NCBO Web Services: Powering Semantically Aware Applications

Trish Whetzel
Outreach Coordinator
National Center for Biomedical Ontology

• Mission
  – To create software for the application of ontologies in biomedical science and clinical care

• NCBO Partners
  – Stanford University - Dr. Mark A. Musen
  – Mayo Clinic - Dr. Christopher G. Chute
  – University of Buffalo - Dr. Barry Smith
  – University of Victoria - Dr. Margaret-Anne Storey
NCBO Key Activities

• We *create and maintain a library* of biomedical ontologies
• We *build tools and Web services* to enable the use of ontologies
• We *collaborate with scientific communities* that develop and use ontologies
National Centers for Biomedical Computing

(http://www.ncbc.cs.org)
Outline

• NCBO Web services Overview
• Ontology Development and Visualization
• Data Annotation
• Data Integration
Outline

• NCBO Web services
• Ontology Development and Visualization
• Data Annotation
• Data Integration
http://www.biotec.tu-dresden.de/research/schroeder/dog4dag/
Outline

• NCBO Web services
• Ontology Development and Visualization
• Data Annotation
• Data Integration
# Investigation Description

- MAGE-TAB template submission

**Assay Title**: Transcriptomics

**Experimental Design**

- Design Type

**Experimental Factor Name**: TIME

**Experimental Factor Type**: Time

**Quality Control Type**: biological_replicate

**Public Release Date**: YYYY-MM-DD

**Person Last Name**: name

**Person First Name**: SEEKID

**Person Email**: submitter

**PubMed ID**: all_pairs

**array_platform_variation_design**

**binding_site_identification_design**

**cell_component_comparation_design**

**cell_cycle_design**

**cell_type_comparation_design**

http://www.sysmo-db.org/rightfield
Lead II Amplitude

Time & Amplitude
Second: 1.00 mV: 11

Ontology
MN Code 1-1-1

Annotation
Q/R amplitude ratio >= 1/3, plus Q duration >= 0.03 sec.

http://wiki.cvrgrid.org/index.php/ECGGadget
Outline

• NCBO Web services
• Ontology Development and Visualization
• Data Annotation
• Data Integration
Gene Weaver Website and Tools

Gene Weaver allows users to integrate phenotype centered gene sets across species, tissue and experimental platform. Sets can be stored, shared and compared privately among user defined groups of investigators.
1. Insulin Resistance and Atherosclerosis in Women With Lupus
2. Non-traditional Cardiovascular Risk Factors and Atherosclerosis in Type 2 Diabetes
4. Non-Invasive Assessment of Atherosclerosis in Patients With CGD and Other Disorders of the Immune System
5. Multi-Analyte, Genetic, and Thrombogenic Markers of Atherosclerosis
6. Understanding the Genetic and Hereditary Basis of Atherosclerosis

See all resources at NCBO
Thank you!

- Keep in touch
  - Software support: support@bioontology.org
  - Twitter: @bioontology
  - Facebook: [http://on.fb.me/bioontology](http://on.fb.me/bioontology)
  - LinkedIn: [http://linkd.in/ncbo-group](http://linkd.in/ncbo-group)