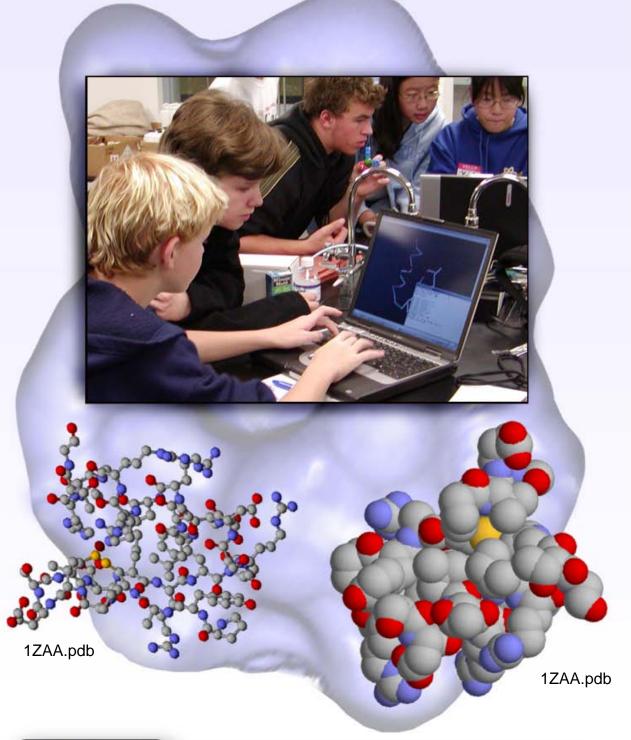
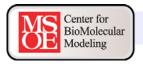
Imol Training Guide









Contents

Acknowledgements

Section 1: Using Jmol as a Computer Visualization Tool

- 1-1 Downloading Jmol
- 1-2 Protein Data Bank (PDB) Files
- 1-3 Launching Jmol and Opening a PDB File
- 1-4 The Command Line and Common Display Formats and Display Colors
- 1-5 The Select Command
- 1-6 Boolean Operators
- 1-7 Exporting Images
- 1-8 Saving Your Work and Organizing Files

Section 2: Understanding the Protein Data Bank

- 2-1 Using the RCSD Protein Data Bank
- 2-2 Searching the RCSD Protein Data Bank
- 2-3 Inside a PDB File
- 2-4 Referencing the RCSD Protein Data Bank

Section 3: Designing Models for Rapid Prototyping

- 3-1 What is 3D Printing?
- 3-2 Selecting Appropriate Display Formats and Colors
- 3-3 Adding and Removing Hydrogen Bonds and Disulfide Bonds
- 3-4 Adding and Removing Support Struts
- 3-5 Coloring Hydrogen Bonds, SS Bonds, and Struts
- 3-6 Adding Sidechains with a "Clean Backbone"
- 3-7 Additional Miscellaneous Jmol Commands

Acknowledgments

The MSOE Center for BioMolecular Modeling would like to thank the countless teachers who have attended workshops over the years for their input in creating this document. Their inspiration and requests for something that would assist them in working with molecular visualization and Jmol has allowed the CBM to put this Training Guide together.

This publication was made possible by a Science Education Partnership Award from the National Center for Research Resources (NCRR), a component of the National Institutes of Health (NIH). (Grant # 1 R25 RR022749-01)