Postdoctoral Position in Ecological Genomics at the University of Michigan.

Postdoctoral Researcher in Ecological and Evolutionary Genomics

A postdoctoral fellowship is available for a highly qualified individual to work on an interdisciplinary research project focused on algal ecology and biofuels. The project, which is funded by a grant from the National Science Foundation’s Emerging Frontiers in Research and Innovation (EFRI) program, examines how algal biodiversity influences the efficiency and sustainability of algal biofuel production. The goal is to develop multi-species photosynthetic systems that express the complementary genes, metabolic pathways, and biological traits needed to increase the efficiency, yield, and stability of biofuel yields relative to current monoculture systems. Collaborators include Dr.’s Brad Cardinale – a community ecologist, Vincent Denef – a molecular microbial ecologist, Phil Savage – a chemical engineer, Nina Lin - a microfluidics expert, and Todd Oakley – a phylogeneticist. This interdisciplinary team works together on field and laboratory experiments, as well as life-cycle analyses to assess the ecological footprint and commercial viability of multi-species biorefineries.

The successful candidate will work at the University of Michigan’s central campus under joint mentorship of Drs. Vincent Denef (a molecular microbial ecologist) and Brad Cardinale (a community ecologist). The candidate will lead the genomic analyses to look for complementary gene expression and metabolic pathways in species consortia that exhibit high yield and quality of biocrude. The successful candidate will further develop their own projects to complement the broader goals of the grant: some possibilities include (a) the genomic basis of algal-bacterial symbioses and their impact on biomass production, (b) the genetic correlates of invasion of algal systems by prokaryotic or eukaryotic nuisance species, or (c) the impacts of herbivores on gene expression and biomass production by algae.

Candidates should have a PhD in bioinformatics, genomics or a closely related field, as well as an interest in applying genomics to ecologically-oriented questions. The ideal candidate should be familiar with transcriptomic and genomic data sets, and adept at coding (Python, PERL, or similar), using and implementing bioinformatics software, statistical analyses, and data visualization. Candidates should also be comfortable working in a collaborative, interdisciplinary environment, which requires excellent written and oral communication skills.

To apply, email a cover letter stating your research accomplishments and interests, a curriculum vitae, two representative publications, and the names and contact information for three references to:

Dr. Vincent Denef
Email: vdenef@umich.edu.

Applications are due April 22nd 2016. The University of Michigan is an equal opportunity employer. Individuals from under-represented groups are especially encouraged to apply.