Resource Summary Report

Generated by NIF on May 17, 2025

Whole Brain Catalog

RRID:SCR_007011
Type: Tool

Proper Citation

Whole Brain Catalog (RRID:SCR_007011)

Resource Information

URL: http://www.wholebraincatalog.org/

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Description: THIS RESOURCE IS NO LONGER IN SERVICE, documented May 26, 2016. An open source, downloadable, 3d atlas of the mouse brain and its cellular constituents that allows multi-scale data to be visualized in a seamless way, similar to Google earth. Data within the Catalog is marked up with annotations and can link out to additional data sources via a semantic framework. This next generation open environment has been developed to connect members of the neuroscience community to facilitate solutions for today's intractable challenges in brain research through cooperation and crowd sourcing. The client-server platform provides rich 3-D views for researchers to zoom in, out, and around structures deep in a multi-scale spatial framework of the mouse brain. An open-source, 3-D graphics engine used in graphics-intensive computer gaming generates high-resolution visualizations that bring data to life through biological simulations and animations. Within the Catalog, researchers can view and contribute a wide range of data including: * 3D meshes of subcellular scenes or brain region territories * Large 2D image datasets from both electron and light level microscopy * NeuroML and Neurolucida neuronal reconstructions * Protein Database molecular structures Users of the Whole Brain Catalog can: * Fit data of any scale into the international standard atlas coordinate system for spatial brain mapping, the Waxholm Space. * View brain slices, neurons and their animation, neuropil reconstructions, and molecules in appropriate locations * View data up close and at a high resolution * View their own data in the Whole Brain Catalog environment * View data within a semantic environment supported by vocabularies from the Neuroscience Information Framework (NIF) at http://www.neuinfo.org. * Contribute code and connect personal tools to the environment * Make new connections with related research and researchers 5 Easy Ways to Explore: * Explore the datasets across multiple scales. * View data closely at high resolution. * Observe accurately simulated neurons. * Readily search for content. * Contribute your own research.

Abbreviations: WBC

Resource Type: software resource, service resource, simulation software, software application, image repository, storage service resource, data repository

Keywords: crowd sourcing, mouse, brain, cell, neuron, simulation, microscopy, neuroscience, electron microscopy, light microscopy, bioinformatics, neuroinformatics, computational biology, biology, visualization, animation, molecular structure, neuronal reconstruction, subcellular, annotation

Funding: Waitt Family Foundation

Availability: THIS RESOURCE IS NO LONGER IN SERVICE

Resource Name: Whole Brain Catalog

Resource ID: SCR_007011

Alternate IDs: nif-0000-23345

Alternate URLs: http://www.nitrc.org/projects/incf_whole-brai

License: GNU Lesser General Public License

Record Creation Time: 20220129T080239+0000

Record Last Update: 20250516T053845+0000

Ratings and Alerts

No rating or validation information has been found for Whole Brain Catalog.

No alerts have been found for Whole Brain Catalog.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 5 mentions in open access literature.

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

Bakker R, et al. (2015) The Scalable Brain Atlas: Instant Web-Based Access to Public Brain Atlases and Related Content. Neuroinformatics, 13(3), 353.

Orlando C, et al. (2015) Integrity of cortical perineuronal nets influences corticospinal tract plasticity after spinal cord injury. Brain structure & function, 220(2), 1077.

Zaslavsky I, et al. (2014) Cyberinfrastructure for the digital brain: spatial standards for integrating rodent brain atlases. Frontiers in neuroinformatics, 8, 74.

Ropireddy D, et al. (2012) Non-homogeneous stereological properties of the rat hippocampus from high-resolution 3D serial reconstruction of thin histological sections. Neuroscience, 205, 91.

Hawrylycz M, et al. (2011) Digital atlasing and standardization in the mouse brain. PLoS computational biology, 7(2), e1001065.