## **Resource Summary Report**

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# **BioPortal**

RRID:SCR\_002713 Type: Tool

**Proper Citation** 

BioPortal (RRID:SCR\_002713)

#### **Resource Information**

URL: http://bioportal.bioontology.org/

Proper Citation: BioPortal (RRID:SCR\_002713)

Description: Open repository of biomedical ontologies that provides access via Web browsers and Web services to ontologies. It supports ontologies in OBO format, OWL, RDF, Rich Release Format (RRF), Protege frames, and LexGrid XML. Functionality includes the ability to browse, search and visualize ontologies as well as to comment on, and create mappings for ontologies. Any registered user can submit an ontology. The NCBO Annotator and NCBO Resource Index can also be accessed via BioPortal. Additional features: \* Add Reviews: rate the ontology according to several criteria and describe your experience using the ontology. \* Add Mappings: submit point-to-point mappings or upload bulk mappings created with external tools. Notification of new Mappings is RSS-enabled and Mappings can be browsed via BioPortal and accessed via Web services. \* NCBO Annotator: Tool that tags free text with ontology terms. NCBO uses the Annotator to generate ontology annotations, creating an ontology index of these resources accessible via the NCBO Resource Index. The Annotator can be accessed through BioPortal or directly as a Web service. The annotation workflow is based on syntactic concept recognition (using the preferred name and synonyms for terms) and on a set of semantic expansion algorithms that leverage the ontology structure (e.g., is\_a relations). \* NCBO Resource Index: The NCBO Resource Index is a system for ontology based annotation and indexing of biomedical data; the key functionality of this system is to enable users to locate biomedical data linked via ontology terms. A set of annotations is generated automatically, using the NCBO Annotator, and presented in BioPortal. This service uses a concept recognizer (developed by the National Center for Integrative Biomedical Informatics, University of Michigan) to produce a set of annotations and expand them using ontology is\_a relations. \* Web services: Documentation on all Web services and example code is available at: BioPortal Web services.

Abbreviations: BioPortal

Synonyms: BioPortal Knowledgebase

**Resource Type:** service resource, controlled vocabulary, ontology, data or information resource, repository, storage service resource, data repository

Defining Citation: PMID:19483092, PMID:21672956, PMID:18999306

**Keywords:** biomedical, thesaurus, ontology mapping, annotation, metadata standard, ontology repository, portal, web service, obo, owl, rdf, rrf protege frame, lexgrid xml

Funding: NIGMS U24 GM143402

**Availability:** Open unspecified license, Acknowledgement requested, The community can contribute to this resource

Resource Name: BioPortal

Resource ID: SCR\_002713

Alternate IDs: nif-0000-23346

Alternate URLs: https://www.force11.org/node/4646

**Record Creation Time:** 20220129T080214+0000

Record Last Update: 20250519T203217+0000

### **Ratings and Alerts**

No rating or validation information has been found for BioPortal.

No alerts have been found for BioPortal.

### Data and Source Information

Source: SciCrunch Registry

### **Usage and Citation Metrics**

We found 304 mentions in open access literature.

Listed below are recent publications. The full list is available at <u>NIF</u>.

Behr AS, et al. (2024) Ontologies4Cat: investigating the landscape of ontologies for catalysis research data management. Journal of cheminformatics, 16(1), 16.

Romao P, et al. (2024) An ontology-based tool for modeling and documenting events in neurosurgery. BMC medical informatics and decision making, 24(1), 216.

Cavalleri E, et al. (2024) An ontology-based knowledge graph for representing interactions involving RNA molecules. Scientific data, 11(1), 906.

Geroyska S, et al. (2024) N-Myristoytransferase Inhibition Causes Mitochondrial Iron Overload and Parthanatos in TIM17A-Dependent Aggressive Lung Carcinoma. Cancer research communications, 4(7), 1815.

Nourani E, et al. (2024) Lifestyle factors in the biomedical literature: an ontology and comprehensive resources for named entity recognition. Bioinformatics (Oxford, England), 40(11).

Liu BL, et al. (2024) ?Midget cave spiders (Araneae, Leptonetidae) from Jiangxi and Fujian Province, China. ZooKeys, 1189, 287.

Song ZQ, et al. (2024) ?Taxonomic notes on the genus Itea (Iteaceae). PhytoKeys, 239, 59.

Parker N, et al. (2024) Leveraging the Genetics of Psychiatric Disorders to Prioritize Potential Drug Targets and Compounds. medRxiv : the preprint server for health sciences.

Corcho O, et al. (2024) A maturity model for catalogues of semantic artefacts. Scientific data, 11(1), 479.

Lin RZ, et al. (2024) Dermoscopy Differential Diagnosis Explorer (D3X) Ontology to Aggregate and Link Dermoscopic Patterns to Differential Diagnoses: Development and Usability Study. JMIR medical informatics, 12, e49613.

Herr K, et al. (2024) Estimating prevalence of rare genetic disease diagnoses using electronic health records in a children's hospital. HGG advances, 5(4), 100341.

Dong Y, et al. (2024) The Role of SPEN Mutations as Predictive Biomarkers for Immunotherapy Response in Colorectal Cancer: Insights from a Retrospective Cohort Analysis. Journal of personalized medicine, 14(2).

Mullin S, et al. (2024) Chemical entity normalization for successful translational development of Alzheimer's disease and dementia therapeutics. Journal of biomedical semantics, 15(1), 13.

Di Muri C, et al. (2024) Assessing semantic interoperability in environmental sciences: variety of approaches and semantic artefacts. Scientific data, 11(1), 1055.

de Boer A, et al. (2024) Disentangling the heterogeneity of multiple sclerosis through identification of independent neuropathological dimensions. Acta neuropathologica, 147(1),

90.

Hu J, et al. (2024) Development and application of Chinese medical ontology for diabetes mellitus. BMC medical informatics and decision making, 24(1), 18.

Altuhaifa F, et al. (2024) Developing an Ontology Representing Fall Risk Management Domain Knowledge. Journal of medical systems, 48(1), 47.

Gonçalves RS, et al. (2024) The text2term tool to map free-text descriptions of biomedical terms to ontologies. Database : the journal of biological databases and curation, 2024.

van Rijn JPM, et al. (2024) From papers to RDF-based integration of physicochemical data and adverse outcome pathways for nanomaterials. Journal of cheminformatics, 16(1), 49.

Mekkes NJ, et al. (2024) Identification of clinical disease trajectories in neurodegenerative disorders with natural language processing. Nature medicine, 30(4), 1143.