Optimizing Models of Dual-Specificity Phosphatases (DSPs)

Vicky Hwang

Mentors: Dr. Haga and Date-sensei

Osaka University

6/29/12

Project goals

- Run DOCK with the tertiary structures of DSP's modeled by students from PRIME 2011 to determine how well ligands bind to the models
 - Choose the best model based on DOPE score
 - Minimize energy using UCSF Chimera
 - Improve loops near the active site using loop modeler

Project Progress

- Selected best models out of the predicted structures
- Began energy minimization:
 - Categorized proteins into levels of priority based on how well the structure is folded
 - Loop modeled the best DSP's

Next week's goals

- Continue to optimize the protein models
- Dock the models with the ligands
- Currently not enough nodes working on milk cluster – hopefully it will be up soon

Culture in Japan







