

NCBI Training at USU

National Center for Biotechnology Information ■ National Library of Medicine ■ 8600 Rockville Pike ■ Bethesda, MD 20894

Course Content

GenBank Database: Description and Scope

The NCBI Derivative Databases: RefSeqs

Database Searching Using Entrez

The NCBI Structures Database

- The Molecular Modeling Database
- Viewing Structures and Structural Alignments with Cn3D

Similarity Searching Using NCBI BLAST

- Local Alignment Statistics
- Scoring Systems
- Using WWW BLAST 2.1.2
- PSI-BLAST / PHI-BLAST
- RPS-BLAST (CDD Search)
- Specialized BLAST pages

Genomic Resources at NCBI

- Complete Genomes in Entrez
- Human Genome Resources
 - RefSeq and LocusLink
 - UniGene
 - The NCBI Draft Genome
 - The Map Viewer
- Mouse Genome Resources

A Field Guide to GenBank and NCBI Molecular Biology Resources

Molecular sequence databases are an important part of nearly all areas of biological and biomedical research. To assist life scientists in using these data and tools, the National Center for Biotechnology Information (NCBI) at the National Library of Medicine offers, at your institution, a one- to two-day training course entitled, "A Field Guide to GenBank and NCBI Molecular Biology Resources." An overview of the training course is at: <http://www.ncbi.nlm.nih.gov/Class/FieldGuide/>

This training course is provided free of charge, and the NCBI will pay all travel expenses of the instructors.

Course Description

The course consists of a 3-hour morning lecture followed by a 2-hour instructor-led computer workshop in the afternoon. During the afternoon session, students will get hands-on experience with the resources at the NCBI site and will learn how to apply these resources in their specific research area. The course provides practical information about GenBank, RefSeq and the integrated genome resources, as well as the other databases maintained at the NCBI. It also provides instruction on effective use of Entrez and BLAST, the two main database search tools.

Intended Audience

The course is designed for principal investigators, postdoctoral fellows, graduate and advanced undergraduate students and others in the life sciences who work with biological sequence data. Both experienced and novice users of NCBI's tools and resources will benefit.

Instructors

Peter S. Cooper, Wayne Matten, Eugenia Posey-Marcos and Susan M. Dombrowski are bioinformatics training specialists with the NCBI User Services staff.

Now featuring the NCBI assembly and annotation of human and mouse genomes, the updated map viewer genome displays, the new genome-specific BLAST pages, the new NCBI curated conserved domains, and Cn3D 4.1.

NCBI will present *The Field Guide to GenBank and NCBI Molecular Biology Resources* at USU on June 18. To register send e-mail to center@cim.usuhs.mil or call 301.295.2163.

Classroom Session 9AM to noon - Lecture Room C

Laboratory Session - LRC 1 to 3 PM

Sponsored by the Department of Biomedical Informatics and the Learning Resource Center