CINGULUM

Tractography

Virtual Neuroanatomy
December 4, 2014
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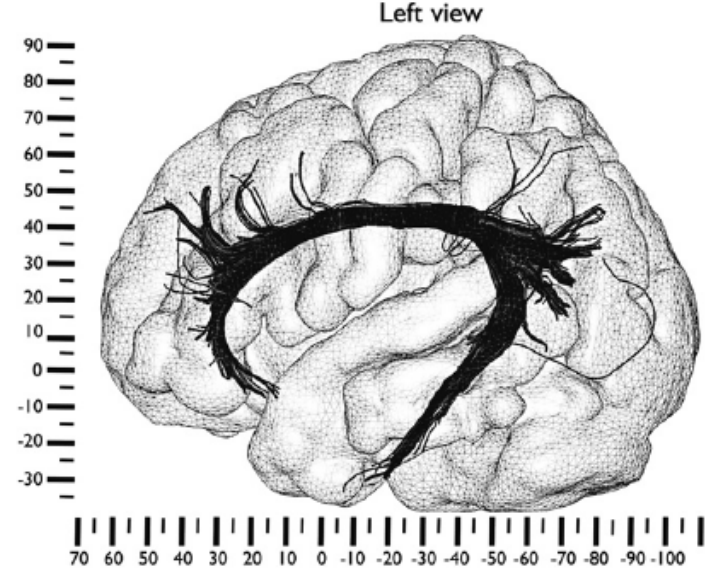
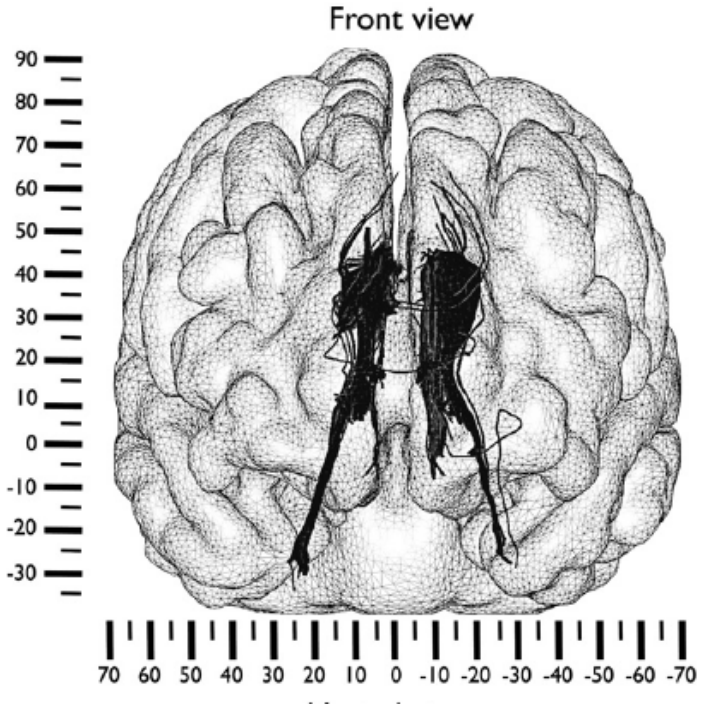
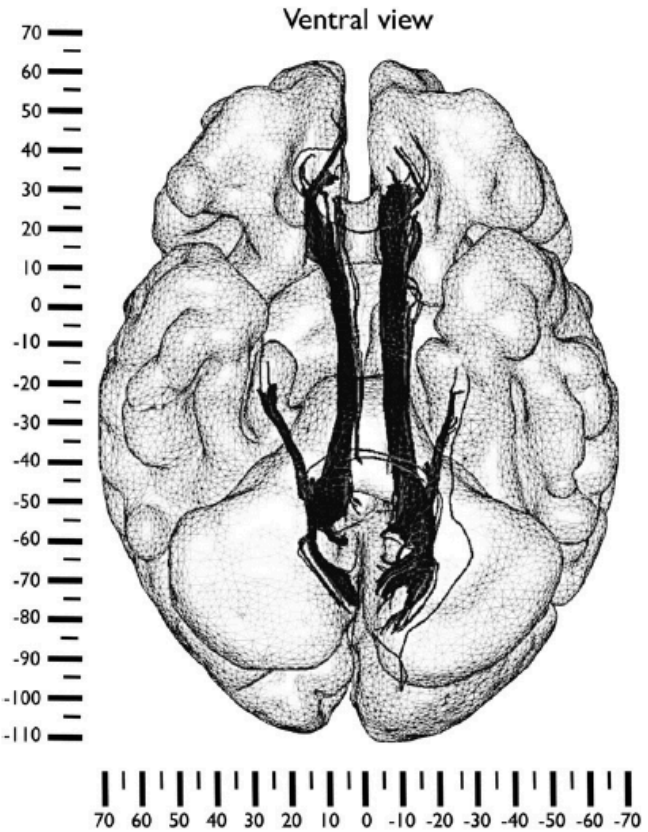
CMU





