BioModels

RRID:SCR_001993
Type: Tool

Proper Citation

BioModels (RRID:SCR_001993)

Resource Information

URL: http://www.ebi.ac.uk/biomodels-main/

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Description: Repository of mathematical models of biological and biomedical systems. Hosts selection of existing literature based physiologically and pharmaceutically relevant mechanistic models in standard formats. Features programmatic access via Web Services. Each model is curated to verify that it corresponds to reference publication and gives proper numerical results. Curators also annotate components of models with terms from controlled vocabularies and links to other relevant data resources allowing users to search accurately for models they need. Models can be retrieved in SBML format and import/export facilities are being developed to extend spectrum of formats supported by resource.

Abbreviations: BIOMD

Synonyms: BioModels Database - A Database of Annotated Published Models, BioModels Database, BioModels

Resource Type: storage service resource, data repository, service resource, database, topical portal, portal, data or information resource

Defining Citation: PMID:20587024, PMID:16381960

Keywords: FAIR sharing, mathematical model, computational model, simulation, kinetic model, annotation, web service, data analysis service, systems biology, biological model, biology, molecular biology, nucleotide sequence, gene expression, protein, gene, dna, rna, genetics, gold standard

Availability: CC0, Public Domain Dedication, Cf. our terms of use.

Resource Name: BioModels

Resource ID: SCR_001993

Alternate IDs: nif-0000-02609

Alternate URLs: http://www.ebi.ac.uk/biomodels/

Record Creation Time: 20220129T080210+0000

Record Last Update: 20250407T215248+0000

Ratings and Alerts

No rating or validation information has been found for BioModels.

No alerts have been found for BioModels.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 232 mentions in open access literature.

Listed below are recent publications. The full list is available at RRID.

Etcheverry M, et al. (2025) AI-driven automated discovery tools reveal diverse behavioral competencies of biological networks. eLife, 13.

Cooper HB, et al. (2024) A validated pangenome-scale metabolic model for the Klebsiella pneumoniae species complex. Microbial genomics, 10(2).

Matzko RO, et al. (2024) BioNexusSentinel: a visual tool for bioregulatory network and cytohistological RNA-seq genetic expression profiling within the context of multicellular simulation research using ChatGPT-augmented software engineering. Bioinformatics advances, 4(1), vbae046.

Xu J, et al. (2024) Curating models from BioModels: Developing a workflow for creating OMEX files. bioRxiv : the preprint server for biology.

Pérez-Fernández BA, et al. (2024) Sodium acetate increases the productivity of HEK293 cells expressing the ECD-Her1 protein in batch cultures: experimental results and metabolic flux analysis. Frontiers in bioengineering and biotechnology, 12, 1335898.

Jardine BE, et al. (2024) MakeSBML: a tool for converting between Antimony and SBML. Journal of integrative bioinformatics, 21(1).

Xu J, et al. (2024) Curating models from BioModels: Developing a workflow for creating OMEX files. PloS one, 19(12), e0314875.

Tsirvouli E, et al. (2024) Dynamic Boolean modeling of molecular and cellular interactions in psoriasis predicts drug target candidates. iScience, 27(2), 108859.

Jallet D, et al. (2024) Integrative in vivo analysis of the ethanolamine utilization bacterial microcompartment in Escherichia coli. mSystems, 9(8), e0075024.

Sizek H, et al. (2024) Unlocking mitochondrial dysfunction-associated senescence (MiDAS) with NAD+ - A Boolean model of mitochondrial dynamics and cell cycle control. Translational oncology, 49, 102084.

Fontanesi M, et al. (2023) Exploiting the structure of biochemical pathways to investigate dynamical properties with neural networks for graphs. Bioinformatics (Oxford, England), 39(11).

Boojari MA, et al. (2023) Developing a metabolic model-based fed-batch feeding strategy for Pichia pastoris fermentation through fine-tuning of the methanol utilization pathway. Microbial biotechnology, 16(6), 1344.

Mirhakkak MH, et al. (2023) Genome-scale metabolic modeling of Aspergillus fumigatus strains reveals growth dependencies on the lung microbiome. Nature communications, 14(1), 4369.

Strain B, et al. (2023) How reliable are Chinese hamster ovary (CHO) cell genome-scale metabolic models? Biotechnology and bioengineering, 120(9), 2460.

Nègre D, et al. (2023) Reconciliation and evolution of Penicillium rubens genome-scale metabolic networks-What about specialised metabolism? PloS one, 18(8), e0289757.

Xu J, et al. (2023) SBMLKinetics: a tool for annotation-independent classification of reaction kinetics for SBML models. BMC bioinformatics, 24(1), 248.

Jardine BE, et al. (2023) MakeSBML: A tool for converting between Antimony and SBML. ArXiv.

Gall L, et al. (2023) Homeostasis, injury, and recovery dynamics at multiple scales in a self-

organizing mouse intestinal crypt. eLife, 12.

Suyama H, et al. (2023) Integrating proteomic data with metabolic modeling provides insight into key pathways of Bordetella pertussis biofilms. Frontiers in microbiology, 14, 1169870.

Aghakhani S, et al. (2023) Hybrid computational modeling highlights reverse warburg effect in breast cancer-associated fibroblasts. Computational and structural biotechnology journal, 21, 4196.