

AI-SUPPORTED CYTOARCHITECTONIC MAPPING AND VISUALIZATION OF THE LATERAL GENICULATE BODY IN THE BIGBRAIN

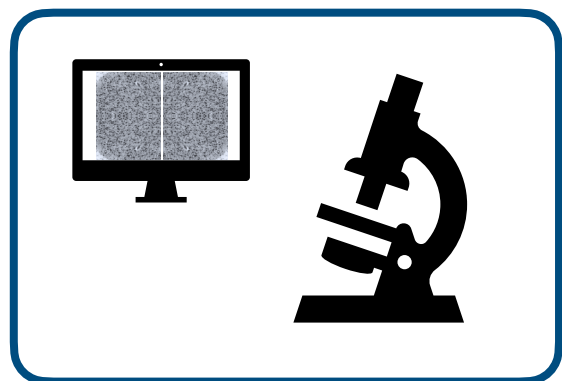
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ANDREA BRANDSTETTER | 26TH JUNE 2020

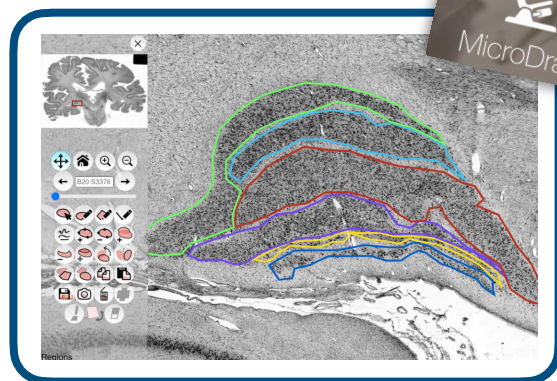
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Member of the Helmholtz Association

