#### Interdisciplinary Biosciences Group

Bioscience permeates research and education across all disciplines at MIT. Over a third of MIT's research funding comes from the Department of Health and Human Services. Since 2005, the MIT Engineering and Science Libraries (ESL) have adopted an interdisciplinary, team-based, projectoriented model to support the diverse biosciences community at MIT.



#### **Core Bioscience** @ **MIT**

- Biology Department
- Biological Engineering Department
- Brain and Cognitive Sciences Department
- Division of Health Sciences and Technology
- Broad Institute
- Computational and Systems Biology Initiative
- Computer Science and Artificial Intelligence Lab
- Koch Institute for Integrative Cancer Research
- McGovern Institute for Brain Research
- Picower Institute for Learning and Memory
- Whitehead Institute
- Woods Hole Oceanographic Institute

Faculty involvement in bioscience beyond core biosciences departments.

#### Department

- Aeronautics Chemical Engineering Chemistry Civil and Environmental Engineering Earth and Planetary Sciences Electrical Engineering and Computer Science Materials Science Mathematics Mechanical Engineering Nuclear Engineering Physics



## Grow Your Own: Building an Interdisciplinary Bioscience Library Program Howard Silver, DA & Courtney Crummett, MLS MIT Engineering and Science Libraries, June 16, 2009



Biological Engineering



#### Faculty

acuit
5%
53%
55%
22%
20%
25%
27%
6%
150%

30%

5%

### What Have We Done in 5 Years?

- 1. Taught or hosted 49 classes or seminars.
- 2. Developed strong relationships with biosciences communities within and outside of MIT.
- 3. Developed and tested outreach toolkit for two departments.
- 4. Purchased two bioinformatics analysis tools: BIOBASE and GeneGO.
- 5. Hosted NCBI training for New England librarians.
- 6. Hosted NLM Associate Fellow.
- Hired Bioinformatics Librarian.
- 8. Dedicated two collection funds to bioscience.

## **Bioinformatics Support**

- Supported purchase of campus-wide access for bioinformatics tools.
- Developed and maintain subject guides.
- Developed video tutorials for bioinformatics resources.

MITLIBRATION BITS A collaboration of the MIT Engineering and Science Libraries and Harvard's Countway Library BioInformatics Tutorial Series

http://libguides.mit.edu/video

• Ask-Bioinfo@mit.edu An email list dedicated to answering bioinformatics research questions.

• Over the last 5 years, approximately 49 bioinformatics classes, seminars, and training sessions have been hosted or provided by MIT Libraries.

#### Class: Bioinformatics for Beginners

Description: Learn about the organization of key NCBI databases, understand the database record structure, and work with the BLAST search tool.

#### Class: **Practically Genomic**

Description: Multipart series focusing on bioinformatics data analysis tools and techniques.

#### Class: **BIOBASE**

Description: Introduction to BIOBASE Knowledge Library (BKL), licensed by MIT Libraries. BIOBASE offers curated databases and analysis tools designed to help life science researchers accelerate discovery processes.

# Biosciences @ MIT Libraries





#### Scholarly Publishing, Open Access, E-Science Initiatives, and Outreach

- their publication practices.
- Worked with MIT Libraries' Scholarly Publishing Consultant to develop outreach strategies for faculty affected by the NIH Public Access Policy.
- Helped to identify and recruit participants for NIH data infrastructure grant application.
- Participated in NN/ML funded program about e-science roles for librarians.
- Developed librarian outreach toolkit for academic departments.
- Tested toolkit by developing outreach plans for the Division of Health Science and Technology and the Department of Biological Engineering.

#### Collaborative Relationships



- Produced video tutorials highlighting bioinformatics resources.
- Co-Sponsored bioinformatics training programs.

- Collaborative on outreach to the School of Health Sciences and Technology. Shared knowledge and strategies to support open access publishing. Developed joint projects for NLM Fellow.

#### NSTITUTE for Integrative Cancer Research at MI

Koch Institute for Integrative Center Research:

#### Take Home Message

To support interdisciplinary bioscience, MIT Libraries created a team with a broad range of skills and domain expertise. This group has been able to expand its capacity by partnering with the larger MIT community and librarians at other institutions to develop a diverse bioscience support program.

• Interviewed faculty about the impact of the NIH Public Access Policy on

Harvard's Countway Library of Medicine:

• Delivered multipart training sessions on bioinformatics analysis tools. • Shared costs for campus-wide purchase of BioBase and GeneGo.



• Held training sessions on Gene Pattern Array. • Shared costs for campus-wide purchase of BioBase and ChemDraw.

