

Integrating Tools and Data: NCIBI Suite of Tools

National Center for Integrative
Biomedical Informatics
(NCIBI -- www.ncibi.org)

NCIBI Design Concepts

- Where do the researchers start from?
 - Data: gene or list of genes?
 - Disease or concept: Browsing for reassurance and novelty
- Where do they want to go?
 - Want reassurance of what they know: Trust
 - Novel discovery that leads them to hypothesis generation
 - Rapid, accurate and usable.

NCIBI Tool Integration

- MiMI molecular interactions database
 - Web interface
 - Integration of tools
- Annotation Tools – using Literature data
 - GIN, MiSearch, Gene2MeSH
- Visualization Tools
 - MiMI Gene Browser, BioSearch2D
- Cytoscape Plugin for MiMI
- Network Matching with SAGA

Today's Demonstration

- Use biological case-studies (DBP) to demonstrate the utility and integration of tools developed by NCIBI.
- Featured tools:
 - MiMI (Michigan Molecular Interactions)
 - MiSearch (Adaptive Literature Search Tool)
 - GIN (NLP literature summarization and centroiding)
 - Gene2Mesh (Gene / Mesh Term matrix)
 - NetworkBrowser (Flex-based network visualization tool)
 - BioSearch2D (Heat-map viewer for literature (gene/mesh) interactions)
 - MiMI Plugin for Cytoscape (API and visualization for the MiMI Data and linkage to other Cytoscape Plugin tools)
 - SAGA (subgraph approximate matching tools for network similarity)
 - BioNLP (parsed and gene-tagged version of PubMed and PMCOA)

Come See Us and Interact with NCIBI

- NCIBI Demonstration in Room C1
 - Posters, Handouts,
 - Live (hopefully) Demo
 - Meet and talk with nearly famous people
- www.NCIBI.org
 - (if you can't make it in person)