Sagittal, coronal and transverse view of the cingulum.

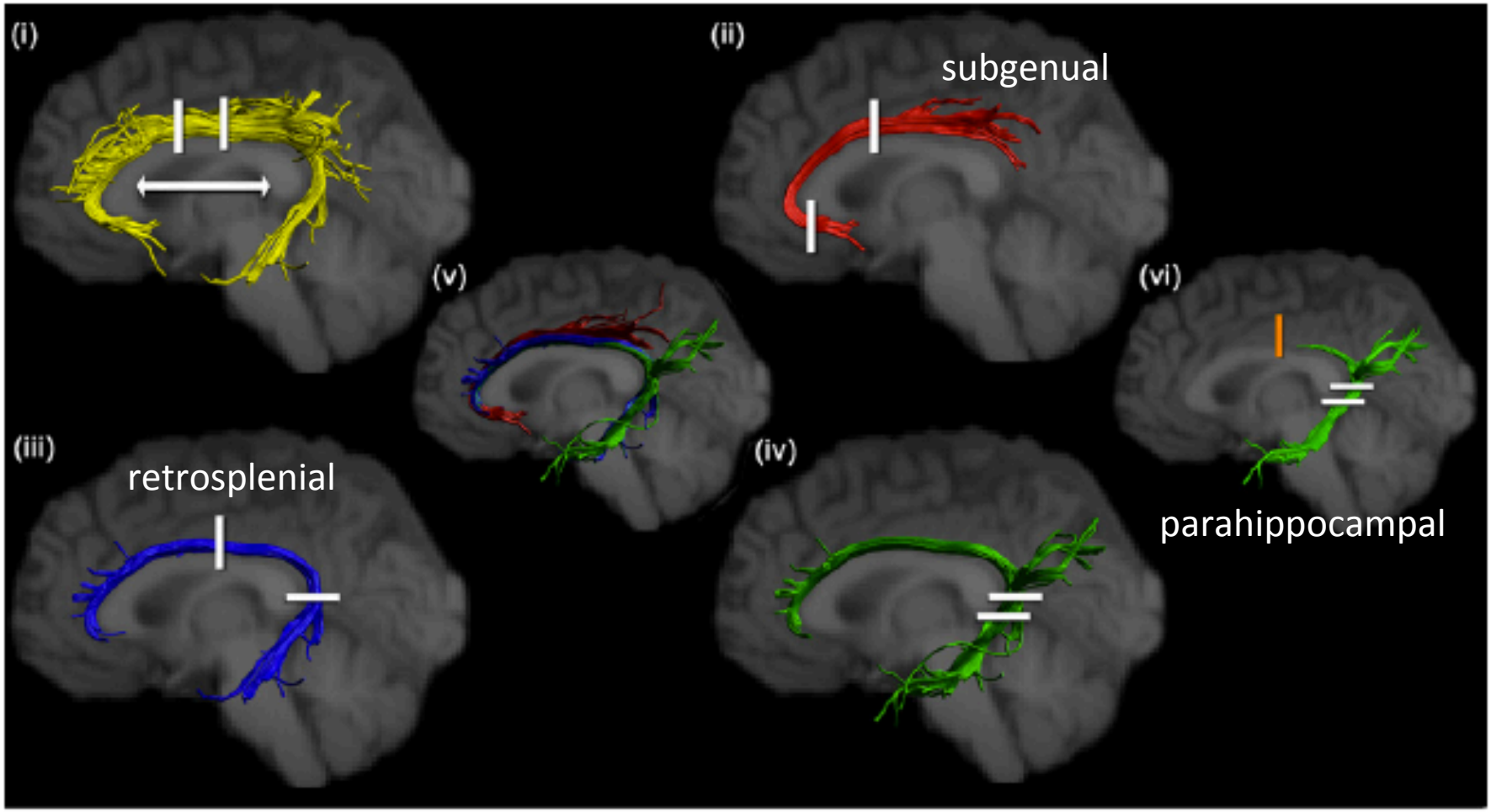


Catani, M., & Thiebaut de Schotten, M., (2008).

We will use the Jones et al. (2013) approach.

Goal: obtain the 3 sub-divisions of the cingulum.

Subgenual (red)
Retrosplenial (blue)
Parahippocampal (green)



