

# Resource Summary Report

Generated by [PRECISE-TBI](#) on Sep 7, 2026

## Open Biological and Biomedical Ontologies Relationship Types

RRID:SCR\_004409

Type: Tool

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### Proper Citation

Open Biological and Biomedical Ontologies Relationship Types (RRID:SCR\_004409)

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### Resource Information

**URL:** <http://purl.bioontology.org/ontology/OBOREL>

**Proper Citation:** Open Biological and Biomedical Ontologies Relationship Types (RRID:SCR\_004409)

**Description:** THIS RESOURCE IS NO LONGER IN SERVICE, documented on April 23, 2014. Ontology that defines core relations used in all OBO ontologies. Obsolete. Replaced with RO.

**Abbreviations:** OBOREL

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

**Keywords:** obo

**Availability:** THIS RESOURCE IS NO LONGER IN SERVICE

**Resource Name:** Open Biological and Biomedical Ontologies Relationship Types

**Resource ID:** SCR\_004409

**Alternate IDs:** nlx\_157539

**Record Creation Time:** 20220129T080224+0000

**Record Last Update:** 20260905T132519+0000

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### Ratings and Alerts

No rating or validation information has been found for Open Biological and Biomedical Ontologies Relationship Types.

No alerts have been found for Open Biological and Biomedical Ontologies Relationship Types.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 62 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [PRECISE-TBI](#).

Bochalis E, et al. (2025) Unraveling diversity by isolating peptide sequences specific to distinct taxonomic groups. bioRxiv : the preprint server for biology.

Yargan D, et al. (2025) Terminological Resources for Biologically Inspired Design and Biomimetics: Evaluation of the Potential for Ontology Reuse. Biomimetics (Basel, Switzerland), 10(1).

Rosner B, et al. (2025) An Ontology for Digital Medicine Outcomes: Development of the Digital Medicine Outcomes Value Set (DOVeS). JMIR medical informatics, 13, e67589.

Meyer C, et al. (2024) IMPatientT: An Integrated Web Application to Digitize, Process and Explore Multimodal PATIENT data. Journal of neuromuscular diseases, 11(4), 855.

Callahan TJ, et al. (2024) An open source knowledge graph ecosystem for the life sciences. Scientific data, 11(1), 363.

Vogt L, et al. (2024) Semantic units: organizing knowledge graphs into semantically meaningful units of representation. Journal of biomedical semantics, 15(1), 7.

Roy BG, et al. (2024) A single viral amino acid shapes the root system architecture of a plant host upon virus infection. BMC microbiology, 24(1), 267.

Stear BJ, et al. (2024) Petagraph: A large-scale unifying knowledge graph framework for integrating biomolecular and biomedical data. Scientific data, 11(1), 1338.

Mullen KR, et al. (2024) The Vertebrate Breed Ontology: Towards Effective Breed Data Standardization. ArXiv.

Schenk PM, et al. (2024) Towards an ontology of mental health: Protocol for developing an ontology to structure and integrate evidence regarding anxiety, depression and psychosis. Wellcome open research, 9, 40.

Ergen C, et al. (2024) Consensus prediction of cell type labels in single-cell data with popV. Nature genetics, 56(12), 2731.

Wagner MM, et al. (2024) Towards Machine-FAIR: Representing software and datasets to facilitate reuse and scientific discovery by machines. Journal of biomedical informatics, 154, 104647.

Boadu F, et al. (2023) Combining protein sequences and structures with transformers and equivariant graph neural networks to predict protein function. *bioRxiv : the preprint server for biology*.

Wang Z, et al. (2023) Global Proteome-Wide Analysis of Cysteine S-Nitrosylation in *Toxoplasma gondii*. *Molecules (Basel, Switzerland)*, 28(21).

Cox S, et al. (2023) Toward an ontology of tobacco, nicotine and vaping products. *Addiction (Abingdon, England)*, 118(1), 177.

Gong S, et al. (2023) Toxicity assessment of hexafluoropropylene oxide-dimer acid on morphology, heart physiology, and gene expression during zebrafish (*Danio rerio*) development. *Environmental science and pollution research international*, 30(12), 32320.

Boadu F, et al. (2023) Combining protein sequences and structures with transformers and equivariant graph neural networks to predict protein function. *Bioinformatics (Oxford, England)*, 39(39 Suppl 1), i318.

Callahan TJ, et al. (2023) Knowledge-Driven Mechanistic Enrichment of the Preeclampsia Ignorome. *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*, 28, 371.

Feng J, et al. (2023) A Schema for Digitized Surface Swab Site Metadata in Open-Source DNA Sequence Databases. *mSystems*, 8(2), e0128422.

Liu M, et al. (2022) ICEO, a biological ontology for representing and analyzing bacterial integrative and conjugative elements. *Scientific data*, 9(1), 11.