

Resource Summary Report

Generated by [Kravitz](#) on Sep 10, 2026

Simbios

RRID:SCR_004320

Type: Tool

Proper Citation

Simbios (RRID:SCR_004320)

Resource Information

URL: <http://simbios.stanford.edu/index.html>

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Description: Simbios is the NIH Center for physics-based Simulation of Biological Structures. Simbios provides infrastructure, software, and training to help biomedical researchers understand biological form and function as they create novel drugs, synthetic tissues, medical devices, and surgical interventions. Simbios is investigating a wide scale of biological structures - from molecules to organisms. Driving biological problems include RNA folding, protein folding, myosin dynamics, cardiovascular dynamics, and neuromuscular biomechanics. Investigators interested in collaborating with Simbios can apply for NIH funding. To encourage collaboration in building accurate biological models and simulations, Simbios also provides the biomedical community with <https://simtk.org>, a free, secure, distributed, development system for projects. Projects may include models, software, data, documentation, publications, and graphics and have automatic backups and off-site storage. Projects may be public or private and have project-specific mailing lists, forums, bug & feature databases, news, blogs, and source-code repositories. Simbios is developing and disseminating the SimTK core simulation toolkit, (simtk.org/home/simtkcore). SimTK core is open-source software developed by experienced professionals. The software includes advanced capabilities for modeling the geometry and physics of biological systems. To ensure utility and accuracy, the software and training material is being developed and tested in close collaboration with biomedical scientists. Simbios has developed OpenSim, an application for advanced neuromuscular modeling that uses the SimTK toolkit, and is making it openly available at simtk.org/home/opensim. Simbios also publishes the Biomedical Computation Review, a magazine devoted to the science and tools in biocomputation, aimed at the community which encompasses the diverse biocomputation disciplines. To help researchers find high quality software and tools Simbios has also establishes the Simbiome an inventory of high-quality commercial and academic bio-simulation tools. Simbios has recurring openings for postdoctoral researchers.

Synonyms: Simbios - NIH Center for Biomedical Computation at Stanford, physics-based Simulation of Biological Structures

Resource Type: data or information resource, journal article, organization portal, portal, postdoctoral program resource, software resource, training resource

Defining Citation: [PMID:22081222](#), [PMID:20107615](#)

Funding: NIGMS U54 GM072970

Resource Name: Simbios

Resource ID: SCR_004320

Alternate IDs: nlx_33018

Record Creation Time: 20220129T080223+0000

Record Last Update: 20260905T132957+0000

Ratings and Alerts

No rating or validation information has been found for Simbios.

No alerts have been found for Simbios.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 1 mentions in open access literature.

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

Lucent D, et al. (2010) Non-bulk-like solvent behavior in the ribosome exit tunnel. PLoS computational biology, 6(10), e1000963.