1. Use MNI_152 template to have a better view of the WM and thus a better reference for the position of the manually defined ROIs.

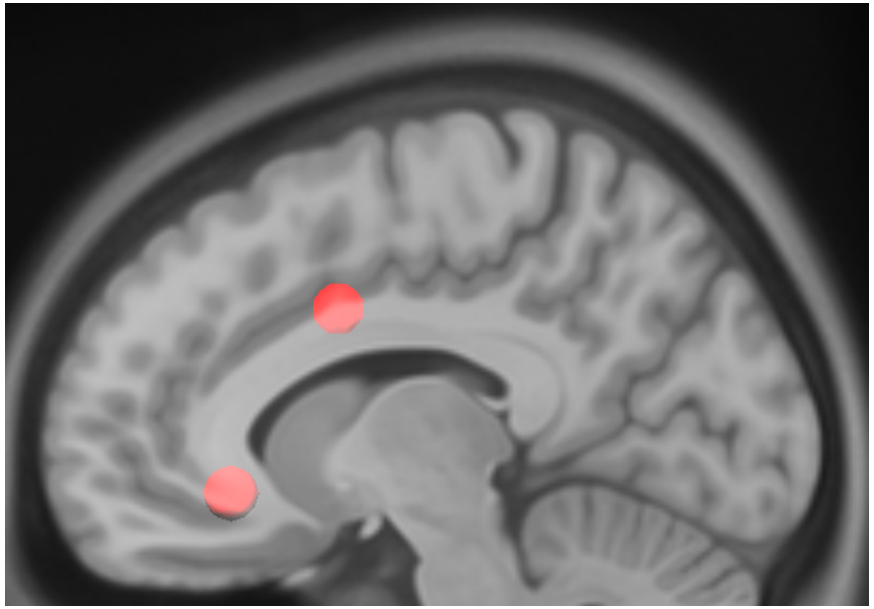
2. Tracking parameters

threshold =	0.07
angular thresh =	90
smoothing =	0.70
min length =	10
max length =	200

