

**Posting Date June 13, 2018**

## **Post Doc in Genome-scale Modeling and Systems Biology for Antimicrobial Resistance**

The Systems Biology Research Group at the University of California San Diego is seeking a Postdoctoral Fellow to join the computational modeling team on a collaborative research project to combat antimicrobial resistance, funded by the NIH ([Project Description](#)). The project will involve utilizing genome-scale models to better understand mechanisms of antibiotic resistance in various pathogens of interest and working with a multidisciplinary team to understand how resistance translates to multiple models.

### **Qualifications**

Candidates should be trained in computational modeling approaches including genome-scale reconstruction, optimization and sampling of genome-scale models, and integration of various omics data types. Candidates should also be familiar with processing omics data sets generated within the team, including DNA and RNA sequencing, and have skills associated with bioinformatics analysis for statistical interpretation of such data sets. Domain expertise on pathogens is a plus.

The preferred candidate has experience with:

- Reconstruction of metabolic networks and/or other cellular functions
- analysis of omics data, including DNAseq, RNAseq, metabolomics and proteomics
- Performing COBRA based computations
- Use of COBRA toolbox and COBRAPy
- Computational design of experiments

Additionally the candidate must have:

- Detailed understanding of linear algebra and constraint based optimization
- Experience coding and computing in several languages, including iPython, MatLab, etc
- Familiarity with basic multivariate statistical analysis, like PCA, hierarchical clustering, etc
- Ability to efficiently communicate with other members of an international research team in English

If you are interested please contact Bernhard Palsson ([palsson@ucsd.edu](mailto:palsson@ucsd.edu)) or Adam Feist ([afeist@ucsd.edu](mailto:afeist@ucsd.edu)), directly with your CV.