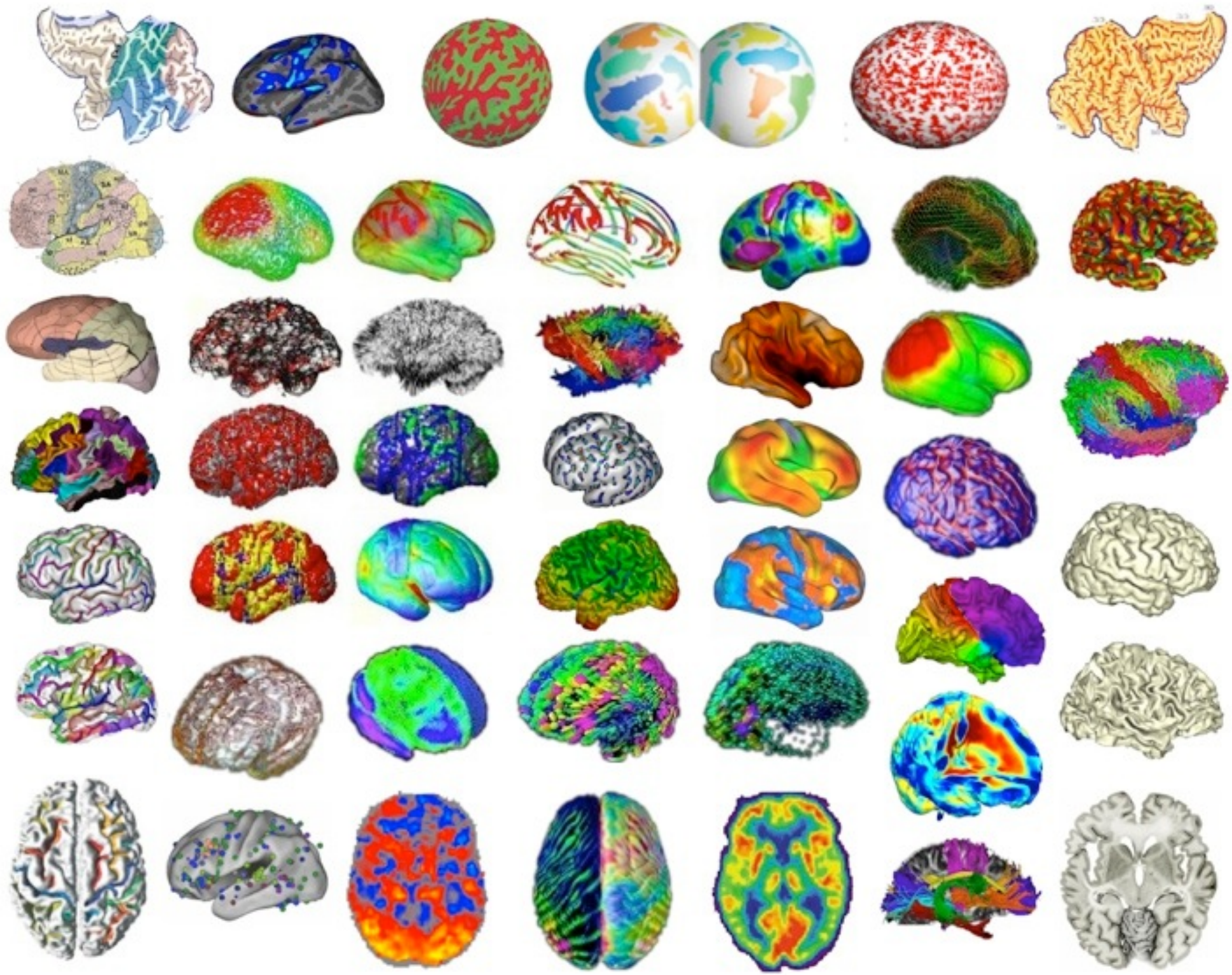
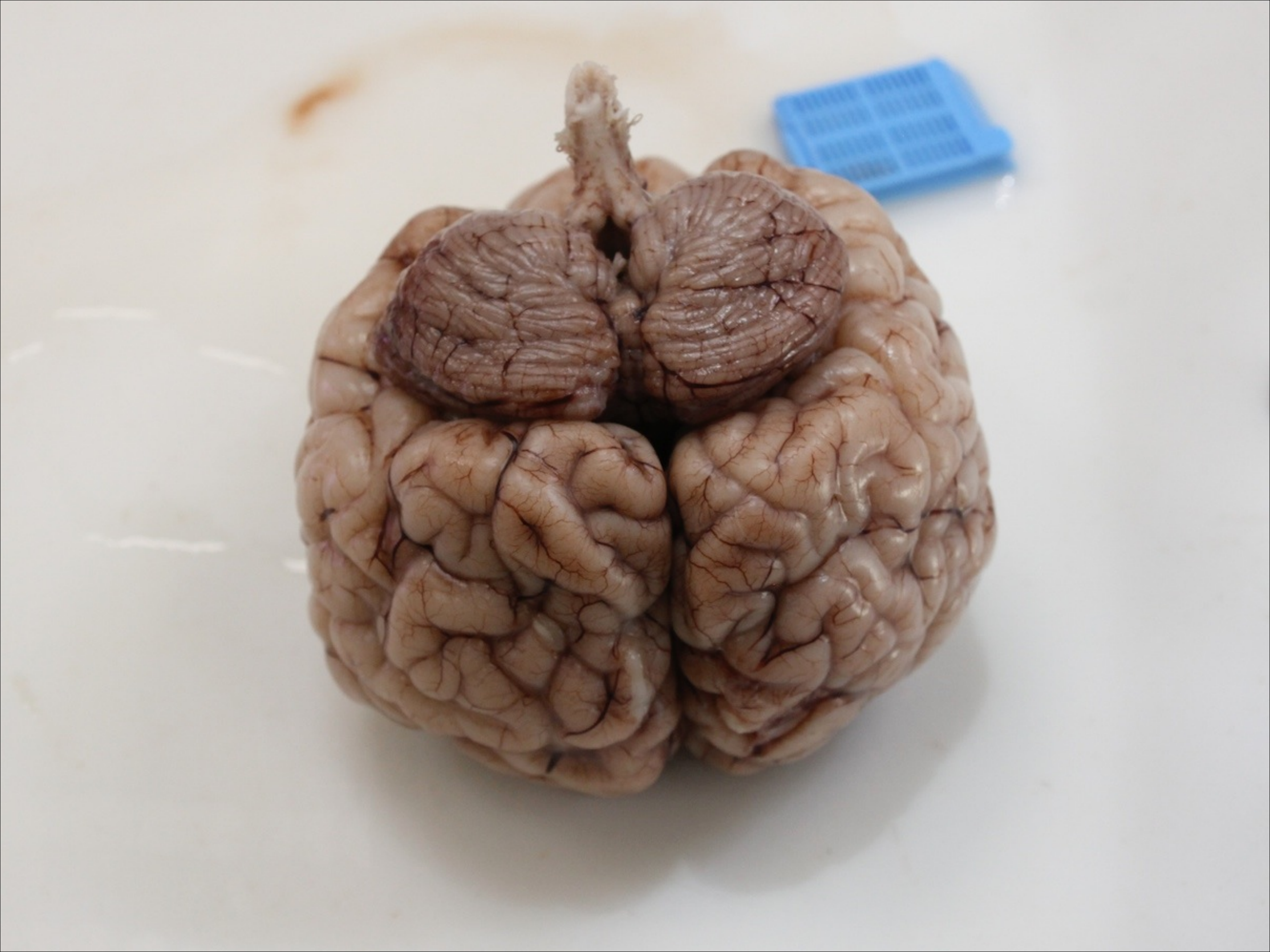
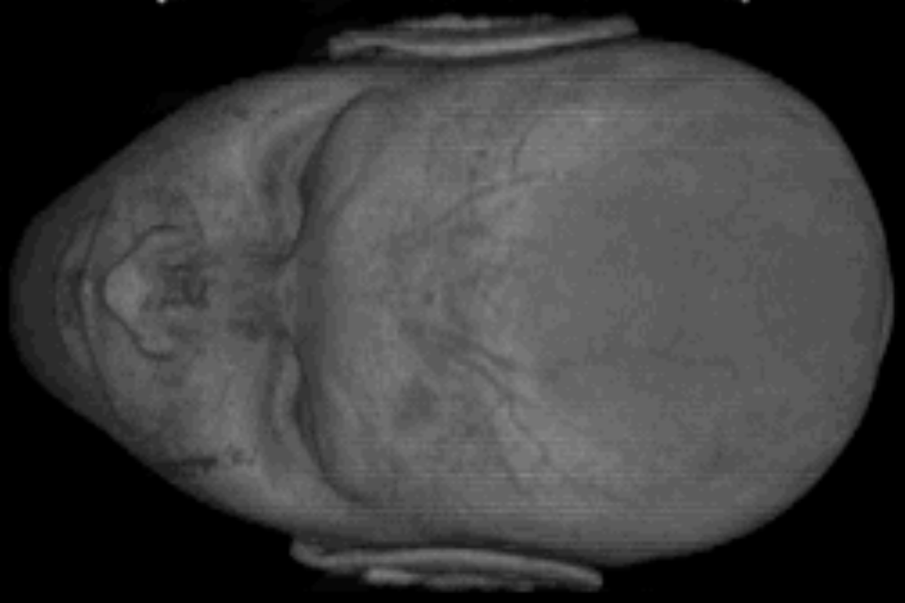
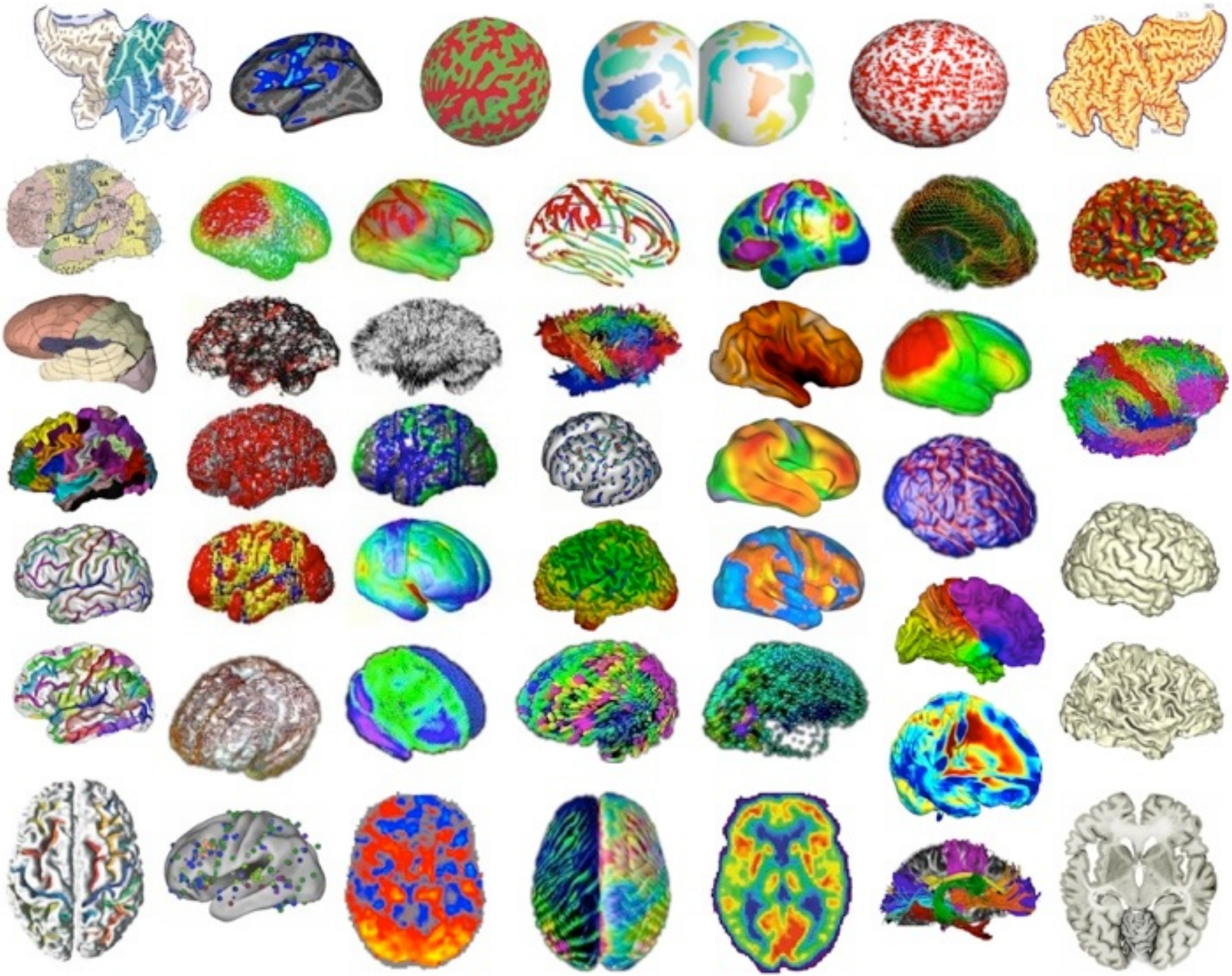
Mindboggling Brains!

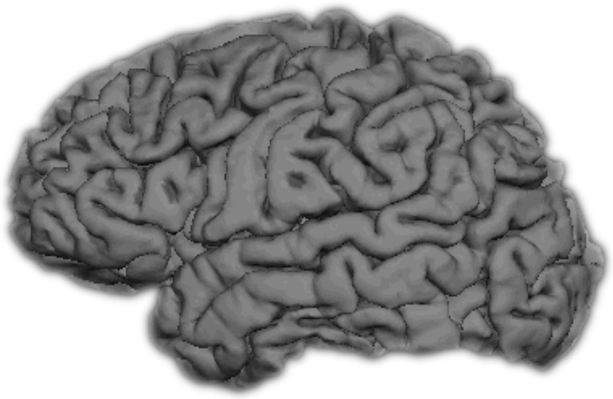


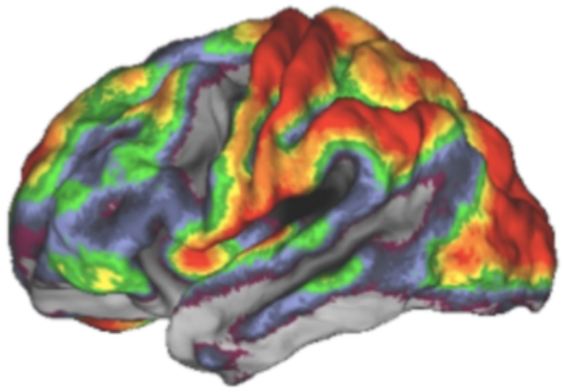
Arno Klein at the IO House . arno@binarybottle.com . Sage Bionetworks

