

# 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 tensor 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:** American Society for Neuroradiology ;  
Bernard and Ronni Lacroute ;  
Boerger Research Fund for Alzheimer Disease and Neurocognitive Disorders ;  
GE Healthcare ;  
HHMI ;  
Marc Paskin ;  
NIA R01 AG061120;  
NIMH R01 MH111444;

NINDS R01 NS093057;  
NINDS R01 NS095985;  
Stanford Neurosciences Institute ;  
Stanford Radiology Angel Funds ;  
U.S. Army Research Laboratory and Defense Advanced Research Projects Agency ;  
William Randolph Hearst Foundation

**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:** 20260912T200257+0000

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## Ratings and Alerts

No rating or validation information has been found for MIRACL.

No alerts have been found for MIRACL.

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## Data and Source Information

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

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## Usage and Citation Metrics

We found 1 mentions in open access literature.

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

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.