

The National Center for Biomedical Ontology is a consortium of leading biologists, clinicians, informaticians, and ontologists who develop innovative technology and methods that allow scientists to create, disseminate, and manage biomedical information and knowledge in machine-processable form.

The goal of the Center is to support biomedical researchers in their knowledge-intensive work, by providing online tools and a Web portal that enable them to access, review, and integrate disparate information resources in all aspects of biomedical investigation and clinical practice. A major focus of our work involves the use of biomedical ontologies to aid in the management and analysis of data derived from complex experiments.

Resources

The Center is developing algorithms and tools for accessing, visualizing, and analyzing biomedical knowledge and data. The Center's technologies address the needs of a diverse community of users. The scope of our Center's technology is sufficiently broad to be applicable to a breadth of biomedical research domains and future Driving Biological Projects (DBPs), while remaining pertinent and useful to the needs of our current collaborators.

As part of the Center's activities, we are producing the following resources for the biomedical community:

- A virtual library of Open Biomedical Ontologies (OBO)
- A Web-based BioPortal to allow investigators and intelligent computer programs to access and use OBO
- Tools to assist biomedical investigators to use ontologies accessible through BioPortal to annotate experimental data
- An online repository of OBO annotations on experimental data accessible via BioPortal known as Open Biomedical Data (OBD)

Education and Dissemination

The Center is undertaking an ambitious educational and training mission to advance the knowledge of biocomputational scientists in biomedical ontology through a novel program of workshops led by world-class faculty. In addition, the Center is disseminating its technology by working closely with our colleagues in both clinical medicine and the life sciences who themselves are engaged in the modeling of biomedical content.

Some of our education and dissemination activities include:

- A postdoctoral program in biomedical ontologies, providing cross-disciplinary training in biology and computer science
- Tutorials and workshops for scientists in biomedicine, biomedical informatics, and computer science concerning the use of ontologies in their research
- Providing Internet resources for discussion, critique, and improvement of existing biological ontologies, ontology tools, and access to the Center's methodology for ontology evaluation

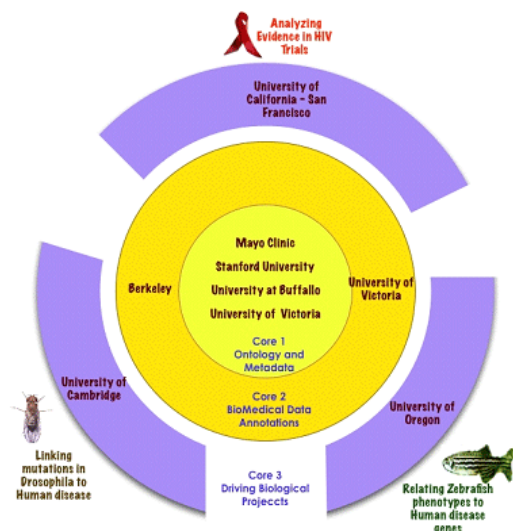
Collaboration

The Center welcomes the opportunity to collaborate with new investigators. The NIH sponsors a Collaborative R01 program designed to support projects that collaborate with the National Centers for Biomedical Computing (see <http://grants.nih.gov/grants/guide/pa-files/PA-05-063.html>).

In addition, our Center seeks a variety of collaborations both with academia and industry to advance the development and use of ontologies in biomedicine and to benefit the broader scientific community.

The Center is truly a National center, assembling the expertise of leading investigators from the following institutions:

- Stanford University
- Lawrence Berkeley National Lab
- Mayo Clinic
- University at Buffalo
- University of Victoria



Driving Biological Projects

The Center collaborates with biomedical researchers conducting Driving Biological Projects (DBPs) to enable their research and to stimulate technology development in the Center.

The Center currently supports three driving biological projects that serve as test beds for the Center's technology and that provide feedback on our work.

- Interpretation of genomic data in *Drosophila*: Linking Mutations in *Drosophila* to Human Disease
Michael Ashburner, University of Cambridge
- Interpretation of genomic data in zebrafish: Relating Zebrafish Phenotypes to Human Disease Genes
Monte Westerfield, University of Oregon
- Analysis of clinical-trial data for therapy of HIV/AIDS: Analyzing Evidence in HIV Clinical Trials
Ida Sim, UCSF

Contact Information

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