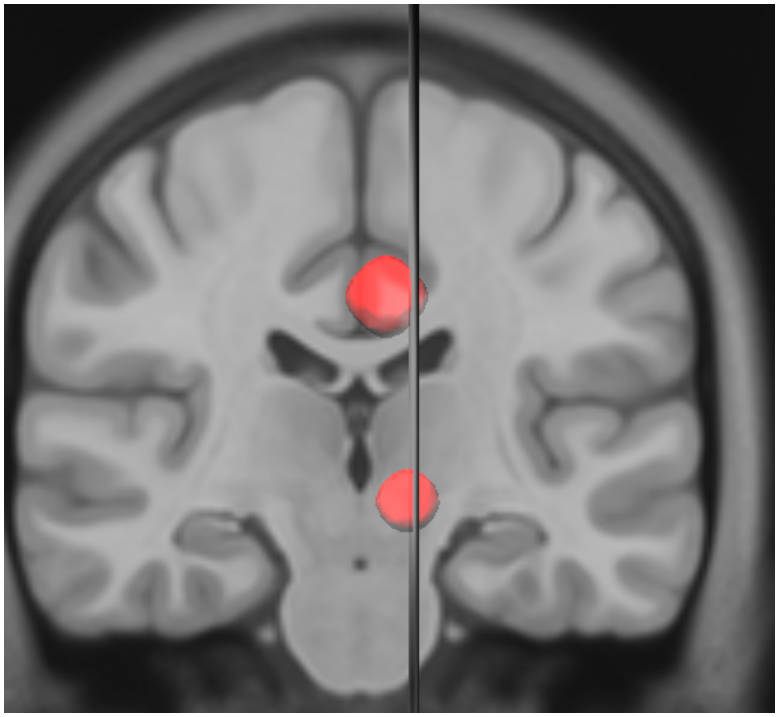
1,000,000 seeds

3. We are going to work only with LEFT HEMISPHERE

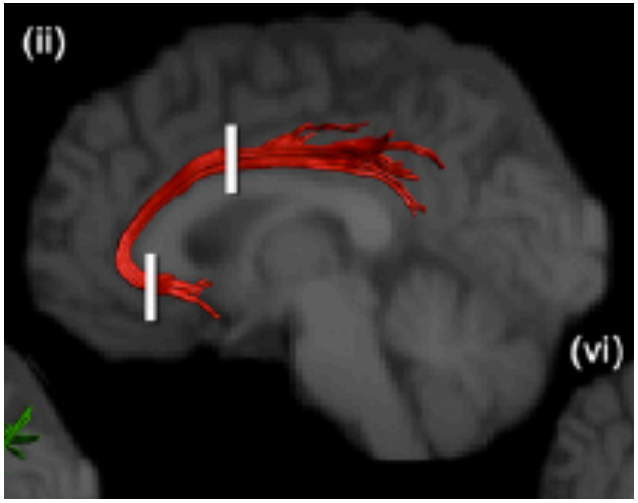
4. Feel free to propose any other approach