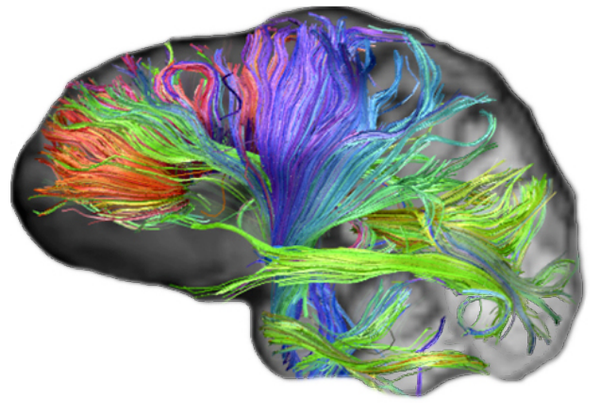


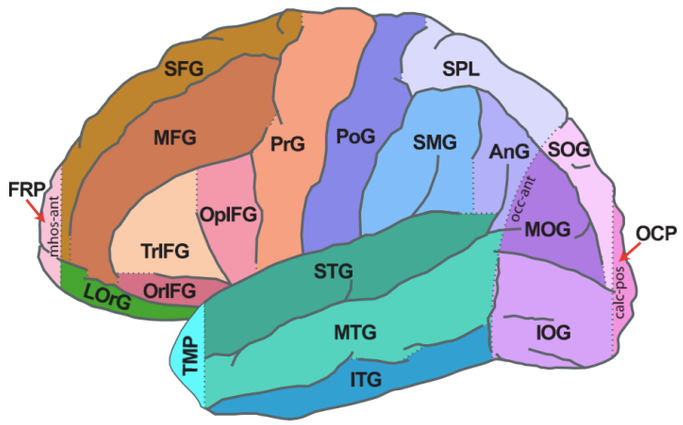


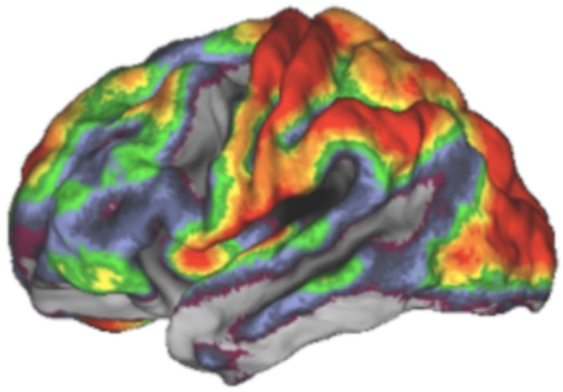


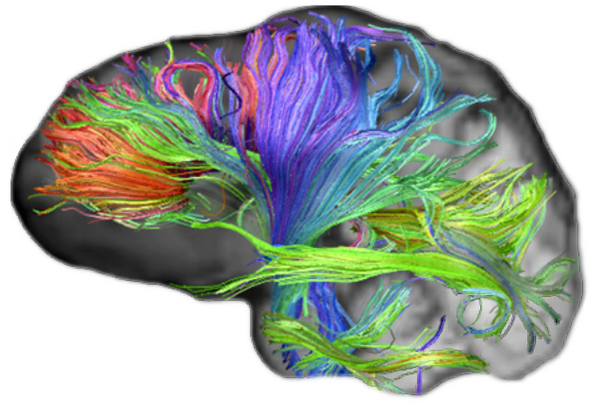


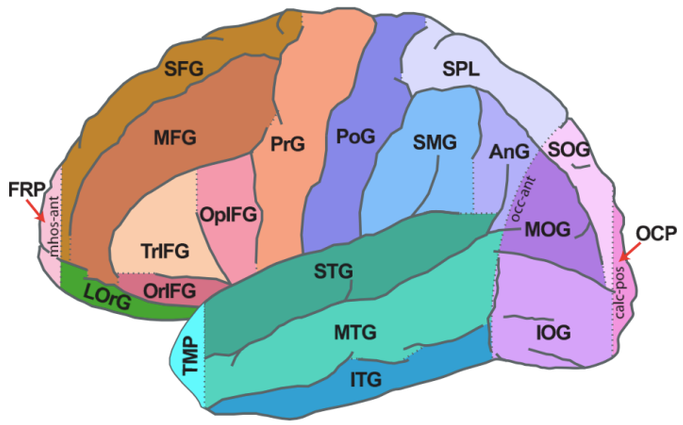


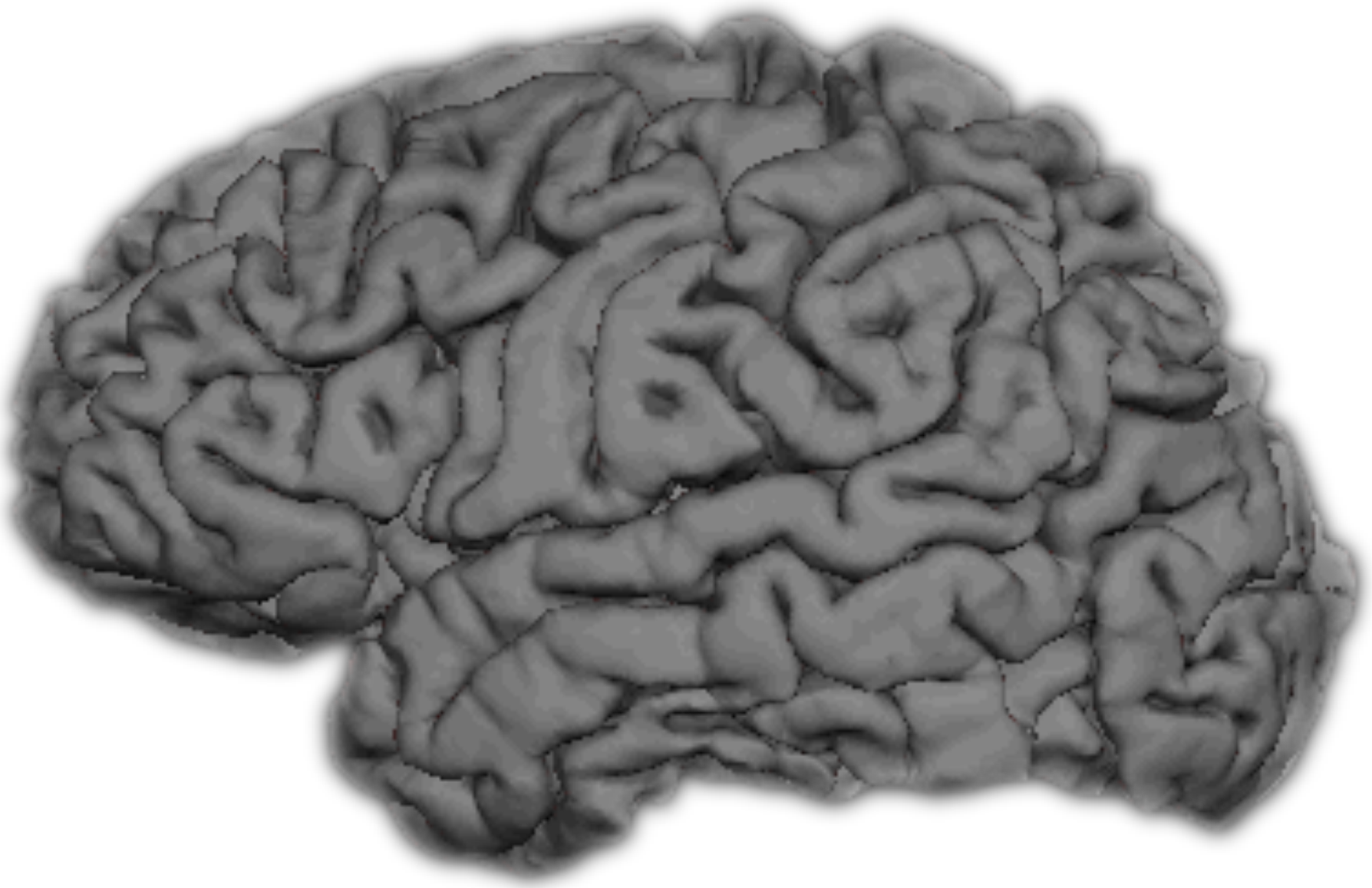


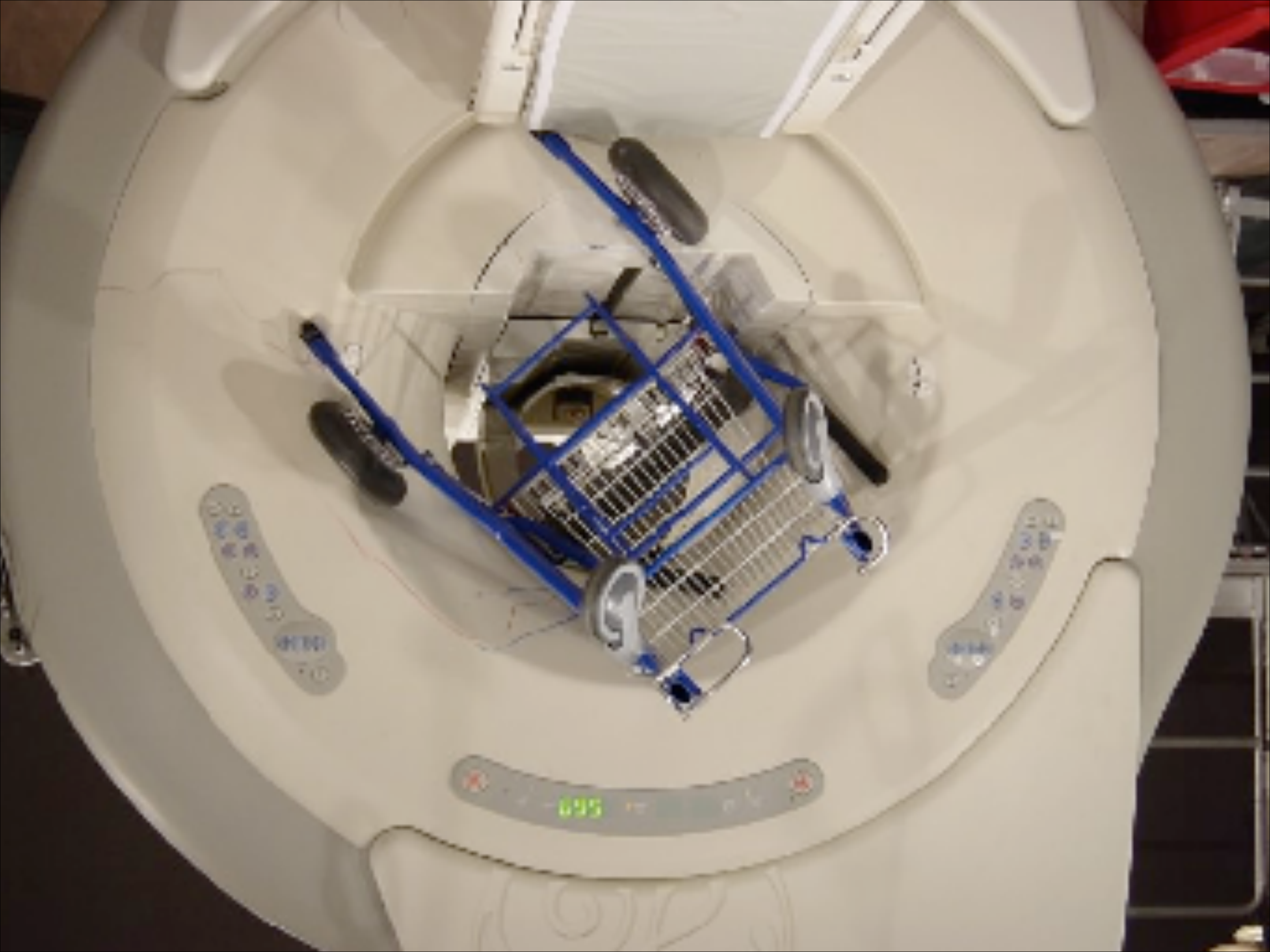

SFG
MFG
PrG
PoG
SMG
SPL
AnG
SOG
FRP
mfos-ant
OpIFG
TrIFG
OrIFG
LOrG
occ-ant
MOG
OCP
calc-pos
STG
MTG
ITG
TMP
IOG



