

BioPortal: A Community-Based Ontology Repository

The screenshot displays the BioPortal website interface. At the top, there is a navigation bar with tabs for 'Browse', 'Search', 'Projects', 'Annotate', 'All Mappings', and 'All Resources Alpha'. On the right side of the navigation bar, there are links for 'Sign In', 'Register', 'Help/About', and 'Send Feedback'. Below the navigation bar, the main content area is titled 'human phenotype ontology'. It features three search boxes: 'Search all ontologies' with a 'Search' button and a link to 'Advanced Search'; 'Find an ontology' with an 'Explore' button and a link to 'Browse Ontologies >'; and 'Search resources' with a 'Search' button and a link to 'Advanced Resource Search'. Below these search boxes, there are three main content sections: 'Most Active Ontologies' with a table, 'Latest Notes' with a list of updates, and 'Latest Mappings' with a list of ontology relationships.

Ontology	Version	Notes	Mappings
Human disease	1.36	0	17732
Mouse adult gross anatomy	1.194	0	3905
NCI Thesaurus	08.12d	9	3798
Foundational Model of Anatomy	3.0	0	1997
Zebrafish anatomy and development	1.21	0	791

Statistics

Ontologies	143
Concepts	723,806
Resources Indexed	11

Latest Notes

- [change namespace from IAO to OBI material entity \(Ontology for Biomedical Investigations\)](#) 06/10/09 whetzel
- [RE:Add mapping to Unit ontology? unit \(Experimental Factor Ontology\)](#) 06/01/09 jamesmalone
- [Add mapping to Unit ontology? unit \(Experimental Factor Ontology\)](#) 04/12/09 whetzel
- [Release notes for version 2009-04-02 entity \(NanoParticle Ontology\)](#) 04/02/09 sobolevnm
- [Missing preferred term field OBI 0000577 \(Ontology for Biomedical Investigations\)](#) 04/01/09 whetzel

Latest Mappings

- [cellular component \(Biological process\) => Cell component \(Foundational Model of Anatomy\)](#) 04/27/09 matthiassamwald
- [Cell component \(Foundational Model of Anatomy\) => cellular component \(Biological process\)](#) 04/27/09 matthiassamwald
- [Cell \(Foundational Model of Anatomy\) => Cell \(NCI Thesaurus\)](#) 04/16/09 lechatpito
- [Cell \(NCI Thesaurus\) => Cell \(Foundational Model of Anatomy\)](#) 04/16/09 lechatpito
- [tbio:Cell \(Basic Vertebrate Anatomy\) => Cell \(NCI Thesaurus\)](#) 04/16/09 lechatpito

<http://biportal.bioontology.org>

The BioPortal Ontology Repository

- Web accessible repository of ontologies for the biomedical community:
 - <http://bioportal.bioontology.org>
- Online support for ontology
 - Peer review
 - Notes (comments and discussion)
 - Versioning
 - Mapping
 - Search
 - Resources

The BioPortal Technology

- BioPortal is a library of biomedical ontologies
- All BioPortal data is accessible through **REST services**
 - BioPortal user interface accesses the repository through REST services as well
- The BioPortal technology is **domain-independent**
 - There are installations of BioPortal for libraries in other domains
 - BioPortal code is open-source
 - Technology stack includes mySQL, J2EE, Spring, Hibernate, Ruby-on-Rails

A Library of Biomedical Ontologies

BioPortal [Browse](#) [Search](#) [Projects](#) [Annotate](#) [All Mappings](#) [All Resources Alpha](#) [Sign In](#) [Register](#)

SUBMIT ONTOLOGY [Submit New Ontology](#)

FILTER BY CATEGORY

FILTER BY GROUP [Link To This Filter](#)

FILTER BY TEXT

 [Subscribe to all ontologies](#)