Sagittal slice 108



Coronal slice 120
Frontal view



Subgenual

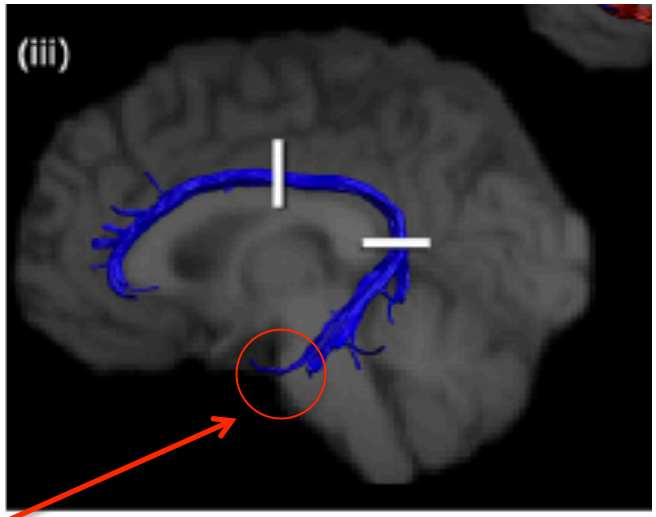
ROIs
1. Subgenual
2. Rostral_AC

Use both as ROIs

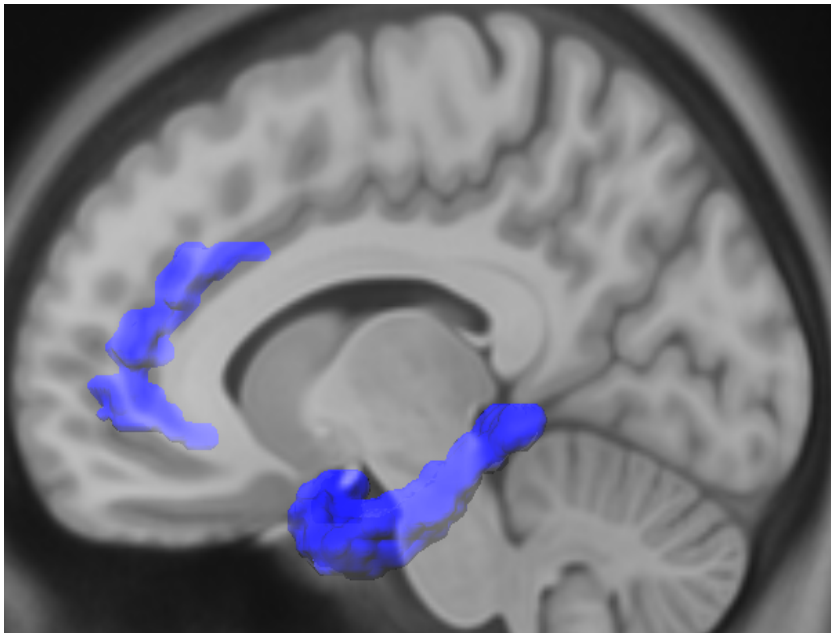
Retrosplenial

You can try the same spherical ROI approach
or
use AAL ROIs

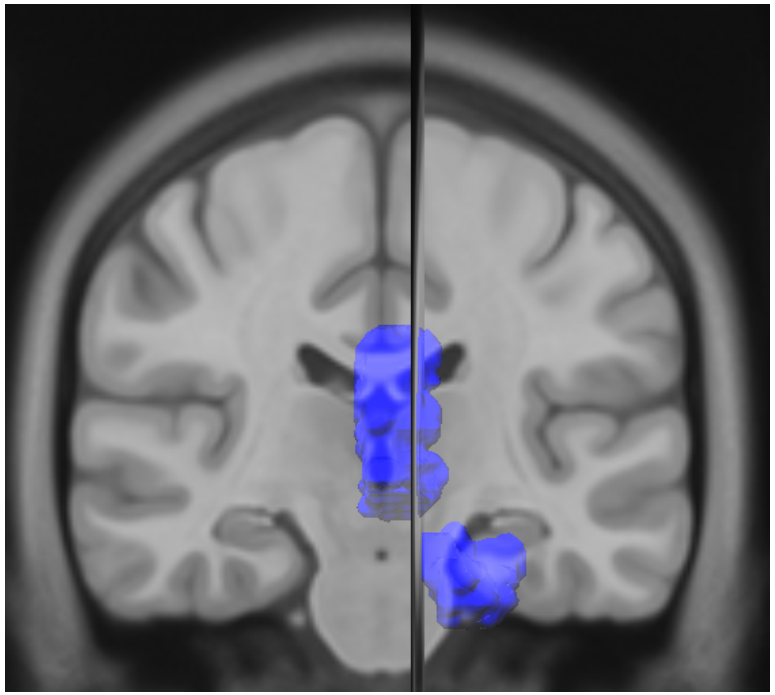
1. Cingulum_Ant_L (ROI)
2. ParaHippocampal (ROI)



