Postdoctoral position:

Systems and synthetic biology of photosynthetic organisms

Jonikas Lab, Carnegie Institution for Science, Stanford, CA

Photosynthetic organisms, our planet's greatest chemists, form the foundations for human health by providing us with food, fuel, materials and drugs. Yet, our understanding of these organisms is in its infancy. Our laboratory aims to enable advances in sustainability by bringing systems and synthetic biology to photosynthetic organisms.

We have brought high-throughput genetics to photosynthetic eukaryotes by generating the first indexed, genome-wide collection of mutants in a single-celled photosynthetic organism, the green alga *Chlamydomonas reinhardtii*. We have also developed tools for systematically determining the localizations of hundreds of proteins in this organism. We are applying these tools to understand molecular inventions that enhance photosynthetic efficiency, with the ultimate goal of transferring them to crops to enhance yields. A major focus is on understanding the algal carbon concentrating mechanism.

The successful candidate will work in one or more of the following areas:

- Developing transformative systems and synthetic biology tools for photosynthetic organisms.

- Applying systems biology approaches to gain key insights into the functions of poorly characterized genes and pathways in photosynthetic organisms.

- Advancing our molecular understanding of the algal carbon-concentrating mechanism, and our ability to transfer this mechanism to higher plants.

More information about our research can be found here: [http://jonikaslab.dpb.carnegiescience.edu/](http://jonikaslab.dpb.carnegiescience.edu/)

I am dedicated to providing my lab members with a nurturing training environment. The data we collect will build a solid foundation on which you can develop an independent research program.

We are physically located on Stanford campus and have access to many of its resources in addition to our own. Moreover, Stanford's excellent location and year-round sunny and warm climate offers a pleasant setting for work and home life.

The ideal applicant will be highly motivated, have a PhD degree, a strong academic record, research experience in the biological sciences, and fluent English language skills. One or more of the following is a plus: experience with *Chlamydomonas*, photosynthesis, large-scale cloning, high-throughput genetics, genomics, computational data analysis, microscopy.

To apply, please submit a cover letter, CV and three letters of recommendation to: [https://jobs.carnegiescience.edu/jobs/postdoctoral-fellow-systems-and-synthetic-biology-of-photosynthetic-organisms/](https://jobs.carnegiescience.edu/jobs/postdoctoral-fellow-systems-and-synthetic-biology-of-photosynthetic-organisms/)

Informal inquiries are also welcome: email jonikas1@stanford.edu.

Applications will be reviewed as they come in. Carnegie Institution for Science is an Equal Opportunity/Affirmative Action employer, and we particularly encourage applications from women, members of ethnic minorities, and individuals with disabilities.