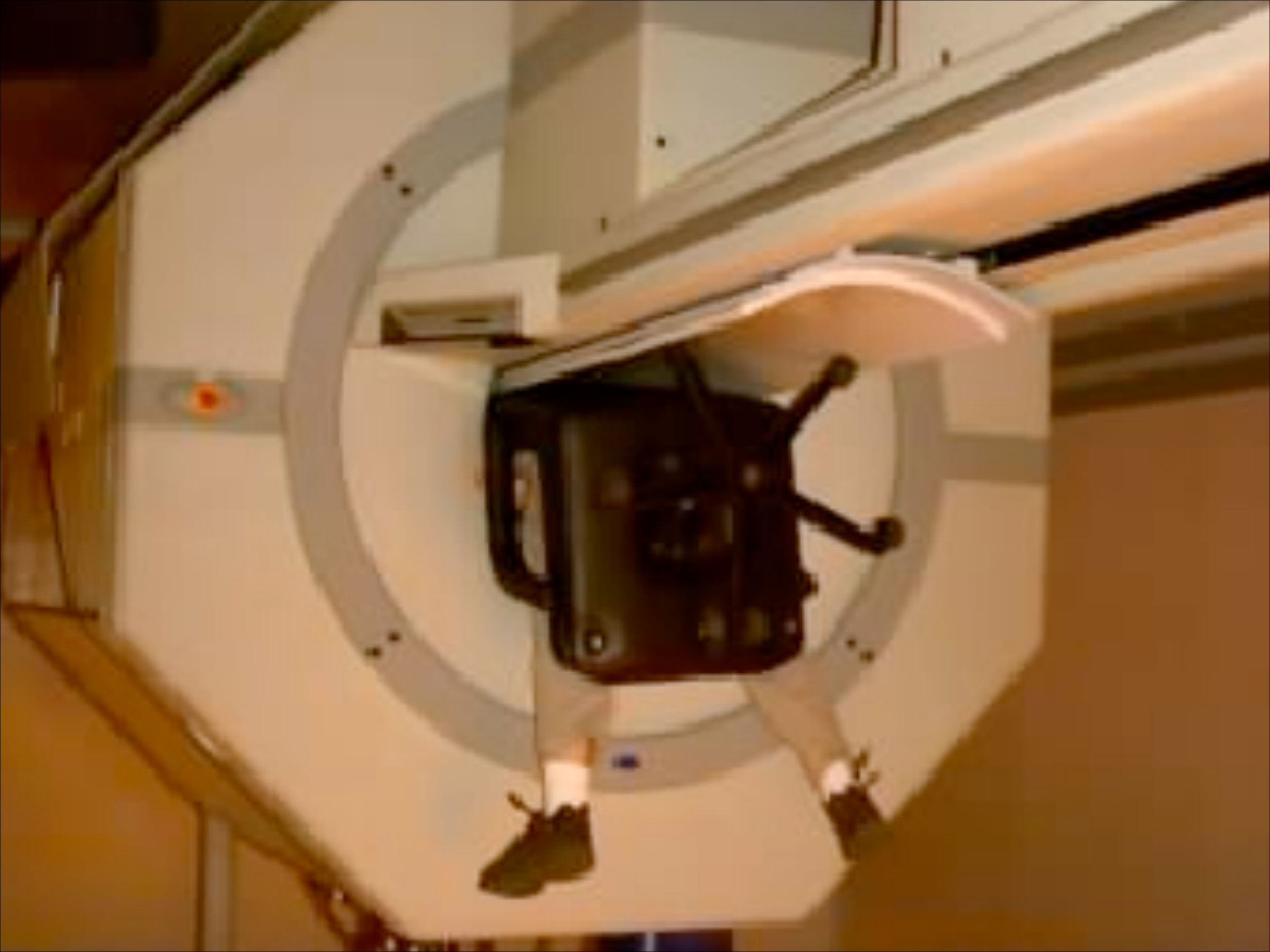


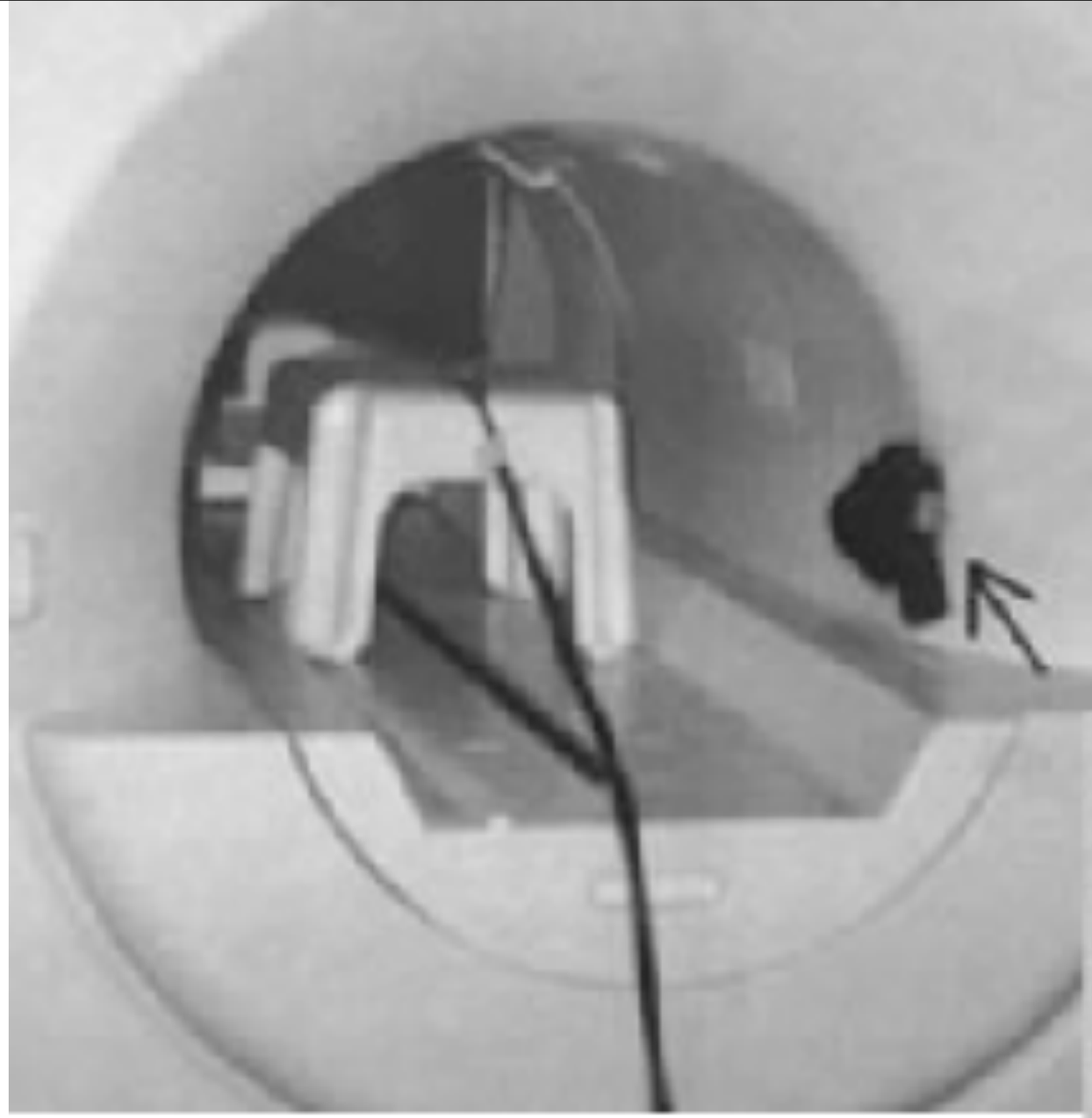

SFG
MFG
PrG
PoG
SMG
SPL
AnG
SOG
FRP
mfos-ant
OpIFG
TrIFG
OrIFG
LOrG
occ-ant
MOG
OCP
calc-pos
STG
MTG
ITG
TMP
IOG

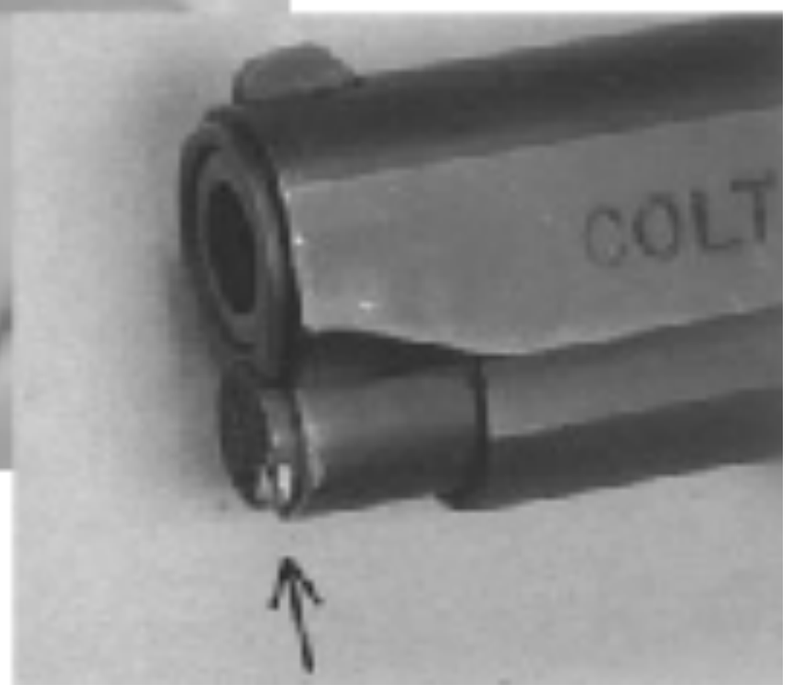




Symphony







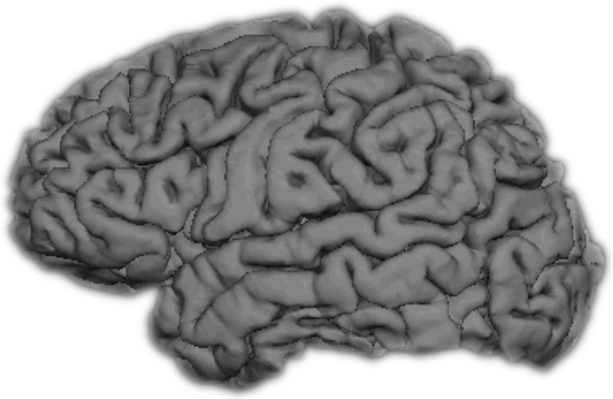
American Journal of Roentgenology

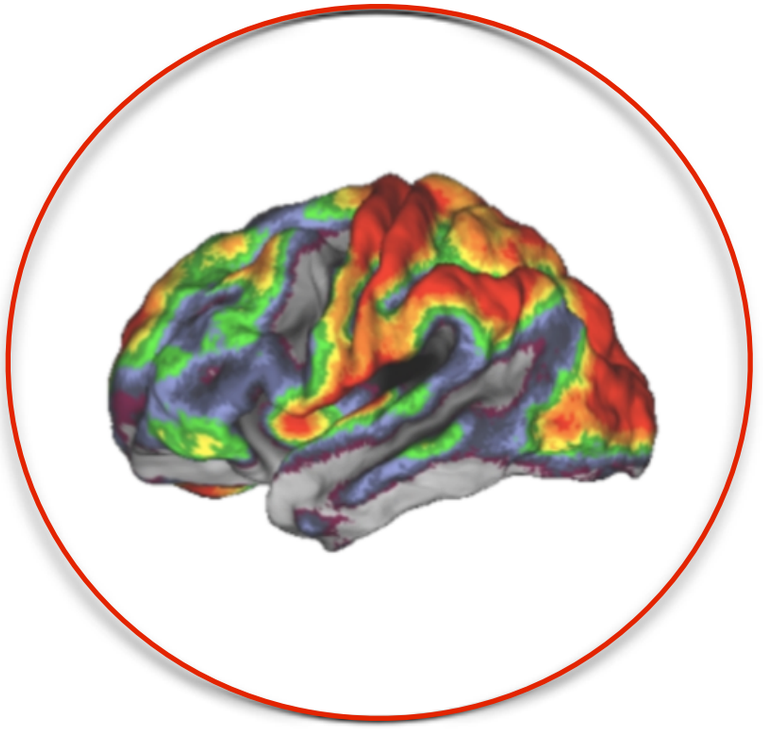
Spontaneous Discharge of a Firearm in an MR Imaging Environment

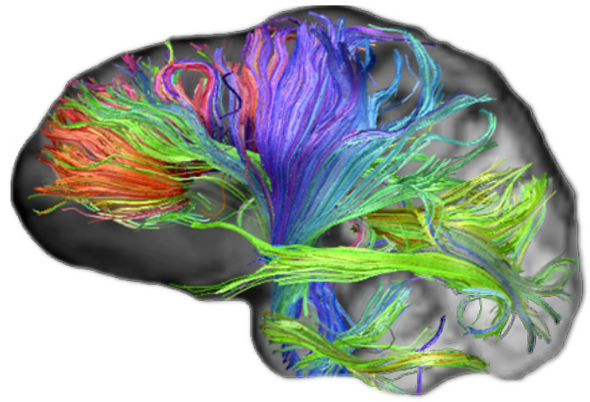
Anton Oscar Beitia[1], Steven P. Meyers[1], Emanuel Kanal[2] and William Bartell[3]

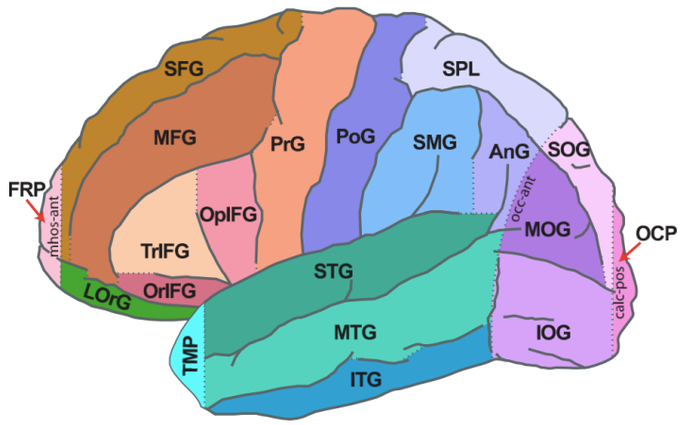
[1] Department of Radiology, University of Rochester Medical Center, 601 Elmwood Ave., Box 648, Rochester, NY 14642.
[2] Department of Radiology (D-132), University of Pittsburgh Medical Center, 200 Lothrop St., Pittsburgh, PA 15213.
[3] Rochester Police Department, Rochester, NY 14624.

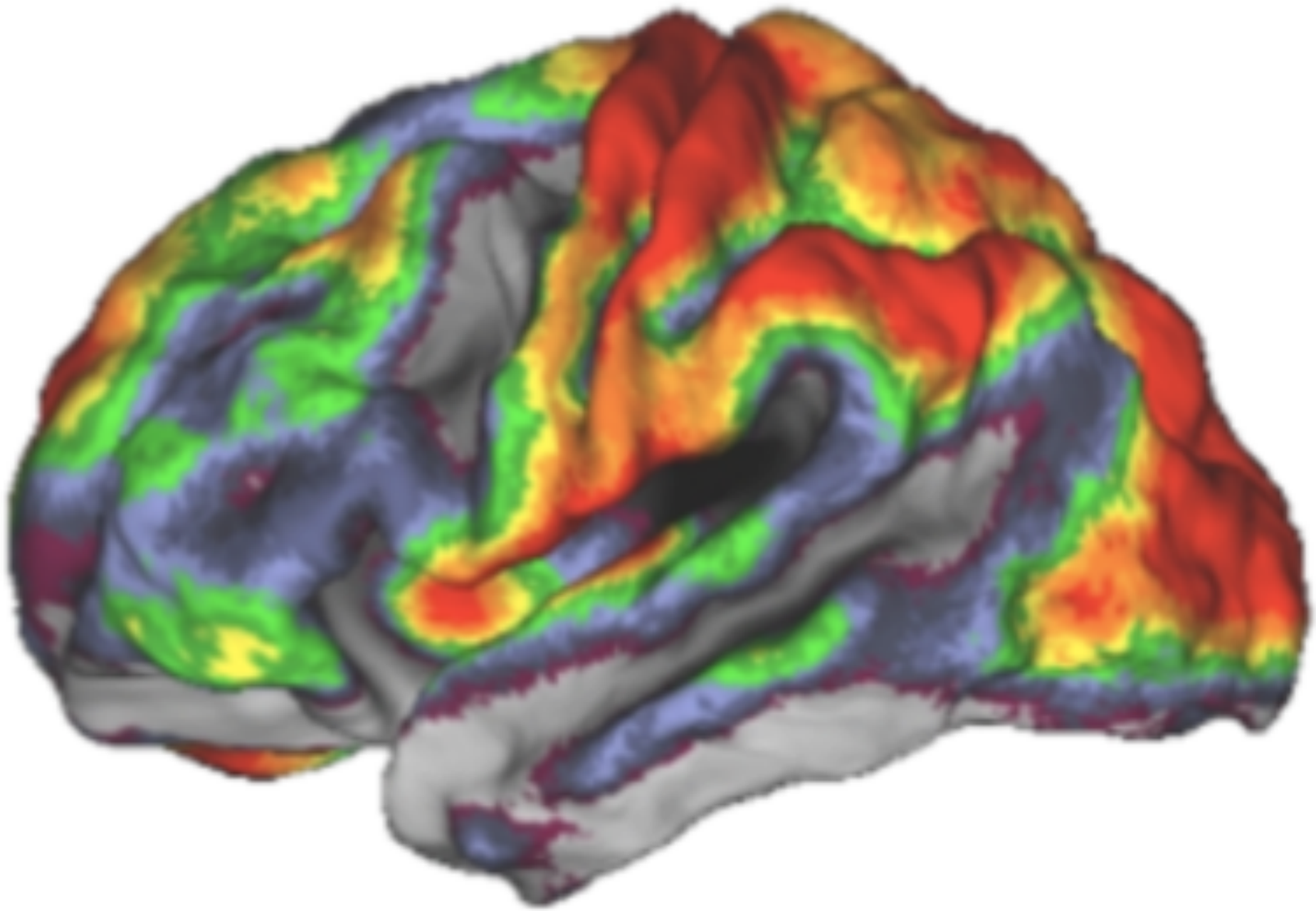
Received September 4, 2001; accepted after revision November 6, 2001.

