Resource Summary Report

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MIRACL

RRID:SCR_020945
Type: Tool

Proper Citation

MIRACL (RRID:SCR_020945)

Resource Information

URL: https://miracl.readthedocs.io/en/latest/

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Description: Automated software resource that combines histologically cleared volumes with connectivity atlases and MRI, enabling analysis of histological features across multiple fiber tracts and networks, and their correlation with in vivo biomarkers.Multimodal image registration and connectivity analysis for integration of connectomic data from microscopy to MRI. Open source pipeline for automated registration of mice clarity data to Allen reference atlas, segmentation and feature extraction of mice clarity data in 3D, registration of mice multimodal imaging data to Allen reference atlas, tract or label specific connectivity analysis based on Allen connectivity atlas,comparison of diffusion tensort imaging/tractography, virus tracing using CLARITY and Allen connectivity atlas, statistical analysis of CLARITY and Imaging data, atlas generation and label manipulation.

Synonyms: Multi modal Image Registration And Connectivity anaLysis

Resource Type: software resource, software toolkit

Defining Citation: PMID:31796741

Keywords: Image registration, CLARITY, multimodal image registration, connectivity analysis, connectomic data integration, MRI data, connectivity atlases, histological features analysis, mice clarity data

Funding: NINDS R01 NS095985;
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American Society for Neuroradiology ;
Boerger Research Fund for Alzheimer Disease and Neurocognitive Disorders ;
GE Healthcare ;
Bernard and Ronni Lacroute ;
William Randolph Hearst Foundation ;
Marc Paskin

Availability: Free, Available for download, Freely available

Resource Name: MIRACL

Resource ID: SCR_020945

Alternate URLs: https://github.com/mgoubran/MIRACL/blob/master/docs/index.rst

License: GNU GPL v3.0.

Record Creation Time: 20220129T080353+0000

Record Last Update: 20250410T071313+0000

Ratings and Alerts

No rating or validation information has been found for MIRACL.

No alerts have been found for MIRACL.

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 FDI Lab - SciCrunch.org.

Rijsketic DR, et al. (2023) UNRAVELing the synergistic effects of psilocybin and environment on brain-wide immediate early gene expression in mice. bioRxiv : the preprint server for biology.