



HARVARD UNIVERSITY
Faculty of Arts and Sciences
Trible Lab, Division of Science
John Harvard Distinguished Science Fellow

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The Trible Lab at Harvard University is looking to hire a postdoctoral researcher with expertise in collecting and analyzing functional genomic data. The successful candidate will seek to understand molecular mechanisms of ant biology and evolution using emerging technologies including genome editing, long read sequencing, single cell genomics, and chromatin binding and architecture measurements. The position will start as soon as March 1, 2020 and no later than September 1, 2020. The position is initially for 2 years and may be extended up to 4 years total.

Potential candidates are encouraged to contact me, Buck Trible (bucktrible@fas.harvard.edu), with a cover letter, a CV including contact information for 3 references, and the link to your Google Scholar page.

Background

A colony of ants cannot be accurately described as a collection of single individuals. Instead, it is a superorganism in which each ant depends on and contributes to the function of the group. An ant colony is therefore analogous to a unitary organism, like a plant or animal, whose cells cooperate to form a larger whole. Like cells, group behavior in ants is orchestrated by continuous communication between individuals, which is largely achieved via a wide range of pheromones. Also similar to cells, the ants in a colony typically differentiate into a germ line (the reproductive queen caste) and a soma (the non-reproductive worker caste(s)) via phenotypic plasticity. In my research I attempt to understand these and other derived features of ant biology from the perspective of molecular genetics and evolutionary developmental biology. I accomplish this by adopting new model organisms that are ideally suited for mechanistic laboratory research. These include the clonal raider ant, *Ooceraea biroi*, and ants of the genus *Leptothorax*, both of which possess evolutionarily relevant genetic variation that can be studied in a laboratory context. The successful candidate will contribute to this research program by bringing bioinformatics expertise to collect and analyze novel datasets for these organisms.



Complex outcomes.....

Profile

I am seeking a candidate with the following profile:

- A strong interest in obtaining detailed, rigorous, and mechanistic descriptions of social insect biology and evolution
- Experience and/or strong desire in collaborating within an interdisciplinary research community, such as that found at Harvard University
- Knowledge and experience in programming languages and statistical methods necessary to analyze large-scale and potentially unfamiliar genomics datasets
- An interest in ant biology and willingness to participate in field collections, maintenance of laboratory stocks, mutagenesis experiments, and research that incorporates careful considerations of natural history and evolution (prior experience is not required)

Essential functions

The successful candidate will be expected to fulfill the following essential functions:

- Lead with the PI the bioinformatics portions of the project, in collaboration with other lab members who will focus on the experimental portion
- Contribute to and lead publications, conference submissions, and grant proposals
- Act as a mentor to diverse students in the lab, especially undergraduates and research assistants, and collaborate effectively with colleagues and university staff
- Identify personal long-term career goals and plan with the PI to ensure these goals are met

Department and mentoring

The successful candidate will be joining the Center for Systems Biology in the Northwest Science Building at Harvard University. This department, and the Harvard community as a whole, unites a diverse range researchers and will provide the candidate opportunities for education, networking, and career development. Within the lab, the candidate will receive direct guidance from the PI, particularly with respect to mentoring students, developing the skillset to conduct mechanistic studies of non-model organisms, and career planning.

Interested? Reach out!



.....have simple beginnings