fit into the following disciplinary foci:

1. Genomics of adaptation. This position will support an empirical genomicist studying genome-environment interactions of plants, fungi, insects or microbes, especially targeting individual organisms, and extending the classical study of adaptation to multiple dimensions of ecosystem structure/function; or, alternatively, a theoretician applying novel network or systems biology approaches to these problems. The successful candidate will focus principally on the mechanisms underlying translational genomics, extending to phenomics, the study of organismic traits and their relation to the underlying processes of genome translation.

2. Molecular ecology of soil microbes. Nutrient-cycling and plant growth-promoting activities of soil microbial communities are critical to plant survival, soil quality and ecosystem health. The successful candidate for this position will be a cross-cutting microbial ecologist focused on one or more topics involving biogeochemical cycles, reclamation/re-vegetation efforts, and/or discovery regarding the evolution, metagenomics, and ecological assembly of microbial communities.

3. Plant evolutionary or ecological genomics. This position will leverage the multidisciplinary strengths on the UA campus in plant ecology and genomics and provide for the hiring of a plant scientist interested in the use of structural, functional, comparative or translational genomics to study the impact of plant genomic diversity on the structure/function of entire ecosystems. The successful candidate will be capable of pursing research that extends from the mechanisms of translational genomics, through organism traits, to ecosystem processes.

4. Agroecosystem genomics: Agroecosystem genomics offers a new paradigm shift in how 21st Century plant breeders and molecular geneticists will create the next generation of super crops that not only enhance food production and nutrition, but also reduce negative environmental

footprints. This position will support a scientist working to resolve the genomic composition of entire agroecosystems to enhance yield while reducing environmental impact. Applications are also invited from theoreticians seeking to develop crop/microbiome models that will enable breeders and seed companies to predict optimal cross-taxa genomic interaction to achieve maximum yields that will keep pace with climate change.

5. Earth system genomics: This position focuses on predicting Earth processes through studying the reciprocal interactions between organisms and their environments, over space, time and/or in fluctuating conditions using experimental approaches and data sets that encompass transcriptomics and translational genomics. Interests and experiences in environmental biology, molecular biology and computational biology are required. Experience collaborating with disciplines beyond the biological sciences such as earth and environmental sciences, natural resources and geography is recommended.

The cluster hire initiative in ecosystem genomics is enabled by the University of Arizona's Never Settle commitment to cross-college collaborations that emphasize engagement, innovation, partnering and programmatic synergy. Depending on the research and teaching interests of candidates and strategic needs in academic units, faculty members hired into cluster hire positions will be invited to join one of three possible colleges, including the College of Science, the College of Agriculture and Life Sciences, and the College of Social and Behavioral Sciences, and one of several schools or departments in those colleges, including the Department of Entomology, the Department of Ecology and Evolutionary Biology, the Department of Molecular and Cellular Biology, the Department of Soil, Water and Environmental Science, the School of Geography and Development, the School of Plant Sciences, the School of Natural Resources and the Environment, and the School of Information.

At the University of Arizona, we value our inclusive climate because we know that diversity in experiences and perspectives is vital to advancing innovation, critical thinking, solving complex problems, and creating an inclusive academic community. We translate these values into action by seeking individuals who have experience and expertise working with diverse students, colleagues and constituencies. Because we seek a workforce with diverse perspectives and experiences, we encourage minorities, women, veterans, and individuals with disabilities to apply. As an Employer of National Service, we also welcome alumni of AmeriCorps, Peace Corps, and other national service programs. Review of applications will begin on November 15, 2015 and will continue until all five positions are filled.

Applications should include: (1) a cover letter explaining the candidate's interest in the initiative, (2) a current CV, (3) a Statement of Research Interests, (4) a Statement of Teaching Interests, and (5) three letters of recommendation. The letters of recommendation should be sent directly to Russell Monson at russmonson@email.arizona.edu, and the name of the applicant should appear in the subject line. All other materials should be submitted through the UA Human Resources web site at: https://uacareers.com/postings/search. In the box labeled "Posting Number", please enter F20214.