ONTOLOGY NAME	FORMAT	VERSION	AUTHOR	UPLOADED ON	GROUP	STATUS
ABA Adult Mouse Brain (ABA)	OWL	1.0	Chinh Dang	06/12/2009		Explore
African Traditional Medicine (ATMO)	OBO Format	1.0.1	Ghislain Atemezing	04/23/2009		Explore
Amino Acid (amino-acid)	OWL	1.2	Nick Drummond, Georgina Moulton, Robert Stevens, Phil Lord	04/25/2009		Explore
Amino Acid with Simplified Chinese annotations (Amino Acid-zh_CN)	OWL	v1.2 zh1.1	Nick Drummond, Georgina Moulton, Robert Stevens, Phil Lord. Annotated by: Lin Zhang	04/27/2009		Explore
Amphibian gross anatomy (AAO)	OBO Format	1.8	AmphiAnat list	07/30/2008	OBOFoundry	Explore
Animal natural history and life history (ADW)	PROTEGE	See Remote Site	Http://animaldiversity Administrators	04/27/2009		
Ascomycete phenotype ontology (APO)	OBO Format	1.2	Fungal_anatomy Administrators	05/02/2009		Explore
Basic Vertebrate Anatomy (basic-vertebrate-gross-anatomy)	OWL	1.1		01/16/2007		Explore
Bilateria anatomy (BILA)	OBO Format	See Remote Site	Thorsten Heinrich	04/13/2009		

BioPortal Library

- 140 ontologies in OWL, RDFS, Protégé frames, and OBO
- 700,000 classes in the ontologies

Ontology Search

Search all ontologies Search time: 3.3 s

Search term:

Include attributes in search

Contains Exact Match

Selected Ontologies (111):

Categories: Filter:

Ontologies:

- ABA Adult Mouse Brain (ABA)
- African Traditional Medicine (ATMO)
- Amino Acid (amino-acid)
- Amino Acid with Simplified Chinese annotations
- Amphibian gross anatomy (AAO)

Matching Concepts 427 results

Filter: Exact Matches Only

Concept Name	Ontology	Found In
Melanoma	Cell line ontology	Preferred Name
Melanoma	Galen	Preferred Name
melanoma	Mouse pathology	Preferred Name
Melanoma	NCI Thesaurus	Preferred Name
melanoma	Experimental Factor Ontology	Preferred Name
Malignant melanoma	human phenotype ontology	Synonym
AMELANOTIC MELANOMA	DermLex: The Dermatology Lexicon	Preferred Name
Amelanotic Melanoma	NCI Thesaurus	Preferred Name
Anal Melanoma	NCI Thesaurus	Preferred Name
ANGIOMATOID MELANOMA	DermLex: The Dermatology Lexicon	Preferred Name
Breast Melanoma	NCI Thesaurus	Preferred Name
BULLOUS MELANOMA	DermLex: The Dermatology Lexicon	Preferred Name
Cervical Melanoma	NCI Thesaurus	Preferred Name
CHONDROID MELANOMA	DermLex: The Dermatology Lexicon	Preferred Name

Mappings in BioPortal

- Mappings in BioPortal are **concept-to-concept** mappings
- Mappings are created by users or uploaded in bulk
- Bulk uploads are usually the results of automatic or semi-automatic mapping
- There is detailed **metadata** for provenance of mappings
- ~30,000 mappings in BioPortal now
 - The number will dramatically increase (to millions) in the coming weeks

BioPortal technology is domain-independent

- Other installations of BioPortal:
 - Marine Metadata Initiative repository
 - Open Ontology Repository

Marine Metadata Interoperability
Ontology Registry and Repository alpha

Other MMI Ontology Products: [voc2rdf](#) :: [VINE](#)

[Home](#) [Browse](#) [Search](#) [Projects](#) [Sign In](#) [Register](#)

Ontology Name	Format	Version	Author	Uploaded On	
AGU Index Terms	OWL-DL	20090604T210443	AGU	06/04/2009	Explore
ARGO Instruments	OWL-DL	20090605T194103	ARGO	06/05/2009	Explore
ARGO Parameters	OWL-DL	20090605T194513	ARGO	06/05/2009	Explore

OOR Open Ontology Repository

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[Browse](#) [Search](#) [Projects](#) [All Mappings](#)

Filter by Category

Filter by Group [Link To This Filter](#)

Filter Ontologies

The panel today

- Carlos Rueda, Paul Alexander & John Graybeal (MBARI): "MMI Ontology Registry and Repository"
- Mike Dean (BBN): "OOR Progress, Federation, and Other Thoughts"
- Stephen Granite (Johns Hopkins University) - "Utilizing NCBO Tools to Develop & Use an ECG Ontology"
- Alex Garcia (University of Bremen) - "The Ontology Repository for Assistive Technologies, ORATE"
- Ken Baclawski (Northeastern University) - "OOR at Northeastern"