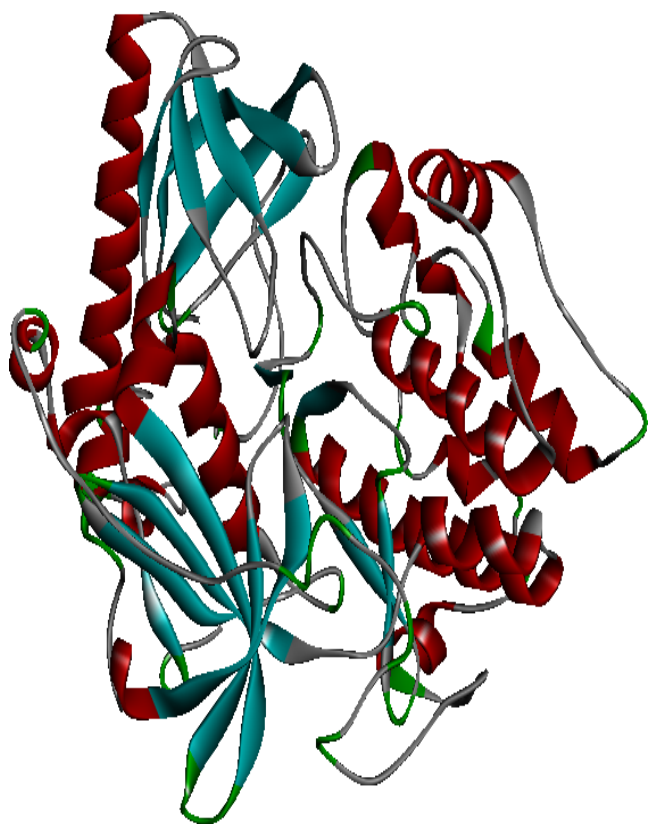




Internally Supported Resources

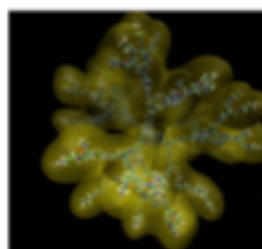
- Annotations & Conversions
<http://biodbnet.abccncifcrf.gov>
- Variation & Impact analysis
<http://avia.abcc.ncifcrf.gov>
- non-B DNA
<http://nonb.abcc.ncifcrf.gov>

“ABCC provides technology development, scientific consultation, collaboration and training, and high-performance computing support to the National Cancer Institute (NCI) and National Institutes of Health (NIH) scientists and staff.”

Advanced Biomedical Computing Center

Jack R. Collins, Ph.D., Director

ABCC is part of the
Information Systems Program
Frederick National Laboratory for
Cancer Research
Atsuo Kuki, Ph.D., Director



<http://isp.ncifcrf.gov/abcc>

ABCC

Advanced Biomedical Computing Ctr.
Information Systems Program
FNLCR



<http://isp.ncifcrf.gov/abcc>

Data Mining and Systems Biology

- Disease and species agnostic data mining and integration
- Large scale Clinical and Genomic integration
- Multi-omics data integration
- Analysis on longitudinal data

Simulation and Modeling

- Advanced Data Analysis
- Protein and DNA Modeling
- Electronic Structure of Proteins and Nanoparticles
- High-Level Calculations of Drug Reactions

Scientific Web Development

- Project tracking and Content Management Systems
- Database design, implementation and management
- User Interface (UI) Design and Graphic Development
- Scientific Applications Design for web and mobile

Nanobiology Informatics

- Structure Characterization
- Quantitative Structure Activity Relationships (QSAR)
- Toxicity

Imaging and Visualization

- 3D Biomedical Visualization
- Quantitative Image Analysis
- Information Visualization
- Image Archive

CCR-Bioinformatics

- Experimental Design
- NGS and Microarray Data QC and analysis
- Data Integration and Visualization
- NGS Data Management

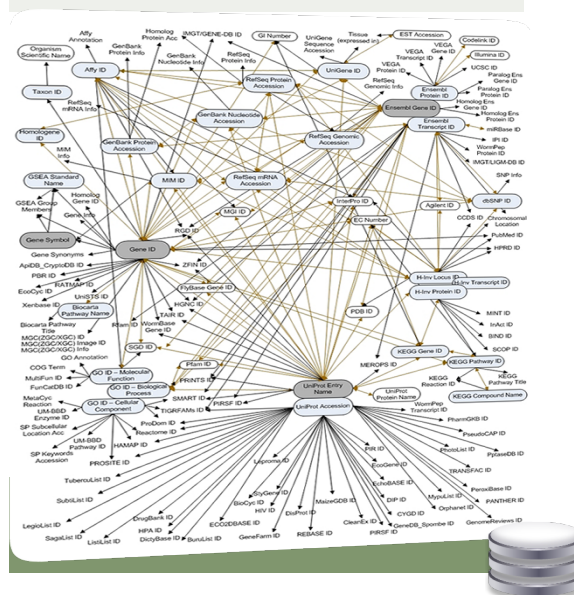
CCR-Sequencing

- Sequencing Strategy Consultation
- Support second and third generation sequencing platforms
- Illumina, IonTorrent as well as PacBio support
- DNA, RNA and Epigenetic sequencing support and data analysis

Engage. ABCC supports the NCI community by integrating community data, building collaborations, and providing bioinformatics consultation.

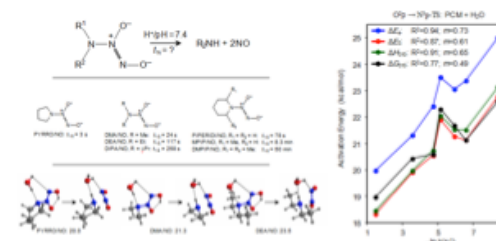
Enable. Through its informatics, analysis and infrastructure support, ABCC delivers reliable services that make key scientific insights possible for the NCI community

Extend. ABCC provides many opportunities to extend and deeply investigate some of the most complex and challenging cancer investigations.



In-Depth Investigations

- Variation analysis
- Survival analysis
- Biological Chemistry modeling
- Algorithm Development



Technology Development

- Mutation impact analysis
- Big data integration / NLP
- Systems Biology
- NGS tool evaluation
- Computational Modeling
- Network/pathway analysis
- Quantitative image analysis workflows
- Workflow optimization

Dedicated Support

- NCI - CCR
- HHS - CDC
- USACEHR