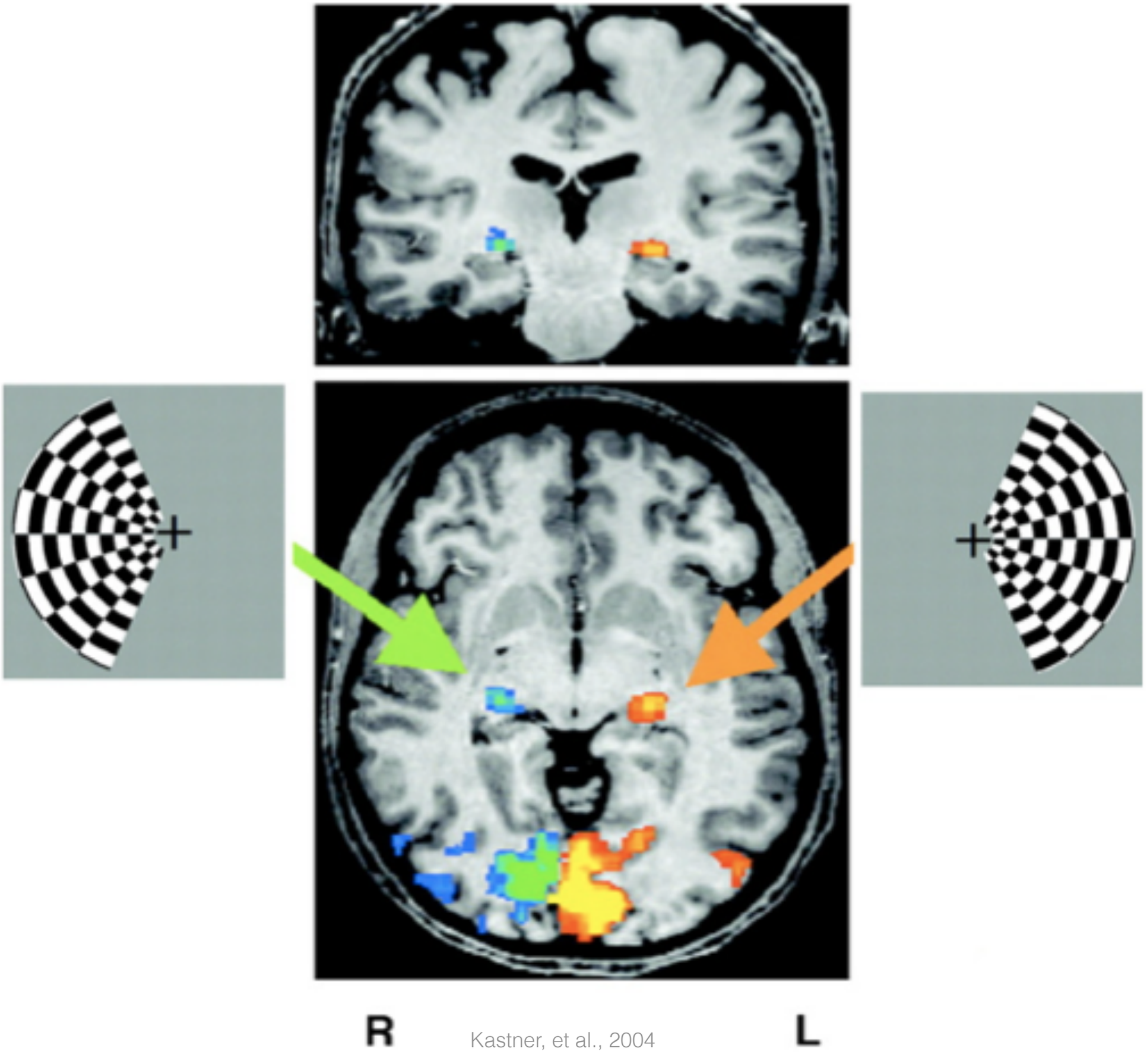




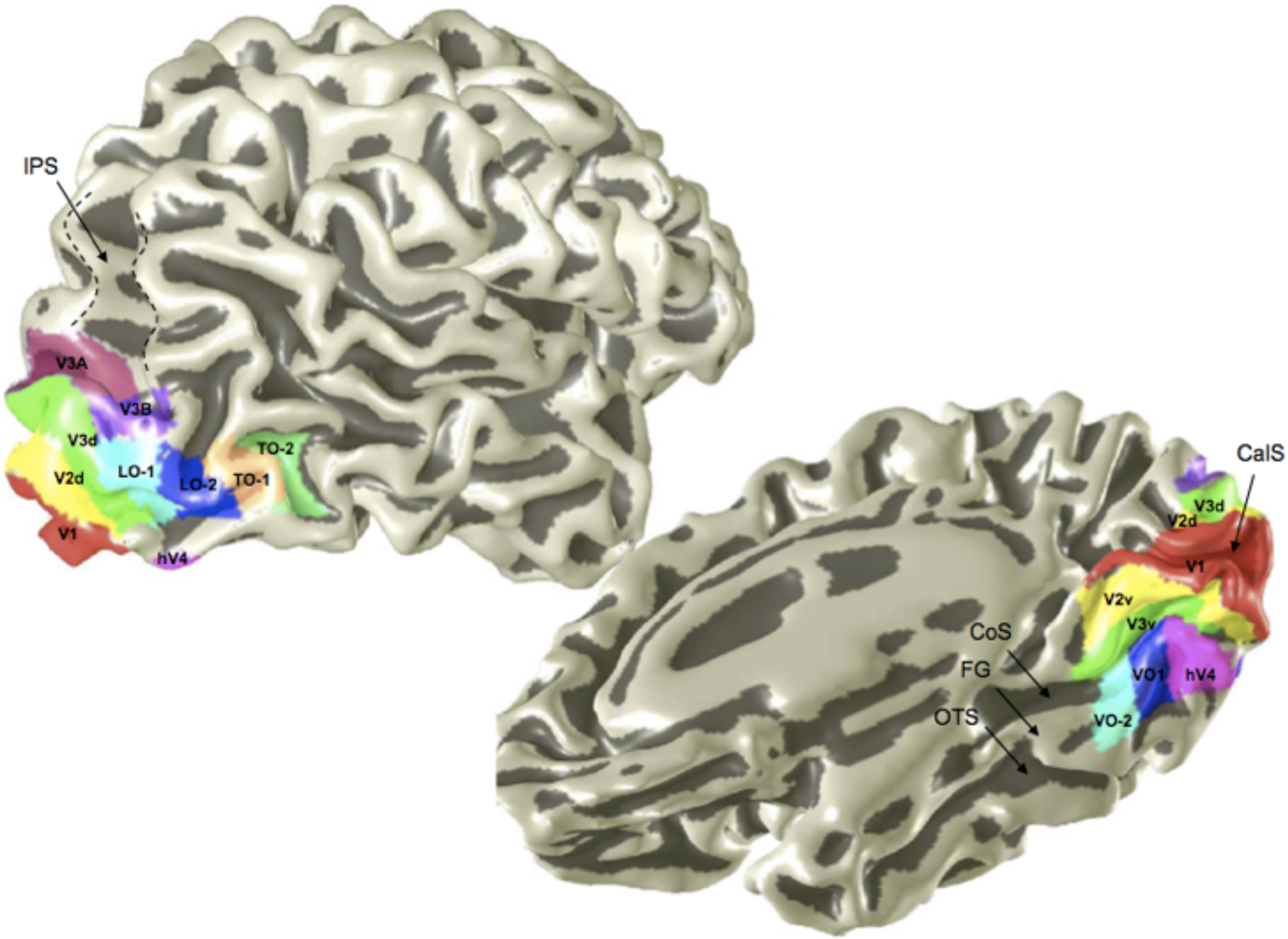



SFG
MFG
PrG
PoG
SMG
SPL
AnG
SOG
FRP
mfos-ant
OpIFG
TrIFG
OrIFG
LOrG
occ-ant
MOG
OCP
STG
MTG
ITG
TMP
IOG
calc-pos





Kastner, et al., 2004

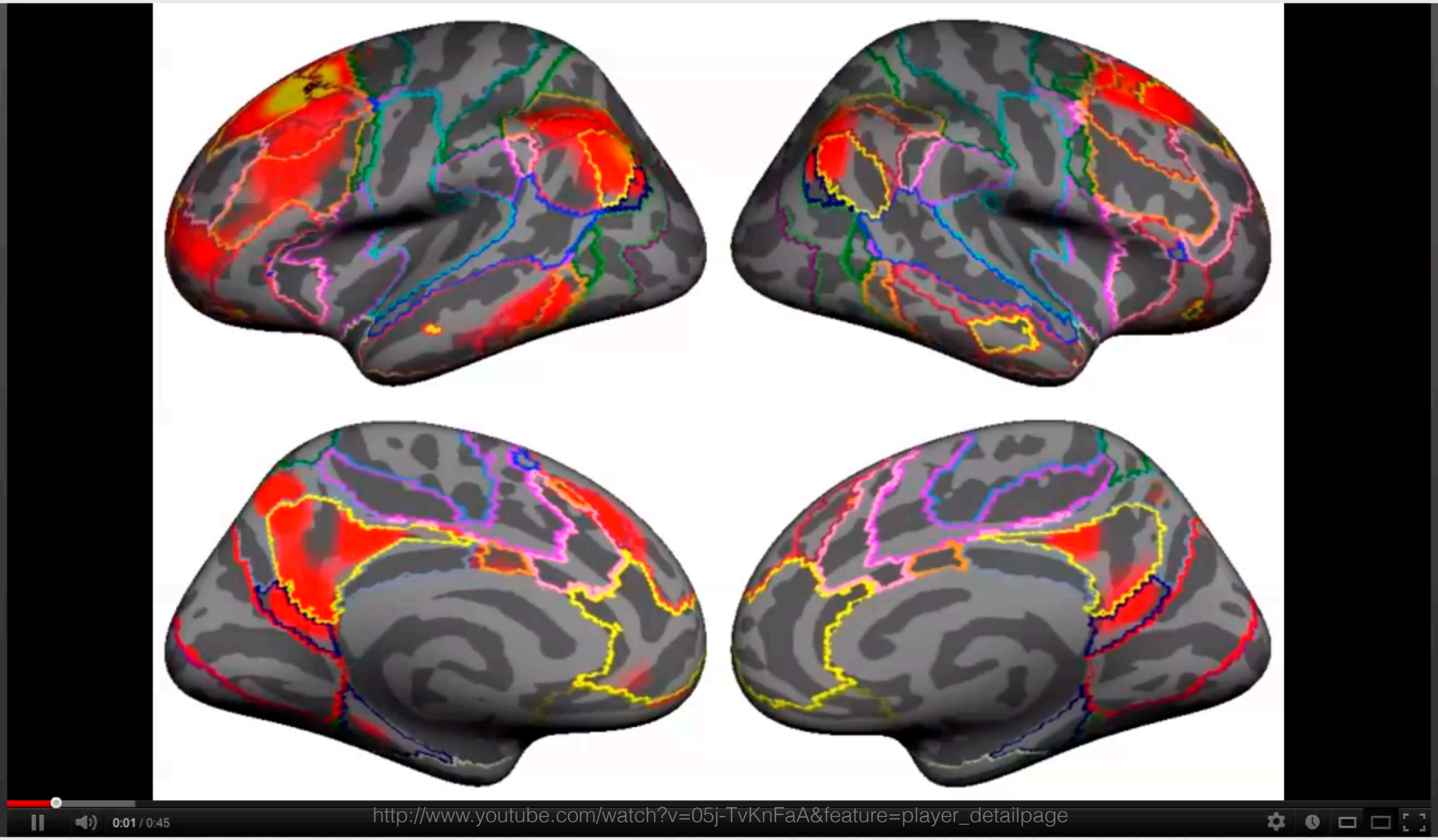


Wandell and Winawer, 2011

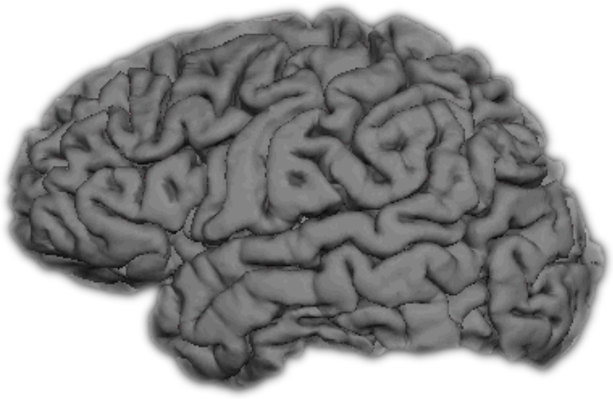
YouTube
Browse | Movies | Upload
binarybottle
This account is managed by binarybottle.com Learn more

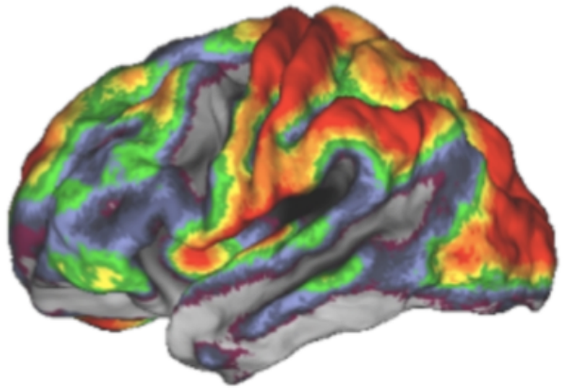
Yeo_etal_JNeurophysiol_2011_Prefrontal.avi

