

MCSG User Resource

www.mcsg.anl.gov
www.sbc.anl.gov

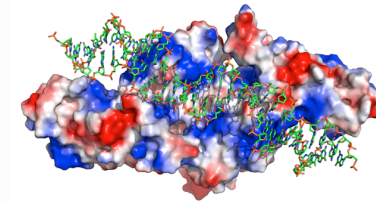
The MCSG will operate the high-throughput protein structure determination and characterization pipeline as a resource for Biology Community. The structure determination platform is well established and it combines technologies, robotics and expertise for gene cloning, protein production, crystallization, and biochemical and biophysical characterization. Data collection and structure determination will be done using SBC beamlines at the APS. The MCSG maintains bank of microbial genomic DNA, protein expression vectors and clones, variety of proteomics and computational software tools and project databases. The MCSG will host and train visiting scientists.

The MCSG Resource is located in the Advanced Protein Characterization Facility (APCF) at Argonne National Laboratory that is directly connected with the APS at sector 19. Starting Aug. 1, 2015 the MCSG will accept applications for access to user resources. The requests can be submitted through APS User Office in conjunction with beamtime application at the SBC beamlines. Check MCSG or SBC websites for details.



Robotic data collection and automated structure determination

SBC-Collect, HKL-3000, robotics



Function annotation

Structural bioinformatics tools and *in silico* docking



Target selection

Structure and LIMS-guided target selection and construct design



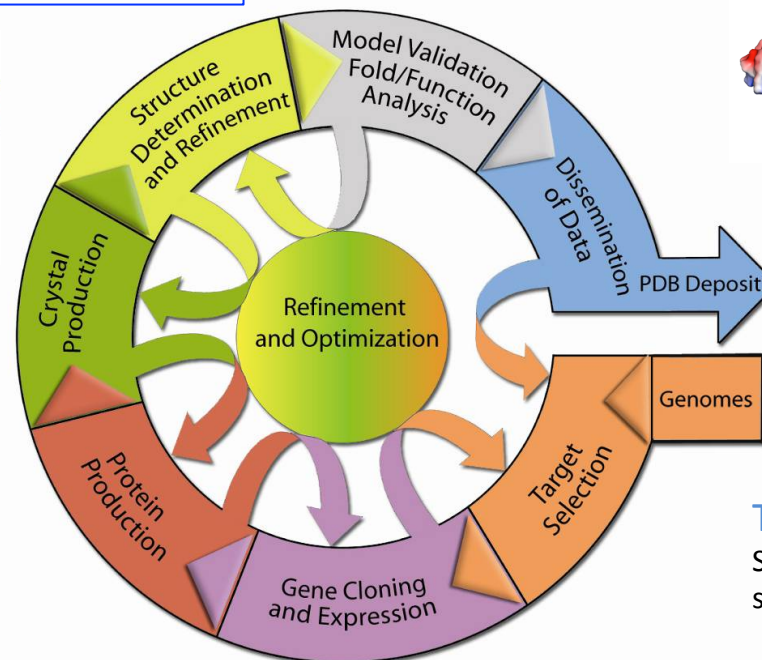
HTP crystallization

Mosquito, Robohotels



Purification mg-scale

AktaXpress systems



Cloning and small-scale expression

250 genomes; >100 vectors; *E. coli* and eukaryotic systems