

# Resource Summary Report

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## Morpheus

RRID:SCR\_014975

Type: Tool

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### Proper Citation

Morpheus (RRID:SCR\_014975)

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### 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:** data processing software, 3d visualization software, data visualization software, simulation software, software resource, software application

**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:** 20260731T042919+0000

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## Ratings and Alerts

No rating or validation information has been found for Morpheus.

No alerts have been found for Morpheus.

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## Data and Source Information

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

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## Usage and Citation Metrics

We found 694 mentions in open access literature.

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

Urbauer E, et al. (2026) Reduced Intestinal GLP-1+ Cell Numbers Are Associated With an Inflammation-related Epithelial Metabolic Signature. Cellular and molecular gastroenterology and hepatology, 20(2), 101656.

Vishnoi M, et al. (2026) A prognostic matrix gene expression signature defines functional glioblastoma phenotypes and niches. Communications biology, 9(1), 18.

Gou X, et al. (2026) Identification of a Two-Gene Biomarker Correlated with Sensitivity to Combined PARP7 Inhibition and AHR Activation in Cancer Cells. Cancer research communications, 6(1), 5.

Pereira-Martins DA, et al. (2026) ?Np73 isoform defines a TP53-mutant-like poor-risk subgroup of acute myeloid leukemia. Cell reports. Medicine, 102540.

Eigenbrood J, et al. (2025) Spatial Profiling Identifies Regionally Distinct Microenvironments and Targetable Immunosuppressive Mechanisms in Pediatric Osteosarcoma Pulmonary Metastases. Cancer research, 85(12), 2320.

Allen B, et al. (2025) PTP1B deficiency in myeloid cells increases susceptibility to Candida albicans systemic infection by modulating antifungal immunity. mBio, 16(10), e0151625.

Dhume K, et al. (2025) T-cell immunity against influenza virus does not require Th1 or Th17 master regulator transcription factors. Mucosal immunology, 18(6), 1284.

Butkute A, et al. (2025) Unveiling Theranostics: Nanocomplex-Assisted Photodynamic Eradication of Aggressive Cancer Cells and Modulation of Tumor-Associated Macrophages. International journal of nanomedicine, 20, 9787.

Sinha R, et al. (2025) bHLH35 mediates specificity in plant responses to multiple stress conditions. bioRxiv : the preprint server for biology.

Divolis G, et al. (2025) Transcriptomic analysis reveals shared deregulated neutrophil responses in COVID-19 and idiopathic pulmonary fibrosis. *Respiratory research*, 26(1), 213.

Pelteikian AK, et al. (2025) Machine Learning Analysis of Electronic Health Records Identifies Interstitial Lung Disease and Predicts Mortality in Patients with Systemic Sclerosis. *medRxiv : the preprint server for health sciences*.

Wang YC, et al. (2025) Single-cell signaling network profiling during redox stress reveals dynamic redox regulation in immune cells. *Nature communications*, 16(1), 5600.

Miyara S, et al. (2025) Cold and hot fibrosis define clinically distinct cardiac pathologies. *Cell systems*, 16(3), 101198.

Gupta P, et al. (2025) Kingdom-specific lipid unsaturation calibrates sequence evolution in membrane arm subunits of eukaryotic respiratory complexes. *Nature communications*, 16(1), 2044.

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).

Kwon G, et al. (2025) Epigenomic landscapes define differential Janus kinases inhibitor sensitivity in IFN- $\gamma$ -primed human macrophages. *iScience*, 28(5), 112502.

Kimura Y, et al. (2025) NOD1 deficiency promotes inflammation via autophagic degradation of ASK1. *Communications biology*, 8(1), 781.

Du YH, et al. (2025) Primary cilium and TULP3-dependent ciliary targeting of ACE2 in SARS-CoV-2 tropism. *Cell communication and signaling : CCS*, 23(1), 515.

Lavrinenko V, et al. (2025) Phenotypic profiling of small molecules using cell painting assay in HCT116 colorectal cancer cells. *PloS one*, 20(10), e0334025.

Ballesteros-González I, et al. (2025) The repressor Capicua is a barrier to lung tumor development driven by Kras/Trp53 mutations. *EMBO molecular medicine*, 17(12), 3377.