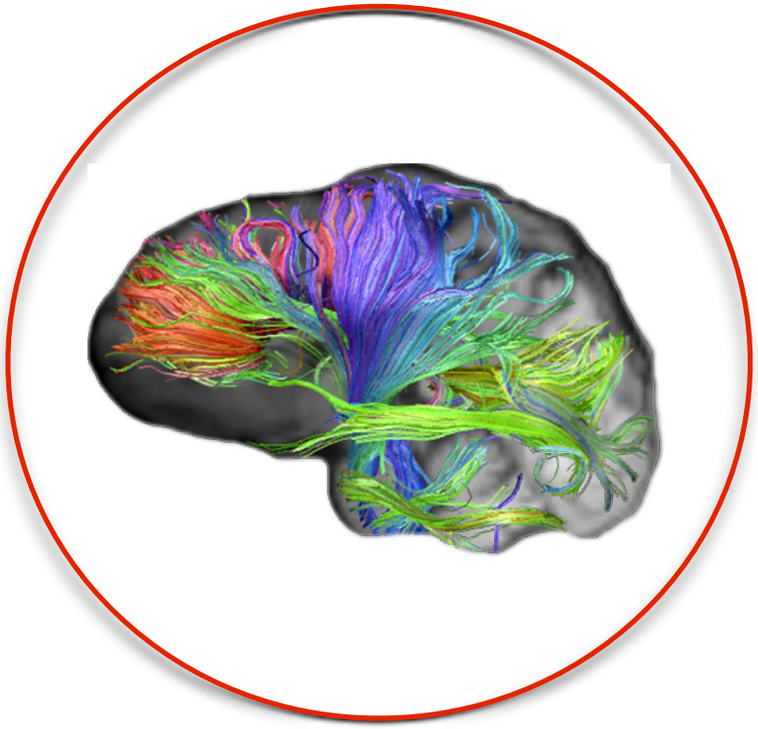
YeoKrienen | Subscribe | 9 videos

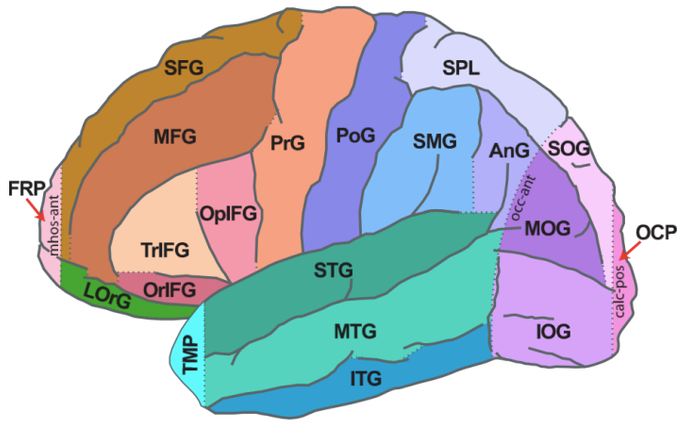


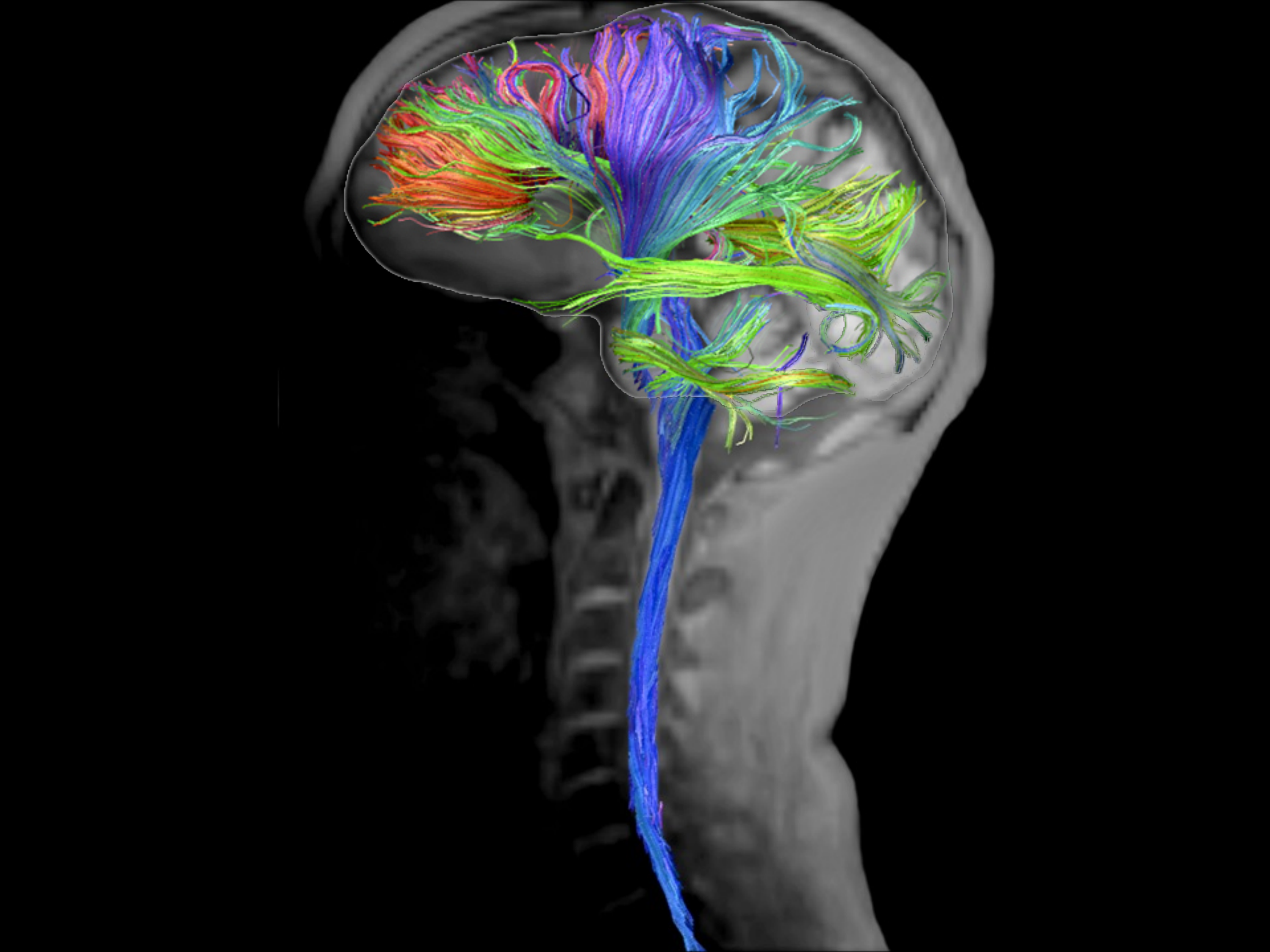
0:01 / 0:45
http://www.youtube.com/watch?v=05j-TvKnFaA&feature=player_detailpage

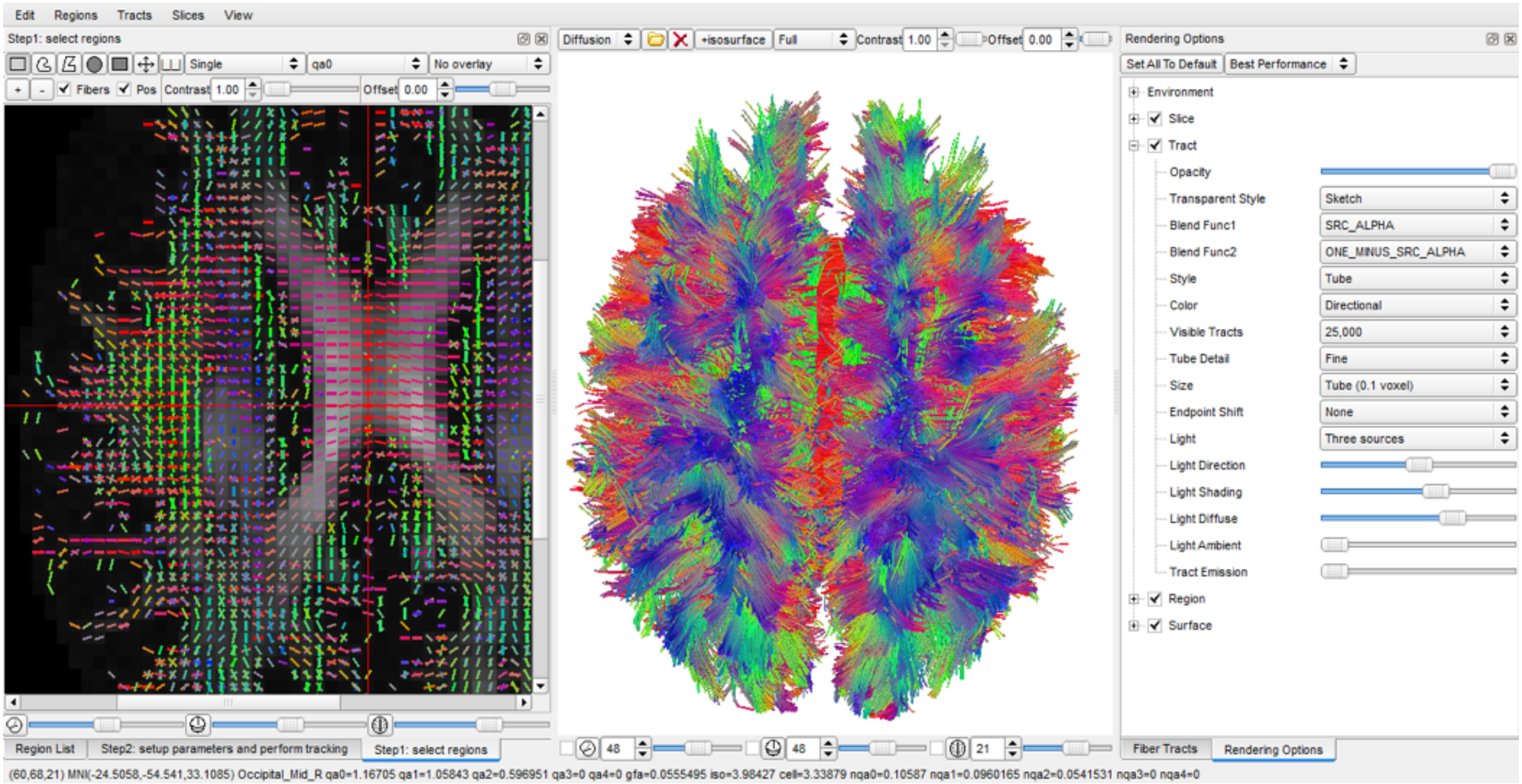


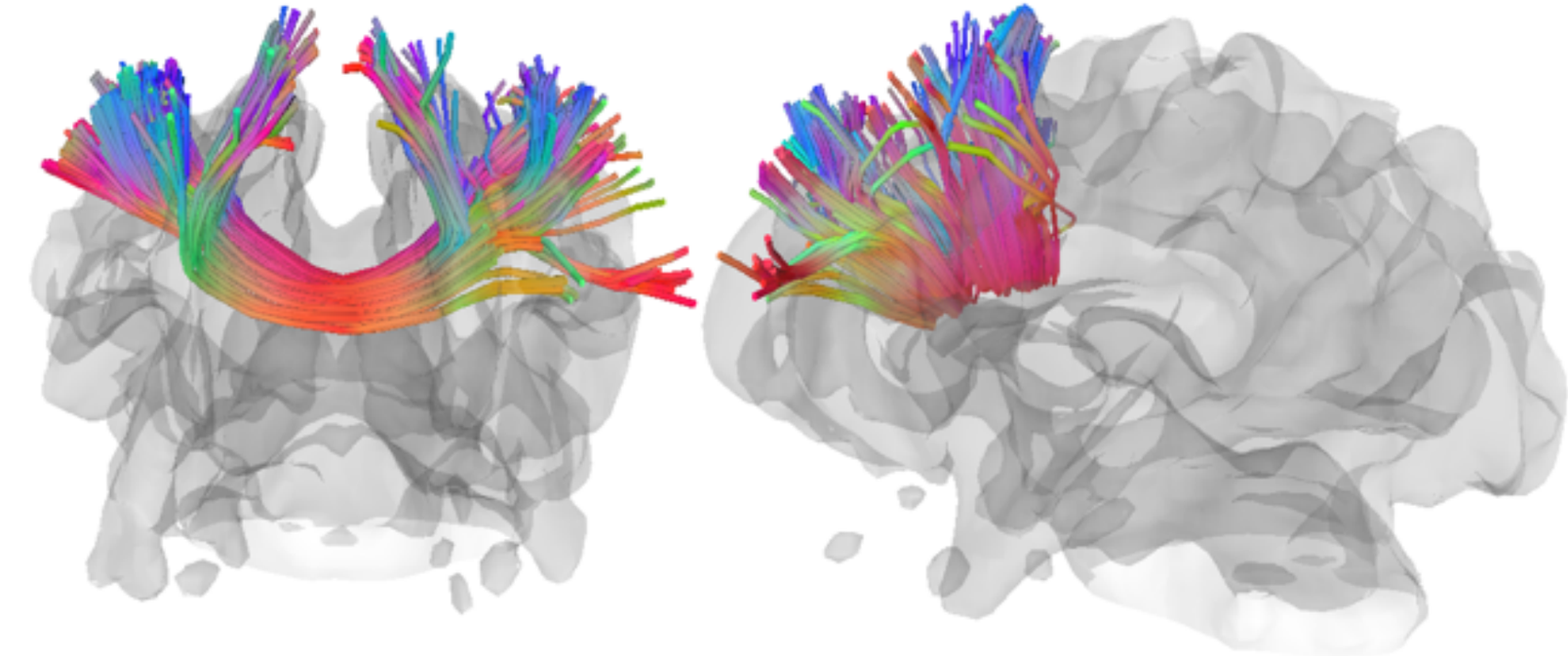


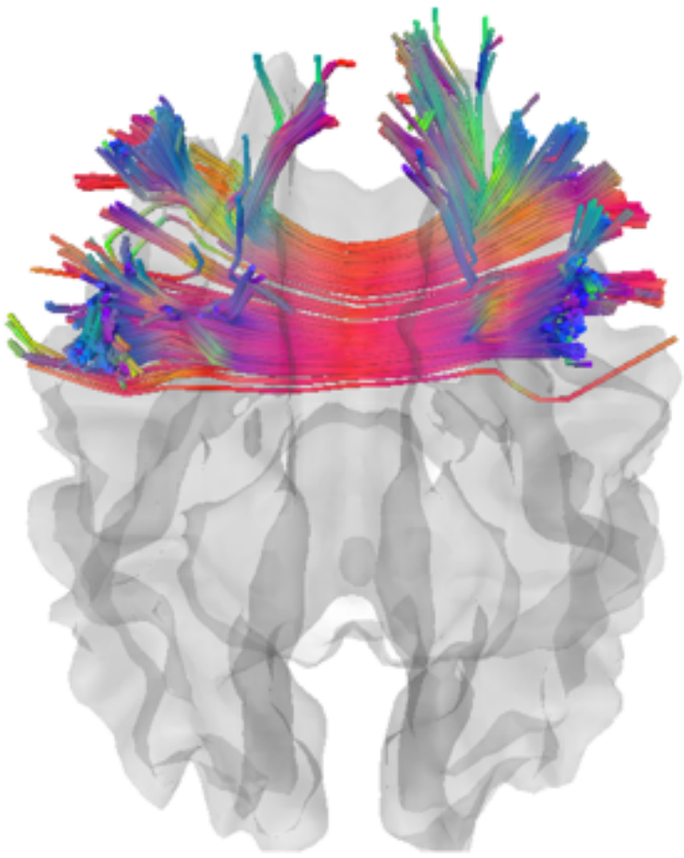


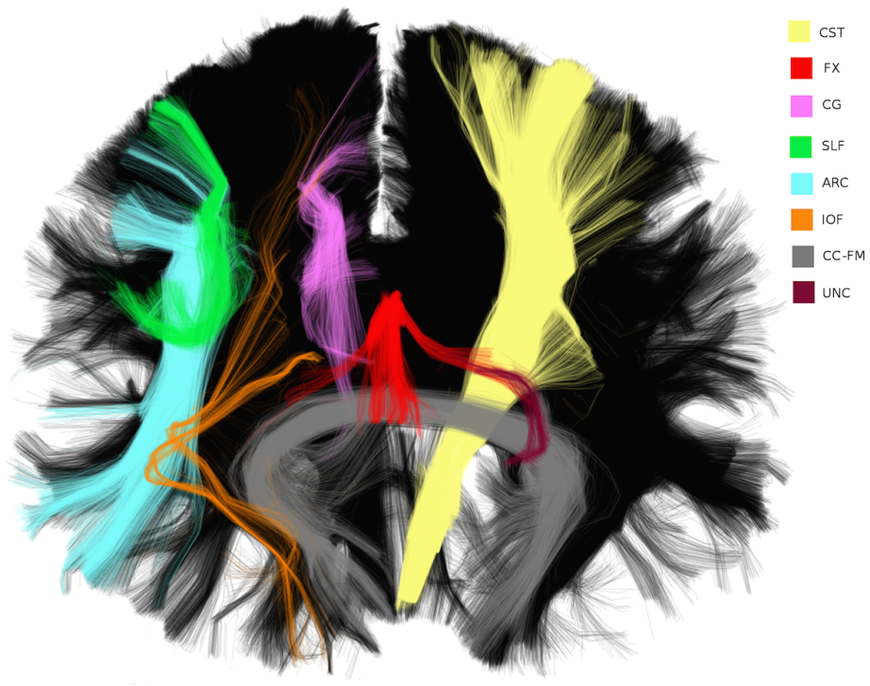

SFG
MFG
PrG
PoG
SPL
SMG
AnG
SOG
FRP
rhos-ant
OpIFG
TrIFG
OrIFG
LOrG
occ-ant
MOG
OCP
STG
MTG
ITG
TMP
calc-pos
IOG