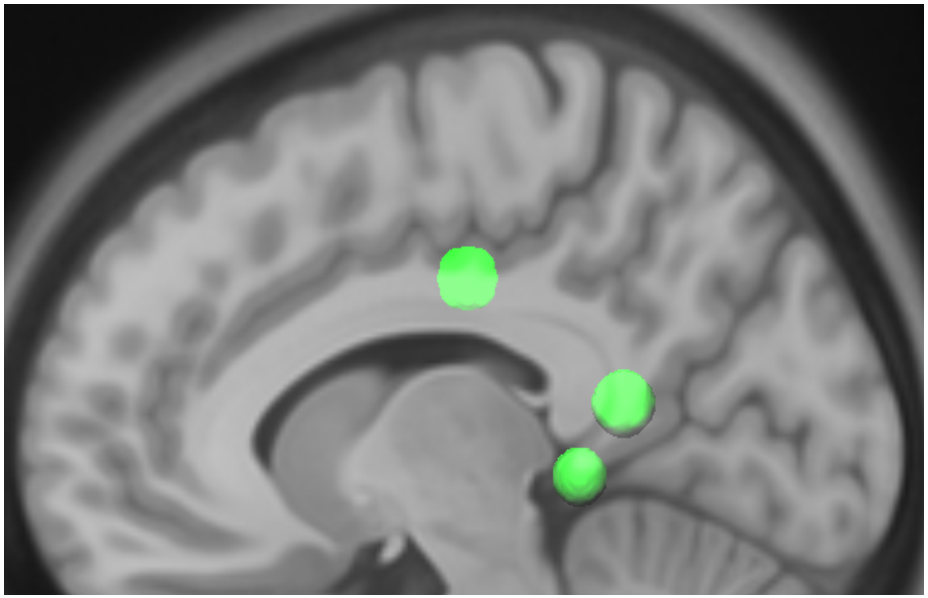
Try reducing threshold to recover some of the most inferior ending parahippocampal tracts



