Resource Summary Report

Generated by dkNET on May 16, 2025

Morpheus

RRID:SCR_014975
Type: Tool

Proper Citation

Morpheus (RRID:SCR_014975)

Resource Information

URL: https://morpheus.gitlab.io/

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Description: Modeling and simulation environment for study of multi scale and multicellular systems. Users can construct and simulate models of gene regulation, signaling pathways, tissue patterning and morphogenesis and explore the effects of multiscale feedbacks between these processes. Morpheus can render 2D and 3D models using graphical user interface.

Resource Type: software resource, 3d visualization software, data visualization software, simulation software, software application, data processing software

Defining Citation: PMID:24443380

Keywords: simulation, modeling, multicellular, systems biology, cell-based models, data visualization, differential equations, reaction-diffusion systems, bio.tools

Funding: BMBF 0315734;
BMBF 0316169;
DFG

Availability: Free, Available for download, Freely available

Resource Name: Morpheus

Resource ID: SCR_014975

Alternate IDs: biotools:morpheus-framework

Alternate URLs: https://gitlab.com/morpheus.lab/morpheus, https://bio.tools/morpheus-framework

Old URLs: https://imc.zih.tu-dresden.de/wiki/morpheus

Record Creation Time: 20220129T080323+0000

Record Last Update: 20250516T054047+0000

Ratings and Alerts

No rating or validation information has been found for Morpheus.

No alerts have been found for Morpheus.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 607 mentions in open access literature.

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

Mokshina N, et al. (2025) A Fresh Look at Celery Collenchyma and Parenchyma Cell Walls Through a Combination of Biochemical, Histochemical, and Transcriptomic Analyses. International journal of molecular sciences, 26(2).

Gupta M, et al. (2025) Meta-QTL analysis for mining of candidate genes and constitutive gene network development for viral disease resistance in maize (Zea mays L.). Heliyon, 11(1), e40984.

da Silva JCT, et al. (2025) Label-free proteomic analysis of Duchenne and Becker muscular dystrophy showed decreased sarcomere proteins and increased ubiquitination-related proteins. Scientific reports, 15(1), 3293.

Tomczak K, et al. (2025) Plasma DNA Methylation-Based Biomarkers for MPNST Detection in Patients With Neurofibromatosis Type 1. Molecular carcinogenesis, 64(1), 44.

Richter A, et al. (2025) The master male sex determinant Gdf6Y of the turquoise killifish arose through allelic neofunctionalization. Nature communications, 16(1), 540.

Lee KE, et al. (2025) Calcium-binding protein CALU-1 is essential for proper collagen formation in Caenorhabditis elegans. Cellular and molecular life sciences : CMLS, 82(1), 62.

Kienzler JC, et al. (2025) Transcriptome analysis of novel B16 melanoma metastatic variants generated by serial intracarotid artery injection. Acta neuropathologica communications, 13(1), 10.

Cigrang M, et al. (2025) Pan-inhibition of super-enhancer-driven oncogenic transcription by next-generation synthetic ecteinascidins yields potent anti-cancer activity. Nature communications, 16(1), 512.

Kistner A, et al. (2024) Prednisolone and rapamycin reduce the plasma cell gene signature and may improve AAV gene therapy in cynomolgus macaques. Gene therapy, 31(3-4), 128.

Kharkwal AC, et al. (2024) Isolation and characterization of a newly discovered plant growth-promoting endophytic fungal strain from the genus Talaromyces. Scientific reports, 14(1), 6022.

Wongkuna S, et al. (2024) Identification of a microbial sub-community from the feral chicken gut that reduces Salmonella colonization and improves gut health in a gnotobiotic chicken model. Microbiology spectrum, 12(3), e0162123.

Webster NJG, et al. (2024) Dysregulation of RNA splicing in early non-alcoholic fatty liver disease through hepatocellular carcinoma. Scientific reports, 14(1), 2500.

Holt LM, et al. (2024) Astrocytic CREB in nucleus accumbens promotes susceptibility to chronic stress. bioRxiv : the preprint server for biology.

Hogan CH, et al. (2024) Multifaceted roles for STAT3 in gammaherpesvirus latency revealed through in vivo B cell knockout models. mBio, 15(2), e0299823.

Casalino-Matsuda SM, et al. (2024) Myeloid Zfhx3 deficiency protects against hypercapnia-induced suppression of host defense against influenza A virus. JCI insight, 9(4).

Randhawa A, et al. (2024) Calcium signaling positively regulates cellulase translation and secretion in a Clr-2-overexpressing, catabolically derepressed strain of Penicillium funiculosum. Biotechnology for biofuels and bioproducts, 17(1), 21.

Janssen AWF, et al. (2024) Comparison of iPSC-derived human intestinal epithelial cells with Caco-2 cells and human in vivo data after exposure to Lactiplantibacillus plantarum WCFS1. Scientific reports, 14(1), 26464.

Eirin A, et al. (2024) Obesity-driven mitochondrial dysfunction in human adipose tissue-derived mesenchymal stem/stromal cells involves epigenetic changes. Cell death & disease, 15(6), 387.

Sandybayev N, et al. (2024) Metagenomic profiling of nasopharyngeal samples from adults with acute respiratory infection. Royal Society open science, 11(7), 240108.

Mun SK, et al. (2024) Targeting Heme Oxygenase 2 (HO2) with TiNIR, a Theragnostic Approach for Managing Metastatic Non-Small Cell Lung Cancer. Biomaterials research, 28, 0026.