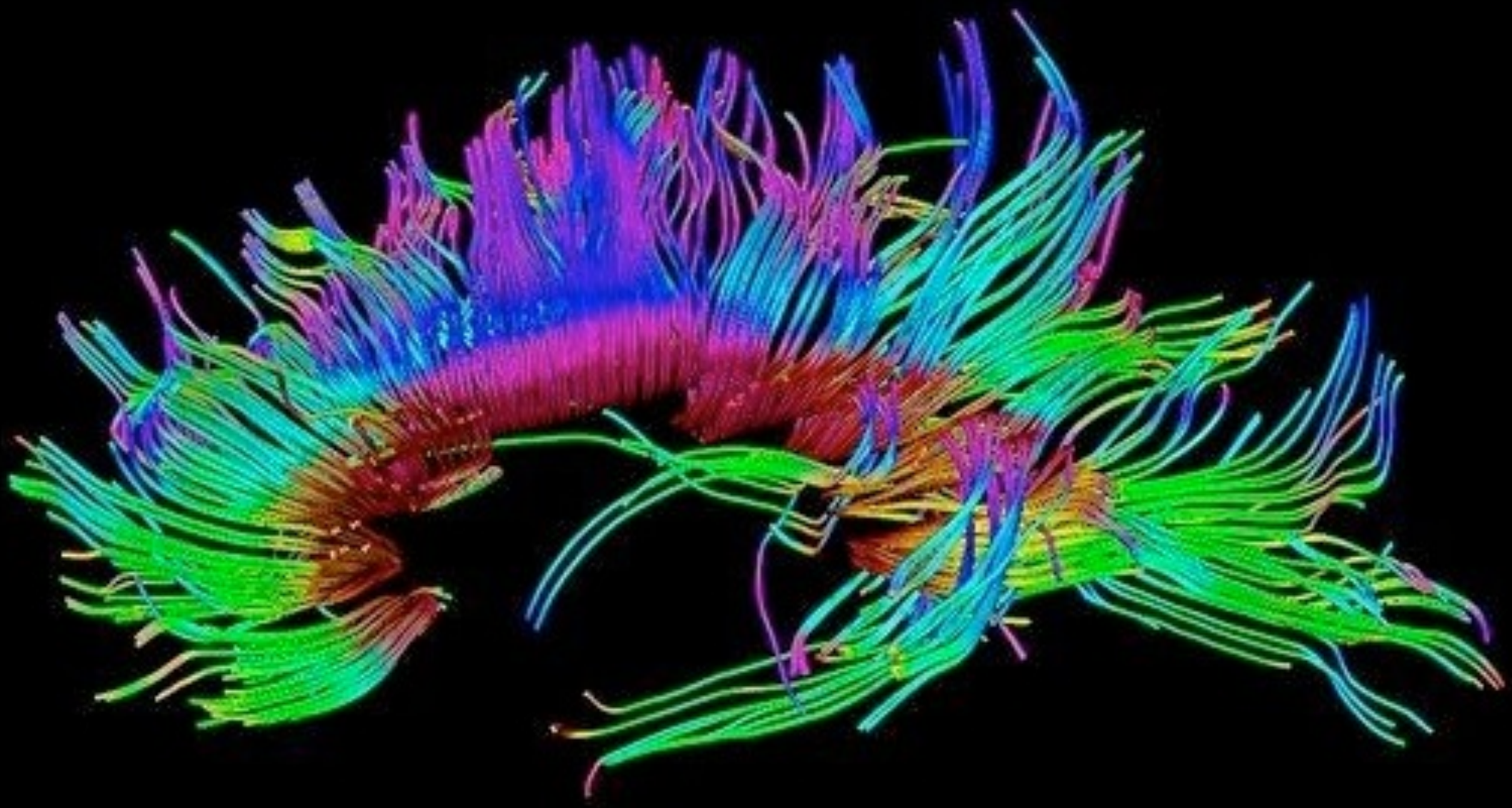


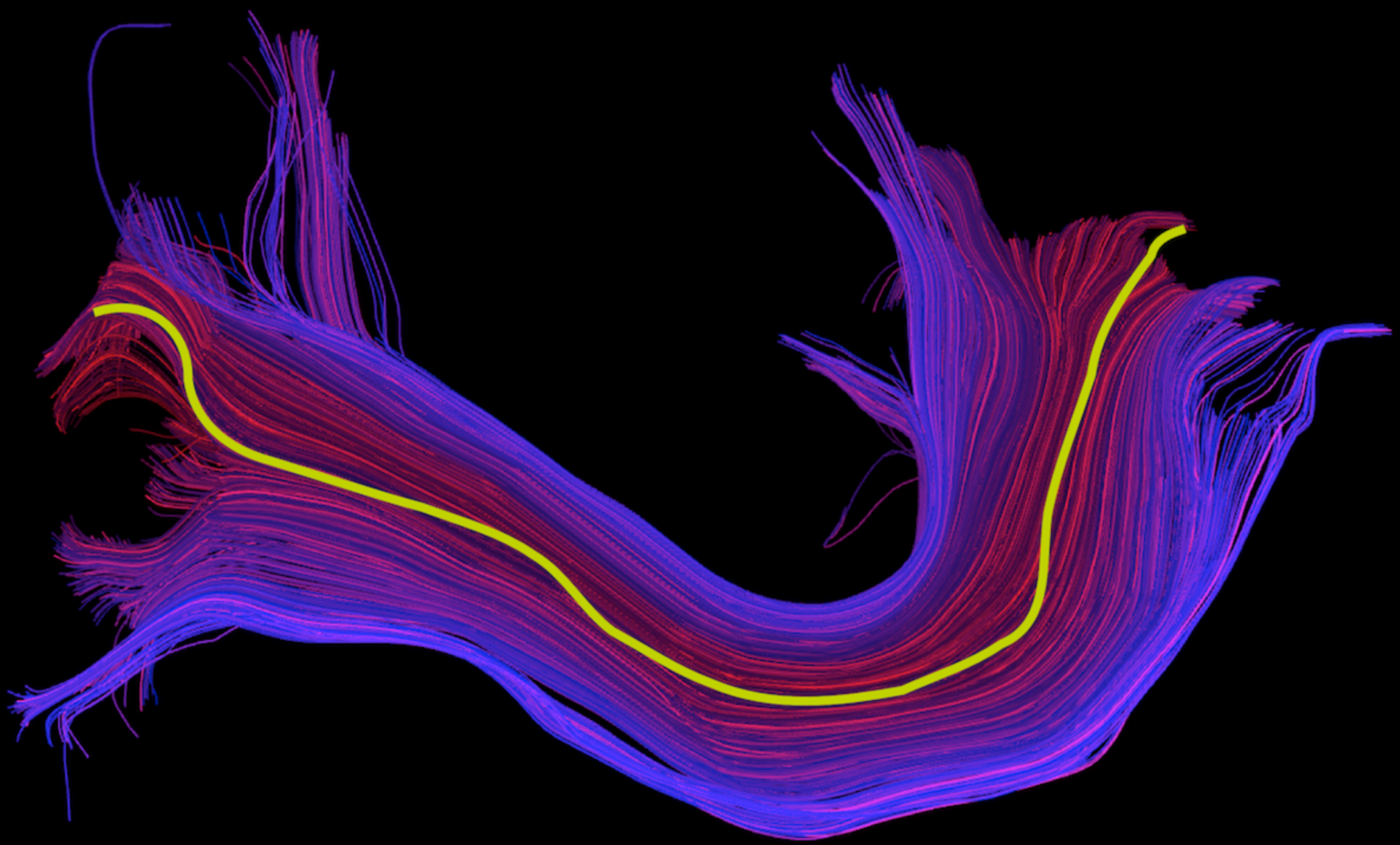

Edit
Regions
Tracts
Slices
View
Step1: select regions
Single
qa0
No overlay
Fibers
Pos
Contrast 1.00
Offset 0.00
Diffusion
+isosurface
Full
Contrast 1.00
Offset 0.00
Rendering Options
Set All To Default
Best Performance
Environment
Slice
Tract
Opacity
Transparent Style
Sketch
Blend Func1
SRC_ALPHA
Blend Func2
ONE_MINUS_SRC_ALPHA
Style
Tube
Color
Directional
Visible Tracts
25,000
Tube Detail
Fine
Size
Tube (0.1 voxel)
Endpoint Shift
None
Light
Three sources
Light Direction
Light Shading
Light Diffuse
Light Ambient
Tract Emission
Region
Surface
48
48
21
Region List
Step2: setup parameters and perform tracking
Step1: select regions
Fiber Tracts
Rendering Options
(60,68,21) MNI(-24.5058,-54.541,33.1085) Occipital_Mid_R qa0=1.16705 qa1=1.05843 qa2=0.596951 qa3=0 qa4=0 gfa=0.0555495 iso=3.98427 cell=3.33879 nqa0=0.10587 nqa1=0.0960165 nqa2=0.0541531 nqa3=0 nqa4=0

