Resource Summary Report

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3D surgical atlases of the murine head

RRID:SCR_008039
Type: Tool

Proper Citation

3D surgical atlases of the murine head (RRID:SCR_008039)

Resource Information

URL: http://phm.utoronto.ca/~jeffh/surgical.htm

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Description: 3D interactive atlas of two mouse brains, 129S1/SvImJ and C57Bl/6J. The aim of this resource is to enhance comparative morphometric analyses and stereotactic surgical procedures in mice. These representations of the murine brain and skull, in conjunction with the resource''s development of a new, more dynamic master coordinate system, provide improved accuracy with respect to targeting CNS structures during surgery compared with previous systems. The interactive three-dimensional nature of these atlases also provide users with stereotactic information necessary to perform accurate off-axis surgical procedures, as is commonly required for experiments such as in vivo micro-electroporation. In addition, three-dimensional analysis of the brain and skull shape in C57Bl, 129Sv, CD1, and additional murine strains, suggests that a stereotactic coordinate system based upon the lambda and rostral confluence of the sinuses at the sagittal midline, provides improved accuracy compared with the traditional lambdabregma landmark system. These findings demonstrate the utility of developing highly accurate and robust three-dimensional representations of the murine brain and skull, in which experimental outputs can be directly compared using a unified coordinate system.

Synonyms: MRI / CT atlases

Resource Type: atlas, data or information resource

Keywords: 129s1/svimj, anatomy, brain, c57bl/6j, central nervous system, digital atlas, imaging assay, in vivo, micro-electroporation, morphometric analysis, skull, sterotactic, transgenic, imaging

Funding: Canadian Institute for Health Research ;

Ontario Research Development Challenge ;
NARSAD Young Investigator award

Resource Name: 3D surgical atlases of the murine head

Resource ID: SCR_008039

Alternate IDs: nif-0000-10249

Record Creation Time: 20220129T080245+0000

Record Last Update: 20250503T055958+0000

Ratings and Alerts

No rating or validation information has been found for 3D surgical atlases of the murine head.

No alerts have been found for 3D surgical atlases of the murine head.

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 dkNET.

Chan E, et al. (2007) Development of a high resolution three-dimensional surgical atlas of the murine head for strains 129S1/SvImJ and C57Bl/6J using magnetic resonance imaging and micro-computed tomography. Neuroscience, 144(2), 604.