

Student Project: Find the Best Parameters for Cholesterol Biosynthesis Pathway from Literature

Evolutionary Systems Biology Group - UW Madison



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Overview

The Evolutionary Systems Biology Group is looking for students with a background in biochemistry who are interested in working as a team to extract from the literature the best possible estimates for kinetic parameters of enzymatic reactions that are part of the cholesterol pathway.

The goal of the project is to contribute towards formulating a concise model of the cholesterol pathway that captures the current state of our knowledge (or absence of it) and link it as closely as possible to original data sources. We expect that all these parameters will not be characterized by a single value but rather by distributions. The output from this project will be used as the basis for efforts to estimate parameters that have not been measured so far.

Sometime after mid May 2011 we plan an introductory session explaining in detail what this is about, how to do the work, and which tools to use.

For more information on the Evolutionary Systems Biology Group, please visit <http://evolution.ws/people/loewe>

Responsibilities

If you join this team, you will:

- Learn how to find kinetic parameters for specific reactions using web-databases
- Critically read the original literature to check the quality and context of database entries and report your findings in a concise manner
- Share your expertise with other team members
- Peer-review the work of your team members, like professional scientists.

Compensation and Hours

This work is a summer project for credit or for experience, but not for pay. Work will start after spring finals with an introduction for all participants, likely end towards the beginning of August, and take about 16 hours per week (for 2 credits). Work will be divided among all participants towards the beginning of the project. You will need your own computer or to use campus computing resources. More projects of a similar nature may follow afterwards.

Contact

If you are interested in this opportunity, please send your CV to Seth Keel at skeel@discovery.wisc.edu. We plan an introductory session some time after mid May 2011 to which we strongly encourage you to come. Feel free to contact Seth with any questions via email or phone at (608) 316-4326. Any updates or changes to this job will be posted at:

<http://evolution.ws/people/loewe/jobs>