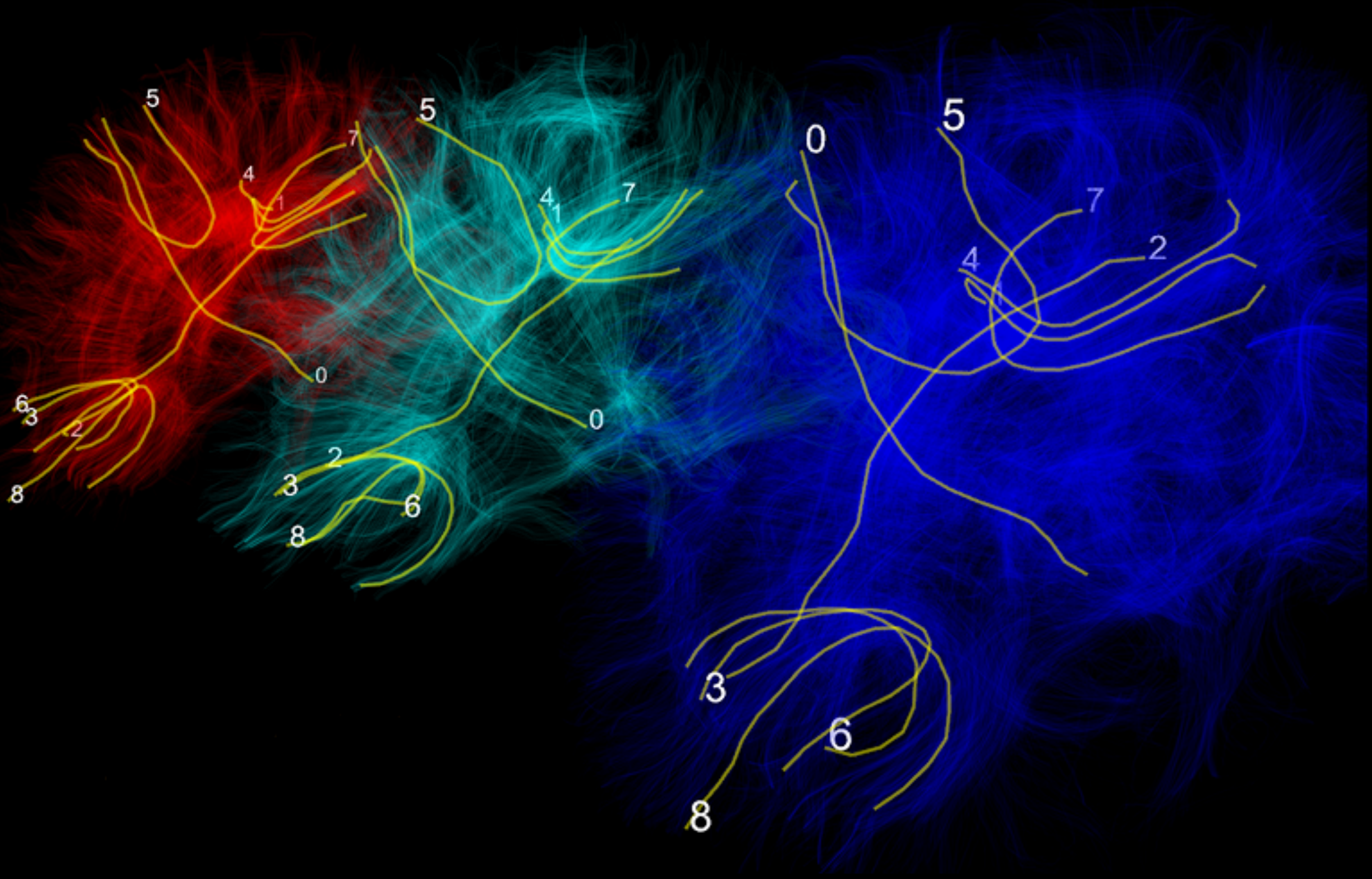


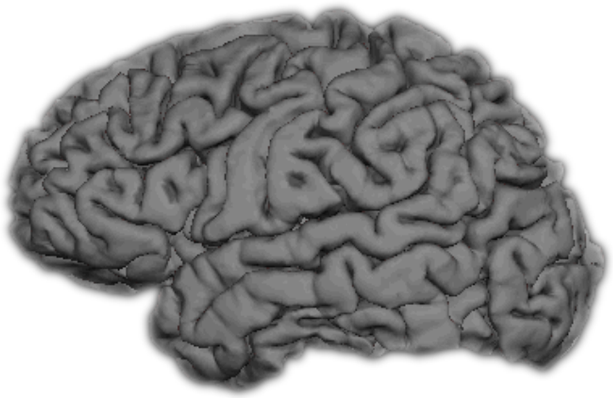


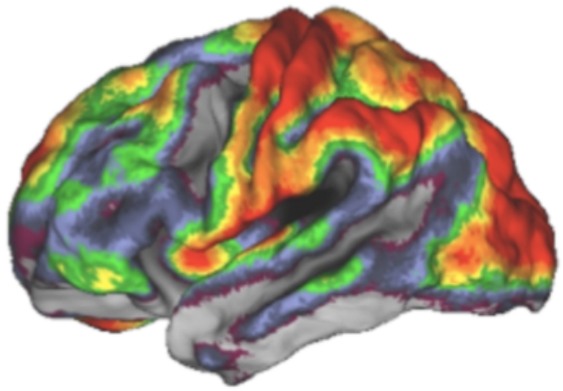

CST
FX
CG
SLF
ARC
IOF
CC-FM
UNC

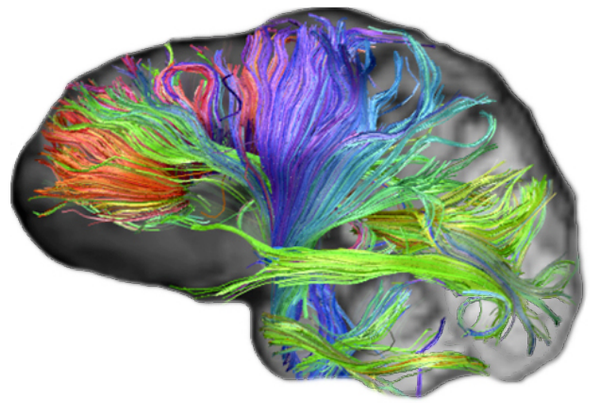


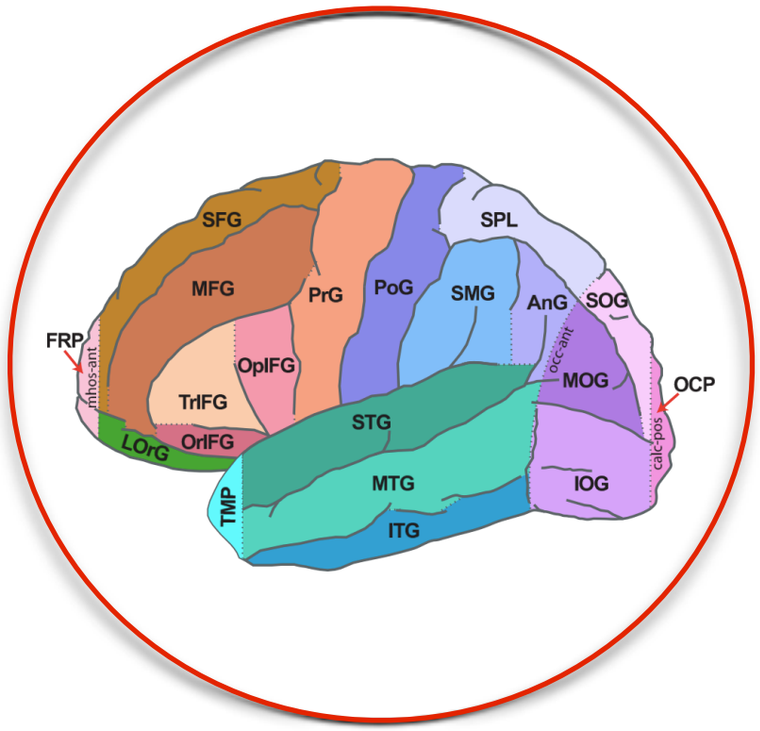


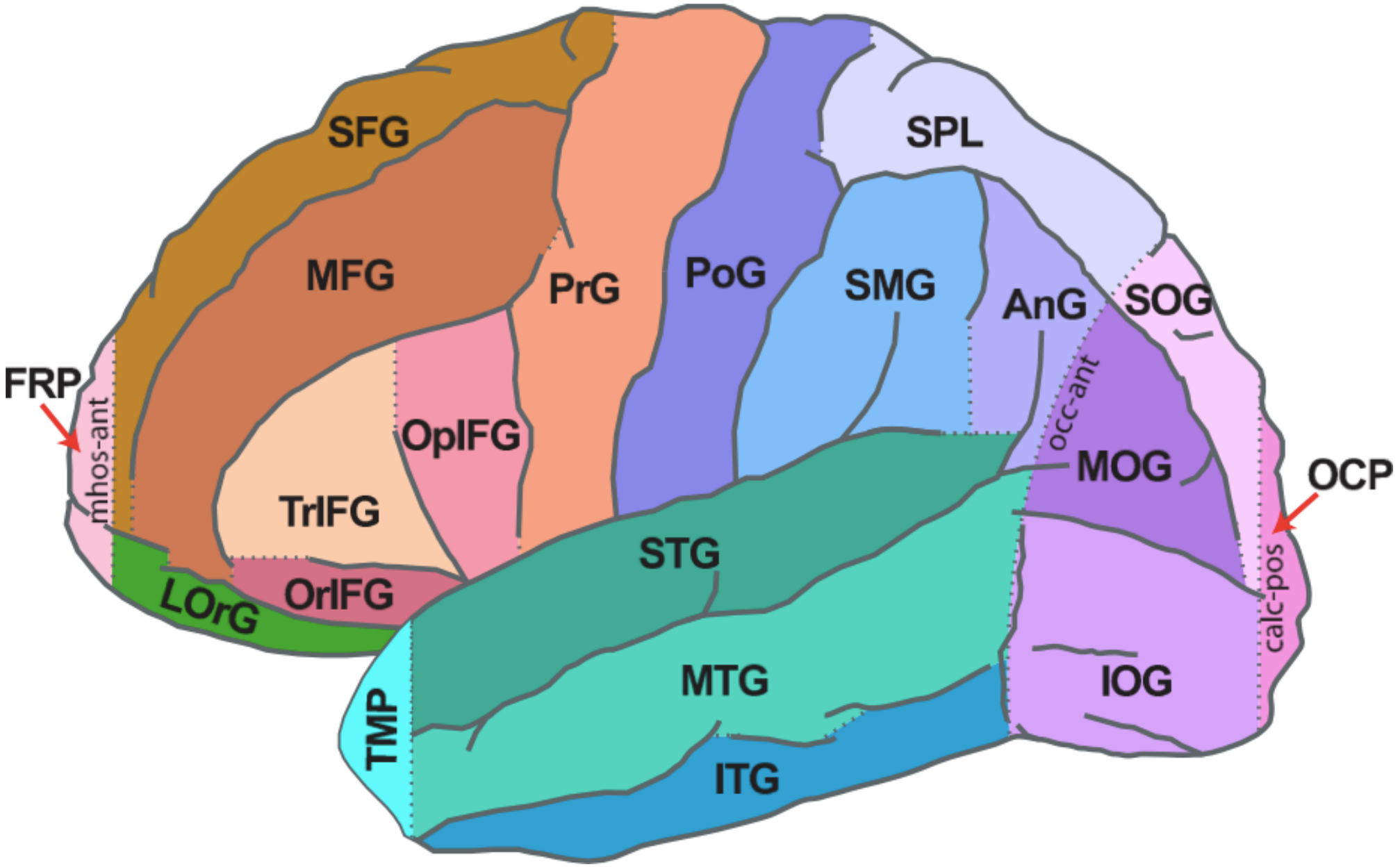

5
7
4
1
0
6
3
2
8
5
4
1
7
0
2
3
6
8
0
5
7
4
2
3
6
8

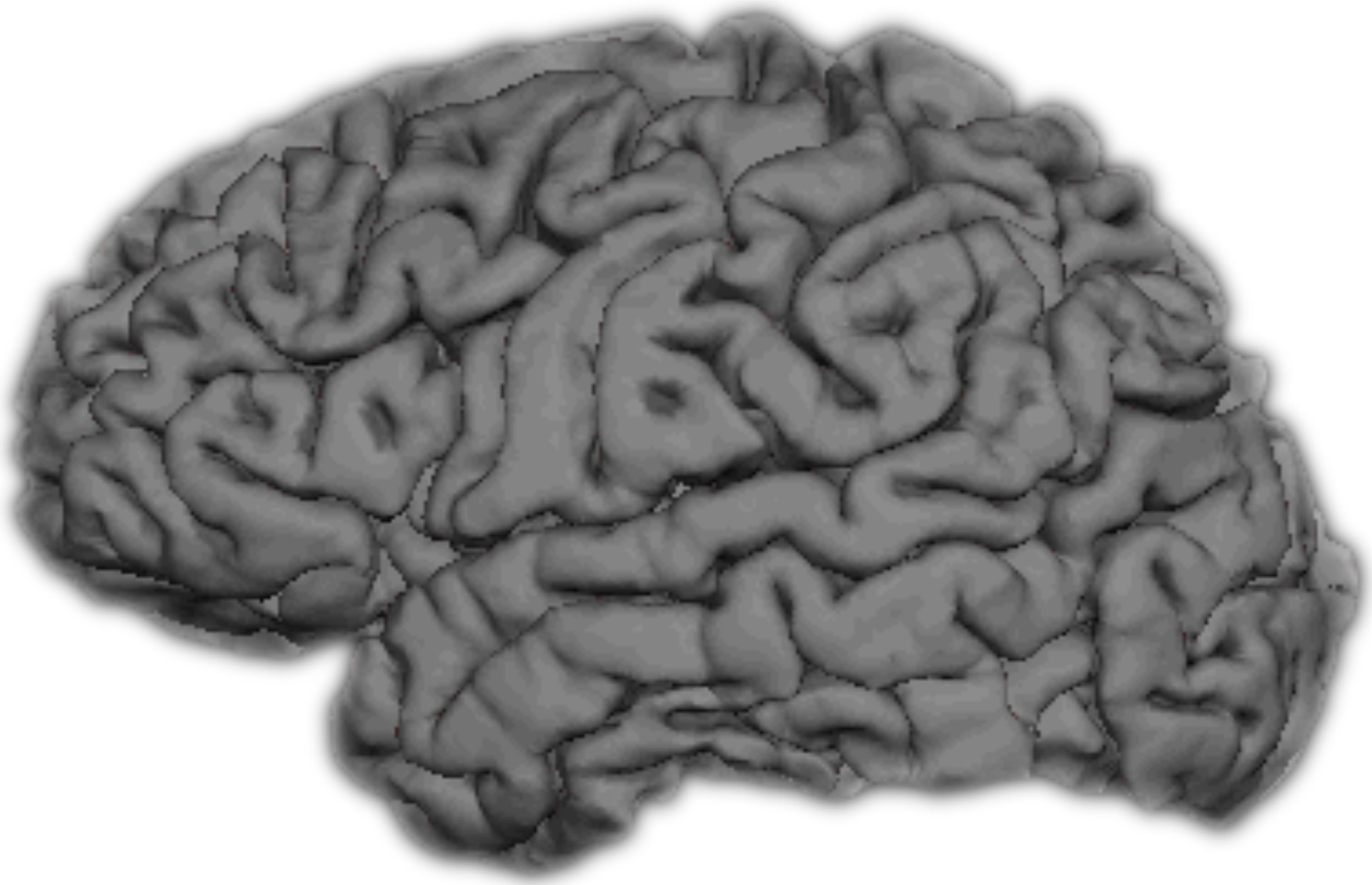


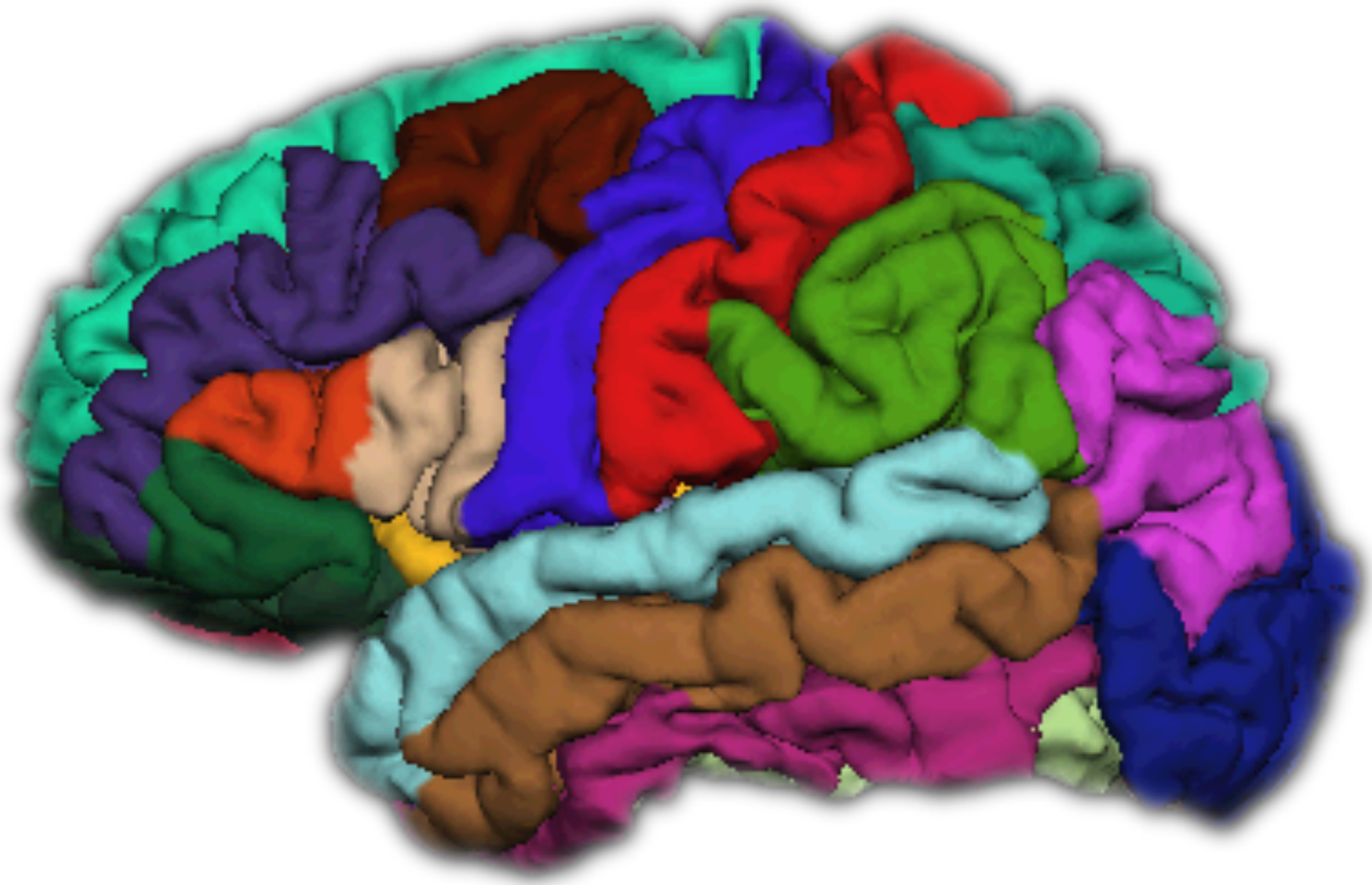





SFG
MFG
PrG
PoG
SMG
SPL
AnG
SOG
FRP
inhos-ant
OpIFG
TrIFG
OrIFG
LOrG
occ-ant
MOG
OCP
STG
MTG
ITG
TMP
IOG
calc-pos


SFG
MFG
PrG
PoG
SPL
SMG
AnG
SOG
FRP
OpIFG
TrIFG
OrIFG
LOrG
STG
MOG
OCP
MTG
IOG
TMP
ITG
occ-ant
calc-pos





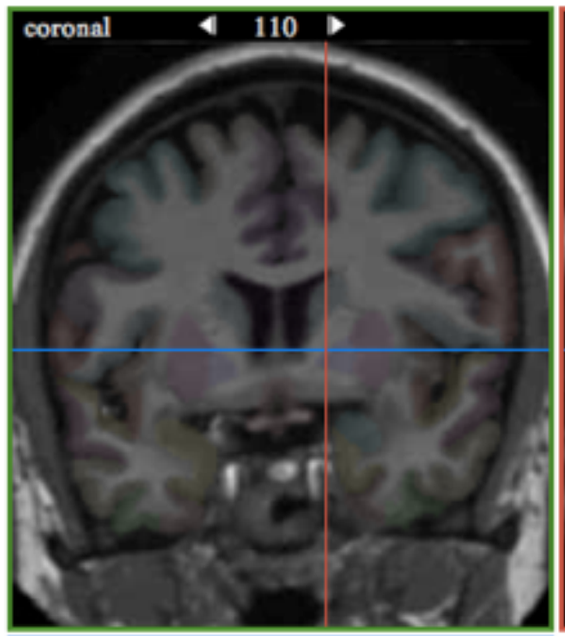
Roy G. Brain Image Viewer

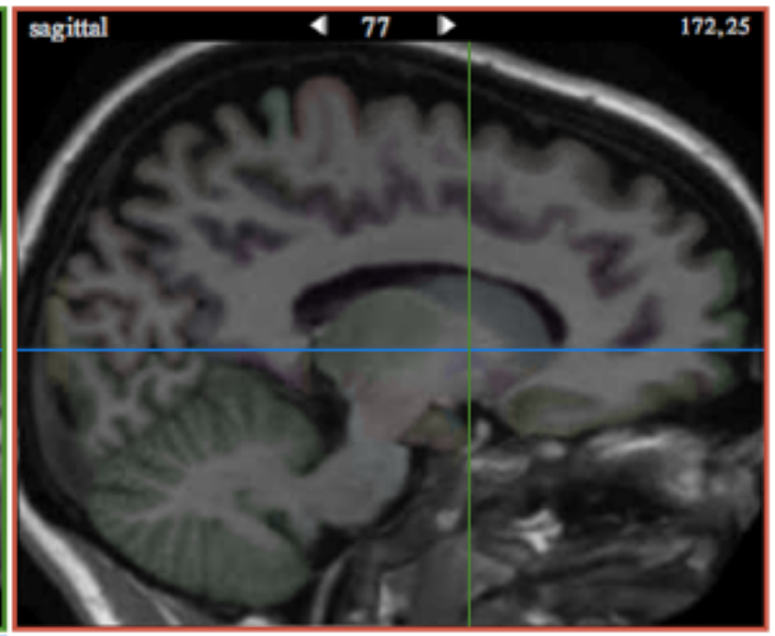
http://www.braincolor.org/

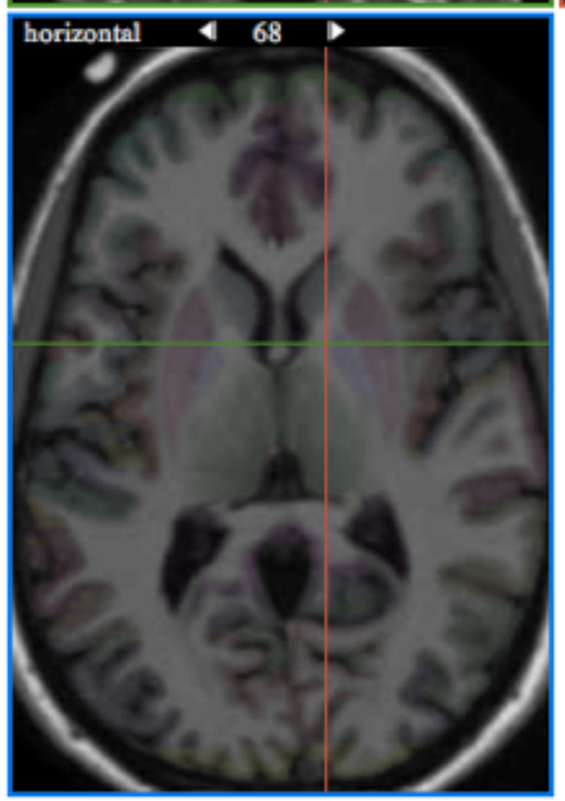
Google

brainCOLOR

Collaborative Open Labeling Online Resource







0 % label opacity

Coronal 110 labels (full label list):

