

## **E0037**

**Integration of PDB Resources and SMART Teams into the High School Curriculum.** Tommie S. Hata, The Pingry School, Martinsville, NJ 08836. Mentors: Dr. Richard Ebright, Dr. Helen Berman, Rutgers, Piscataway, NJ 08854.

The Protein Data Bank has become a significant and popular website to supplement high school curriculum within molecular biology. Despite attempts by text books to invigorate material with animations and CD-ROM presentations, the material in a book is often static and disconnected from the real world of science. The PDB has given life to molecules, the people behind them, and the process of discovering them.

The reality of seeing the proteins in a three-dimensional form combined with computer visualization leads to animated discussions on structure. Manipulation of the molecule on the computer enhances students depth of understanding of the molecular structure. The educator's role was simply a tool in the learning process and the students were given the resources to facilitate the opportunity for learning.

The Pingry School established a SMART Team under the guidance of Dr. Tim Herman at the Milwaukee School of Engineering. Under guidance of the science mentors, students designed a physical model of a class I transcription-activation complex. College level concepts such as protein structural motifs have become part of our discussions and that would not have been possible without the SMART Team program and the PDB.