Bioinformatics postdoc position to develop computational pipelines to identify and annotate enzymes in plant genomes

A postdoctoral researcher position is available immediately in the laboratory of Dr. Sue Rhee at the Carnegie Institution for Science, Department of Plant Biology, to create and analyze metabolic networks of plants. Plants are essential to life on Earth and provide us with the air, food, fuel, clothing, and shelter. Plant metabolism is the engine that enables plants to provide these things. The Rhee lab strives to uncover how plant metabolism is organized, regulated, and evolves. The successful candidate will lead the development of computational tools and methods for predicting plant metabolic enzymes as a part of a team called the Plant Metabolic Network (PMN, www.plantcyc.org). The work will be based on a machine learning pipeline we built previously and extending and transforming its capabilities to distinguish the functions of members of large enzyme families using structural, phylogenomic and functional features. The successful candidate will have opportunities to investigate novel questions regarding evolution, function, or regulation of enzymes and transporters as well as metabolic networks in plants by leveraging the tools and data generated at the PMN and the Rhee lab.

Qualified candidates must have a Ph.D. or equivalent in Bioinformatics, Computational Biology, Biology, Biochemistry or a related field, with a strong background in machine learning or phylogenomics. Working experience in large-scale amino acid sequence analysis and proficiency in programming languages such as Python and/or Perl are highly desired. The successful candidate should also have a demonstrated ability for independent and critical thinking, excellent communication and teamwork skills, and enthusiasm for learning new things.

The Carnegie Institution, a private, nonprofit organization engaged in basic research and advanced education in biology, astronomy, and the earth sciences, was founded and endowed by Andrew Carnegie in 1902 and incorporated by an act of Congress in 1904. Andrew Carnegie conceived the Institution’s purpose “to encourage, in the broadest and most liberal manner, investigation, research, and discovery, and the application of knowledge to the improvement of mankind.” The Department of Plant Biology engages in basic research on the mechanisms involved in the growth and development of plants and algae. The Department of Plant Biology is co-located with the Carnegie Department of Global Ecology on a seven-acre site on the campus of Stanford University.

Please apply online at:

Inquires about this position can be sent to Peifen Zhang (pzhang@carnegiescience.edu).