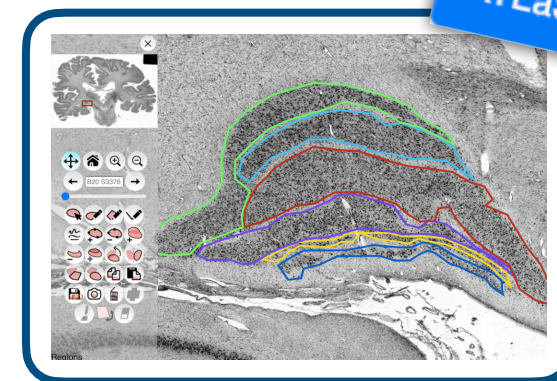
WORKFLOW



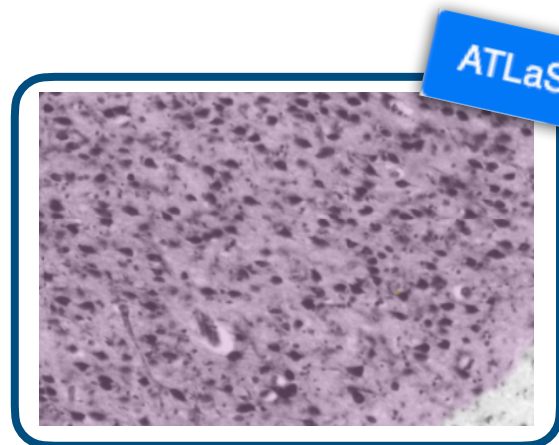
High-resolution flatbed scans



Annotation of every 30th section

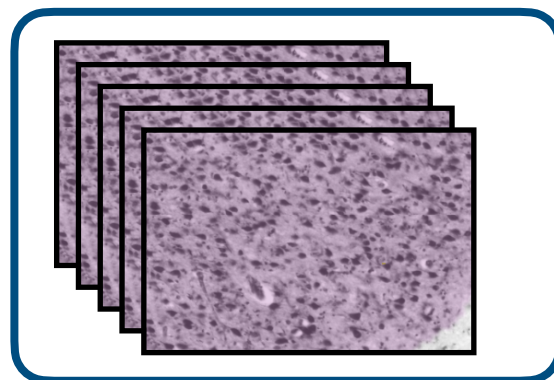


Training

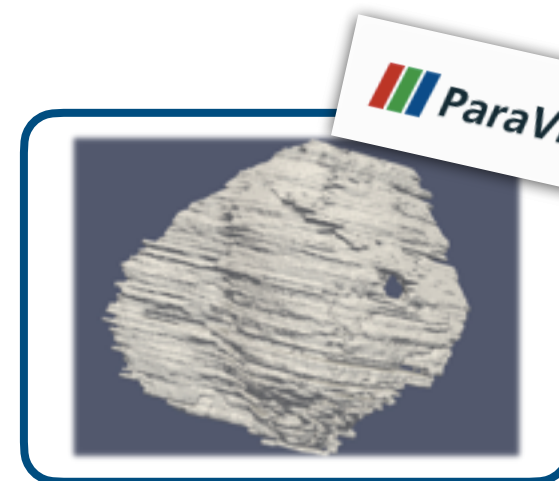


ATLaS UI

transformations



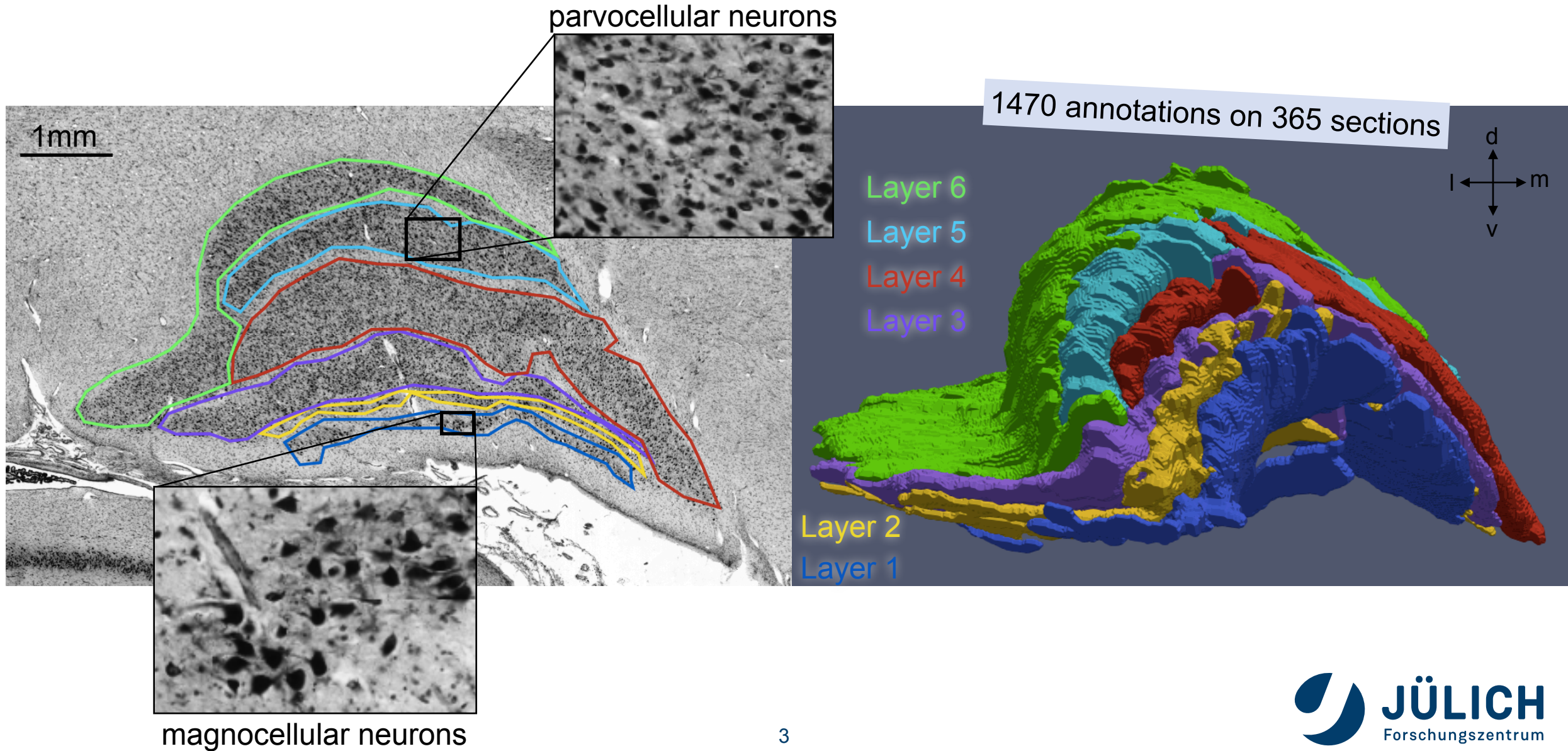
3D reconstructed predictions



ParaView

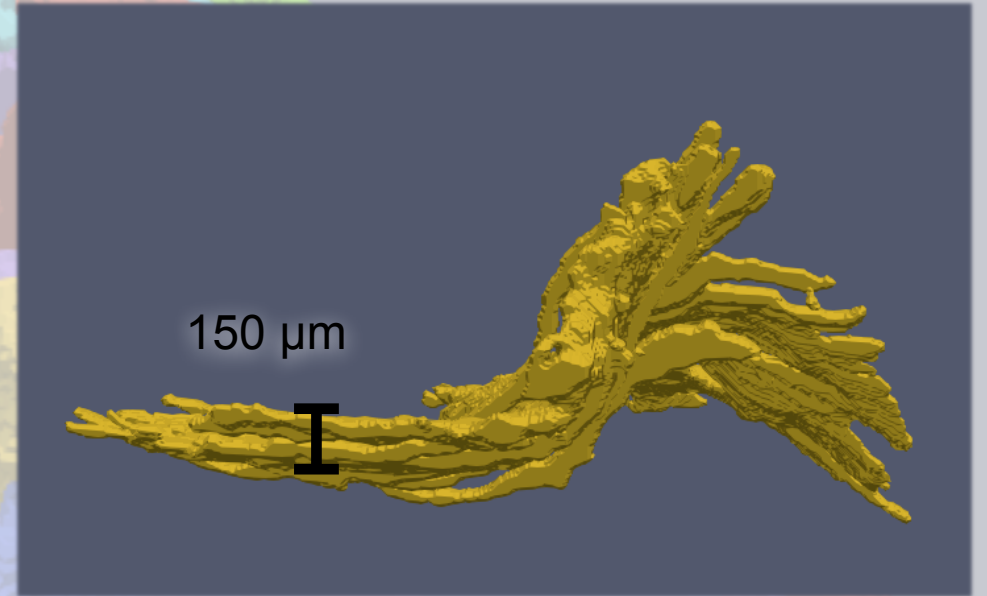
Visualization

VISUALIZATION OF THE LATERAL GENICULATE BODY



CONCLUSION & OUTLOOK

- Application of Deep Learning for annotating a subcortical structure achieved
- Comparison with results of Atelier 3D planned
- Application of DL model to further small subcortical structures planned



Layer 2 of the lateral geniculate body, example of a small heterogeneous structure