

BioCoRE: A Collaboratory for Structural Biology

<http://www.ks.uiuc.edu/Research/biocore/>

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Data and Collaboratories in the Biomedical Community

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NIH Resource for Biomolecular Modeling and Bioinformatics
<http://www.ks.uiuc.edu/>

Beckman Institute, UIUC

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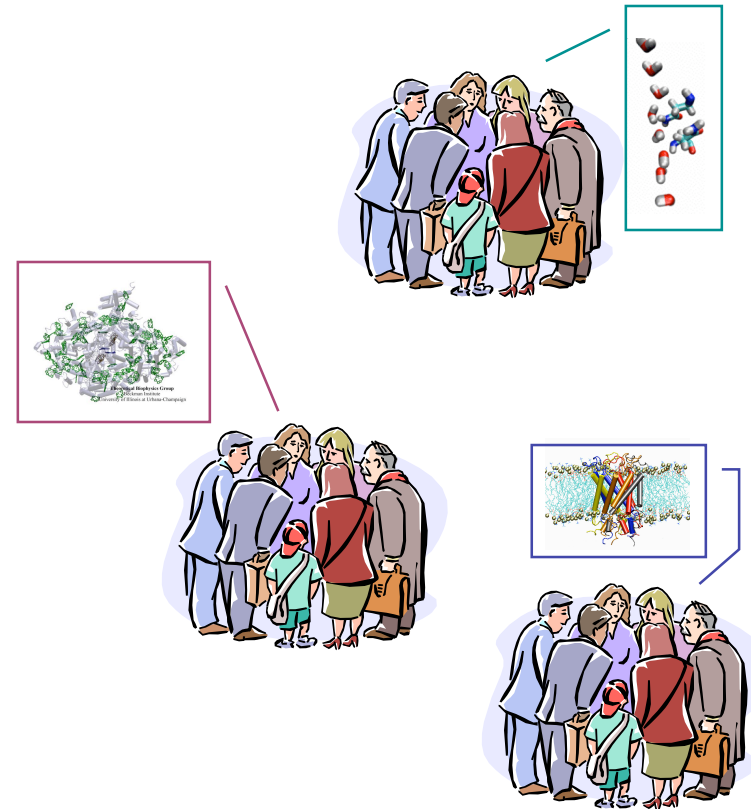
BioCoRE is a unified, web-based platform-independent environment, featuring an integrated, tool-oriented communication system

- Useful for research and training
- Integrates in-house and third-party tools
- Includes a built-in evaluation component
- Freely available on the web
- Benefits from the latest computer hardware and software technologies



BioCoRE is Organized Around Projects

- Researchers/Instructors create *projects* by topic
- Project leaders invite colleagues/students to join
- Only project team can access project data
- Each operation performed in BioCoRE is recorded for later review by project members



BioCoRE Operational Areas

- *Workbench*: a web-based interface to manage supercomputer jobs and shared access to visualization and other tools
- *Notebook*: collaborative tools for logging, locating, and reviewing methods, data, literature
- *Conferences*: delayed/real-time sessions logged for later review
- *Documents*: a shared file system supports all areas of BioCoRE for storage, retrieval, exchange of information, joint publications



Collaborative Functions and Capabilities

- ***Main Interface:*** a standard web browser makes BioCoRE a simple and affordable platform-independent framework
- ***File System :*** a virtual, WebDAV-accessible workspace supports users' sharing and exchanging files with team
- ***Job Management:*** a friendly interface simplifies running jobs on supercomputers and other compute resources
- ***VMD*** ***BioCoRE:*** a solution for sharing a molecular structure display w/collaborators



Collaborative Functions and Capabilities - Cont.

- ***Java Molecular Viewer (JMV)***: web-based tool to display structures stored within BioCoRE or retrieved directly from the PDB
- ***Scientific Data Archive***: a warehouse to store data from internal and external applications
- ***Control Panel***: an application to notify members of significant events occurring in their project space
- ***Built-in Evaluation***: an event tracker informs evaluators of user activities



Future BioCoRE Experience

- Greater depth through enhanced training and research capabilities
- Increased breadth embracing more science domains
- Enriched user experience via cross-cutting range of tools and applications
- A integrated yet diverse community of stakeholders working together at different levels with heterogeneous expertise, coming from a variety of disciplines





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