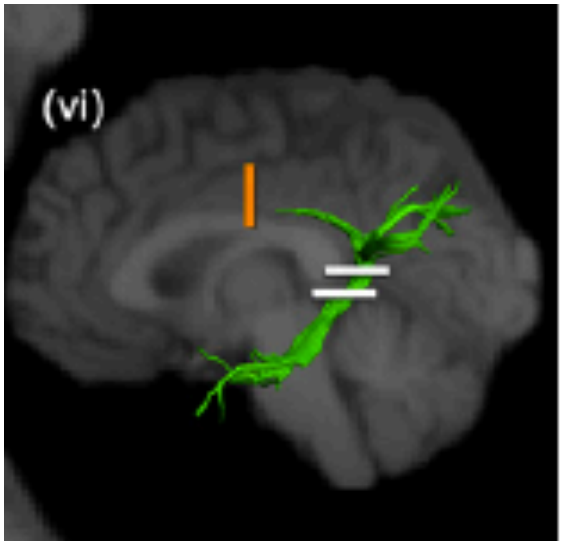
Sagittal slice 108



Coronal slice 120 – frontal view



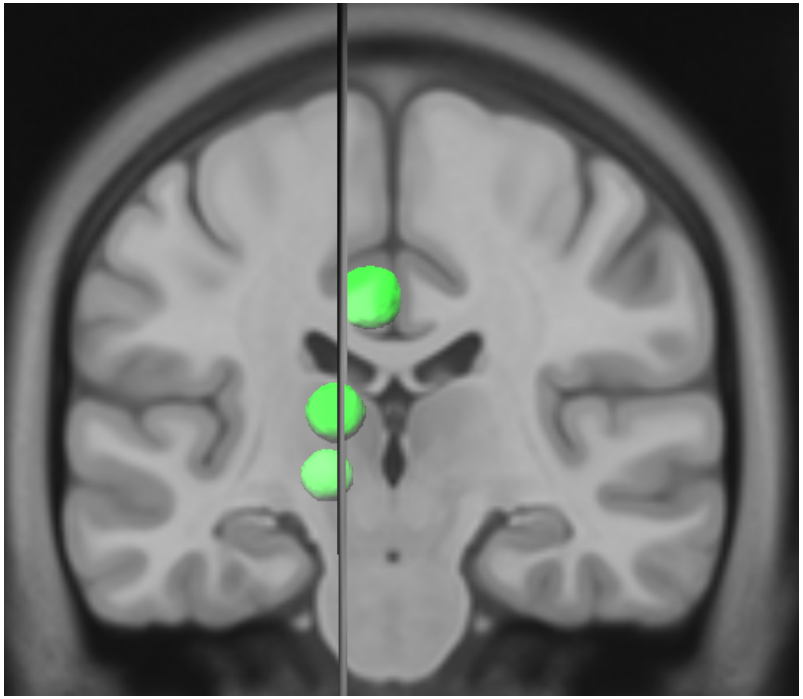
Sagittal slice 108



Parahippocampal restricted

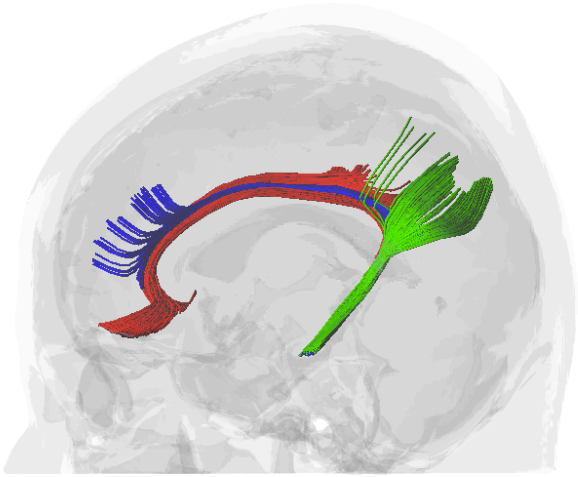
Create spherical ROIs

1. Caudal_AC (ROA)
2. Ventral_PC (ROI)
3. Retrosplenial (ROI)

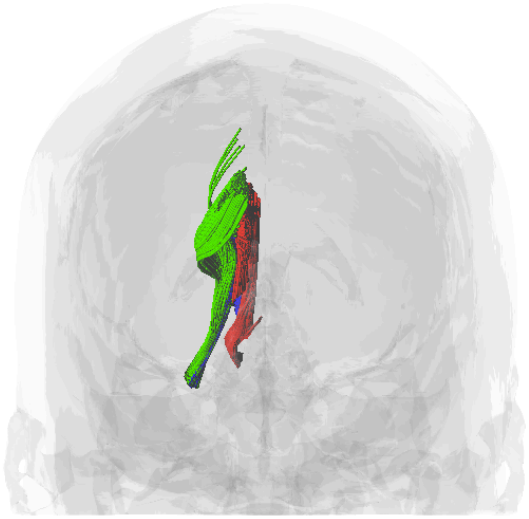


Coronal slice 120
Anterior view

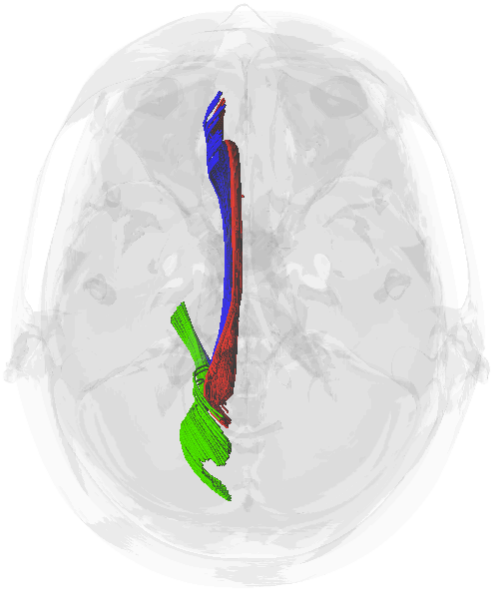
Reference views for the LEFT CINGULUM 3-subdivisions



Sagittal



Coronal



Transverse