Resource Summary Report

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Scalable Brain Atlas

RRID:SCR_006934
Type: Tool

Proper Citation

Scalable Brain Atlas (RRID:SCR_006934)

Resource Information

URL: http://scalablebrainatlas.incf.org/

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Description: A web-based, interactive brain atlas viewer, containing a growing number of atlas templates for various species, including mouse, macaque and human. Standard features include fast brain region lookup, point and click to select a region and view its full 3D extent, mark a stereotaxic coordinate and view all regions in a hierarchy. Built-in extensions are the CoCoMac plugin, which provides a spatial display of Macaque connectivity, and a service to transform stereotaxic coordinates to and from the INCF Waxholm space for the mouse. Three dimensional renderings of brain regions are available through a Matlab interface (local installation of Matlab required). The SBA is designed to be customizable. External users can create plugins, hosted on their own servers, to interactively attach images or data to spatial atlas locations. This fully web-based display engine for brain atlases and topologies allows client websites to show brain region related data in a 3D interactive context. Currently available atlases are: * Macaque: The Paxinos Rhesus Monkey atlas (2000) * Macaque: Various templates available through Caret, registered to F99 space: Felleman and Van Essen (1991), Lewis and Van Essen (2000), Regional Map from K??tter and Wanke (2005), Paxinos Rhesus Monkey (2000) * Macaque: The NeuroMaps Macaque atlas (2008) * Mouse: The INCF Waxholm Space for the mouse (2011). Previous versions available. * Mouse: The Allen Mouse Brain volumetric atlas (ABA07) * Human: The LPBA40 parcellation, registered to SRI24 space A variety of services are being developed around the templates contained in the Scalable Brain Atlas. For example, you can include thumbnails of brain regions in your own webpage. Other applications include: * Analyze atlas templates in Matlab * List all regions belonging to the given template * List of supported atlas templates * Find region by coordinate * Color-coded PNG (bitmap) or SVG (vector) image of a brain atlas slice * Region thumbnail in 2D (slice) or 3D (stack of slices) The Scalable Brain Atlas is created by Rembrandt Bakker and Gleb Bezgin, under supervision of Rolf K??tter in the NeuroPhysiology and -Informatics group of the Donders Institute, Radboud UMC Nijmegen.

Abbreviations: SBA

Synonyms: INCF Scalable Brain Atlas

Resource Type: data or information resource, reference atlas, software resource, service resource, atlas, software application

Keywords: atlas application, atlas data, image display, javascript, magnetic resonance, os independent, php, three dimensional display, tractography, visualization

Funding Agency: International Neuroinformatics Coordinating Facility

Availability: GNU General Public License

Resource Name: Scalable Brain Atlas

Resource ID: SCR_006934

Alternate IDs: nlx_98156

Alternate URLs: http://www.nitrc.org/projects/sba

Ratings and Alerts

No rating or validation information has been found for Scalable Brain Atlas.

No alerts have been found for Scalable Brain Atlas.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 19 mentions in open access literature.

Listed below are recent publications. The full list is available at FDI Lab - SciCrunch.org.

Lee K, et al. (2024) Flexible, scalable, high channel count stereo-electrode for recording in the human brain. Nature communications, 15(1), 218.

Dotson NM, et al. (2023) Acute Neuropixels recordings in the marmoset monkey. bioRxiv : the preprint server for biology.

Paquelet GE, et al. (2022) Single-cell activity and network properties of dorsal raphe nucleus serotonin neurons during emotionally salient behaviors. Neuron, 110(16), 2664.

Ludyga S, et al. (2022) The Nervous System as a Pathway for Exercise to Improve Social Cognition. Exercise and sport sciences reviews, 50(4), 203.

Kondratov O, et al. (2021) A comprehensive study of a 29-capsid AAV library in a non-human primate central nervous system. Molecular therapy : the journal of the American Society of Gene Therapy, 29(9), 2806.

Bouquier N, et al. (2020) Gelatinase Biosensor Reports Cellular Remodeling During Epileptogenesis. Frontiers in synaptic neuroscience, 12, 15.

Gao BY, et al. (2020) Paired associated magnetic stimulation promotes neural repair in the rat middle cerebral artery occlusion model of stroke. Neural regeneration research, 15(11), 2047.

Stacho M, et al. (2020) A cortex-like canonical circuit in the avian forebrain. Science (New York, N.Y.), 369(6511).

Martinez-Rubio C, et al. (2018) Multimodal Encoding of Novelty, Reward, and Learning in the Primate Nucleus Basalis of Meynert. The Journal of neuroscience : the official journal of the Society for Neuroscience, 38(8), 1942.

Cléry J, et al. (2018) Cortical networks for encoding near and far space in the non-human

primate. NeuroImage, 176, 164.

Beul SF, et al. (2017) A Predictive Structural Model of the Primate Connectome. Scientific reports, 7, 43176.

Land R, et al. (2016) The contribution of inferior colliculus activity to the auditory brainstem response (ABR) in mice. Hearing research, 341, 109.

Shu CY, et al. (2016) Quantitative ? mapping for calibrated fMRI. NeuroImage, 126, 219.

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Guipponi O, et al. (2015) Whole brain mapping of visual and tactile convergence in the macaque monkey. NeuroImage, 117, 93.

Jonckers E, et al. (2015) The power of using functional fMRI on small rodents to study brain pharmacology and disease. Frontiers in pharmacology, 6, 231.

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

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