Left Lateral Ventricle
Left Caudate
Left Putamen
Left Pallidum
Left Ventral DC
Left AIns anterior insula
Left MCgG middle cingulate gyrus
Left PP planum polare
Left MFG middle frontal gyrus
Left PrG precentral gyrus
Left PrG precentral gyrus
Left Ent entorhinal area
Left ITG inferior temporal gyrus
Left SFG superior frontal gyrus
Left SMC supplementary motor cortex
Left OpIFG opercular part of the inferior frontal gyrus
Left CO central operculum
Left FuG fusiform gyrus
Left STG superior temporal gyrus
Left MTG middle temporal gyrus
Left PIns posterior insula

Right Lateral Ventricle
Right Caudate
Right Putamen
Right Pallidum
Right Ventral DC
Right Amygdala
Right Insula
Right AIns anterior insula
Right PIns posterior insula
Right MCgG middle cingulate gyrus
Right OpIFG opercular part of the inferior frontal gyrus
Right MTG middle temporal gyrus
Right ITG inferior temporal gyrus
Right FuG fusiform gyrus
Right SFG superior frontal gyrus
Right MFG middle frontal gyrus
Right SMC supplementary motor cortex
Right PrG precentral gyrus
Right OpIFG opercular part of the inferior frontal gyrus
Right CO central operculum
Right PP planum polare
Right Ent entorhinal area
Right STG superior temporal gyrus

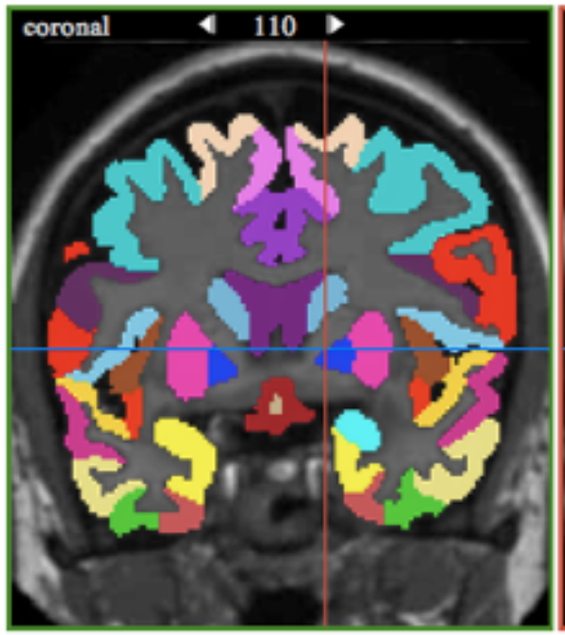
3rd Ventricle

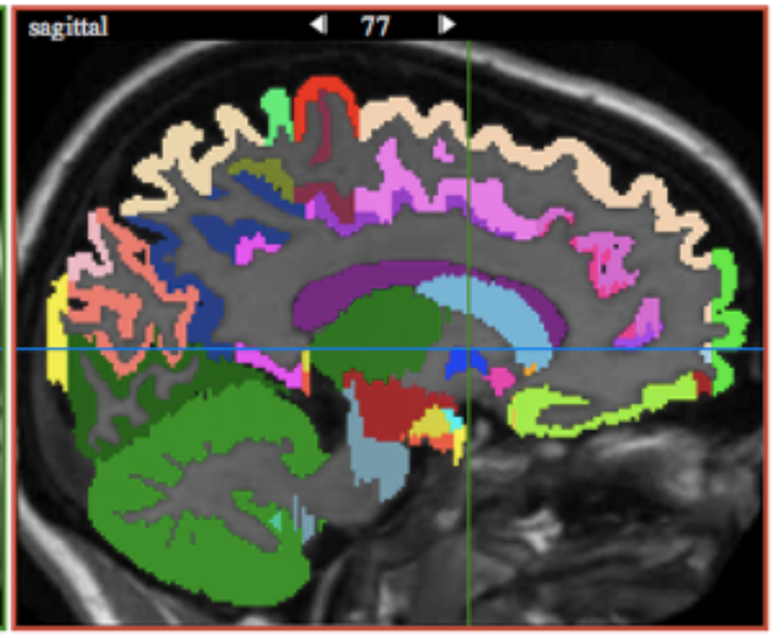
Roy G. Brain Image Viewer

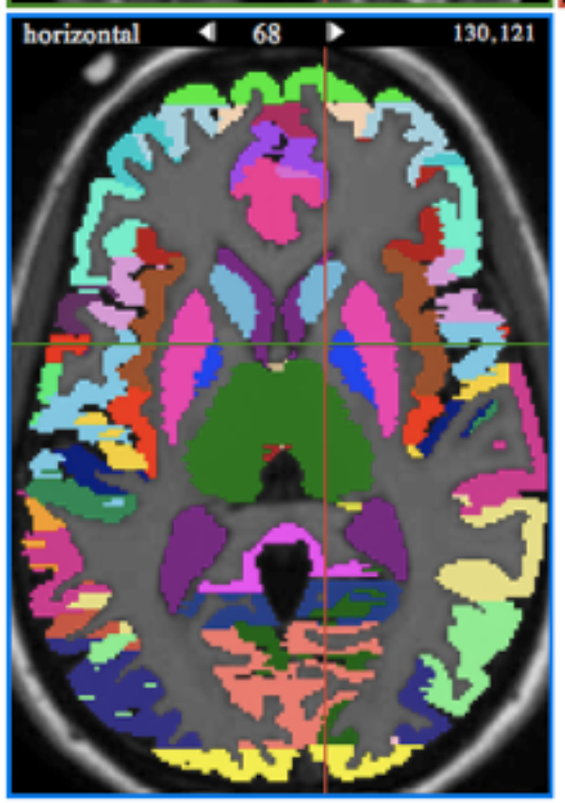
http://www.braincolor.org/

Google

brainCOLOR Collaborative Open Labeling Online Resource







100 % label opacity

Coronal 110 labels (full label list):

Left Lateral Ventricle
Left Caudate
Left Putamen
Left Pallidum
Left Ventral DC
Left AIns anterior insula
Left MCgG middle cingulate gyrus
Left PP planum polare
Left MFG middle frontal gyrus
Left PrG precentral gyrus
Left PrG precentral gyrus
Left Ent entorhinal area
Left ITG inferior temporal gyrus
Left SFG superior frontal gyrus
Left SMC supplementary motor cortex
Left OpIFG opercular part of the inferior frontal gyrus
Left CO central operculum
Left FuG fusiform gyrus
Left STG superior temporal gyrus
Left MTG middle temporal gyrus
Left PIns posterior insula

Right Lateral Ventricle
Right Caudate
Right Putamen
Right Pallidum
Right Ventral DC
Right Amygdala
Right Insula
Right AIns anterior insula
Right PIns posterior insula
Right MCgG middle cingulate gyrus
Right OpIFG opercular part of the inferior frontal gyrus
Right MTG middle temporal gyrus
Right ITG inferior temporal gyrus
Right FuG fusiform gyrus
Right SFG superior frontal gyrus
Right MFG middle frontal gyrus
Right SMC supplementary motor cortex
Right PrG precentral gyrus
Right OpIFG opercular part of the inferior frontal gyrus
Right CO central operculum
Right PP planum polare
Right Ent entorhinal area
Right STG superior temporal gyrus

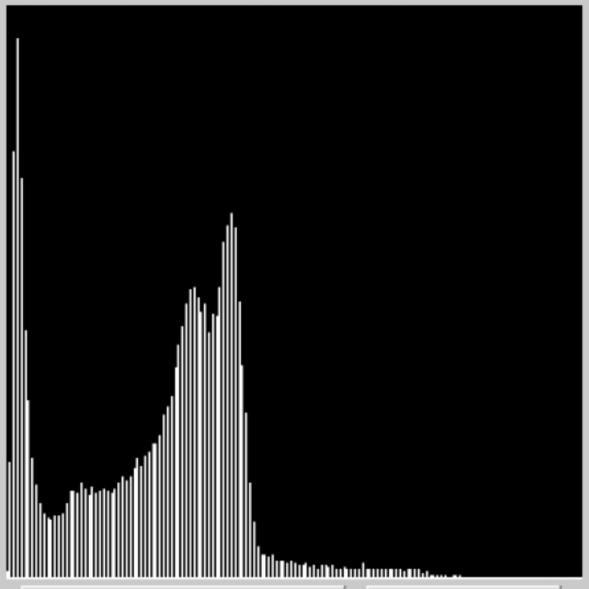
3rd Ventricle

NVM pid=10015 scn=3

File Edit Windows Tools Help

Segmenter Prefix: rjm Right Hippocampus

NVM: Histogram



Set Full Intenisty Range (s) | clear region (c)

Minimum: 0 Maximum: 153 hide (h)

NVM: Landmarks

File Landmark Help

Choose a Scan:

10015_3

Choose a Landmark:

Right->Left X 0
Superior -> Inferior Z 0
Posterior -> Anterior Y 0

0.5

Review: Next | Previous hide

SegMentor v0.0

File Edit Actions Help

Ready to run: after last command (1 total) index.xml

Help | Prev. | Next | To Do list

This SegMentor script will guide you through the segmentation

Hit the Enter key (with the main window selected and the mouse over an image) to begin...

NVM: Outline Labels

File Label Help

◇ Assign current label when extracting

Choose Existing Label:

R-L Amygdala

Review: Next | Previous hide

save otl | load otl

Update View

slice 69

NVM: AutoContour slice 69

File AutoContour Help

Current	Contour	Label (and original intensity)
43		RoughBrain
13		Background-CSF
30		CSF-Gray
58		Gray-White

Set to current intensity

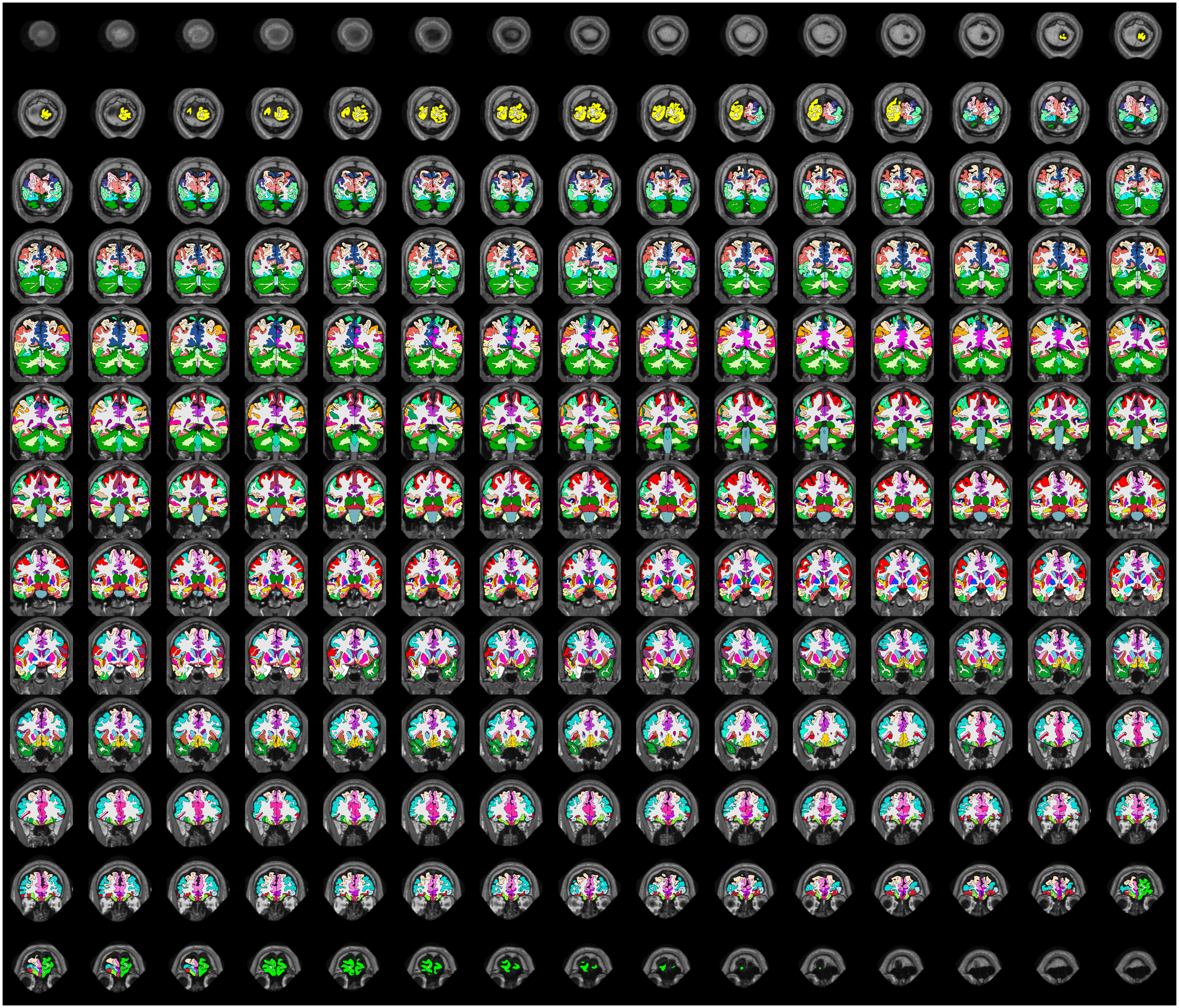
Update View

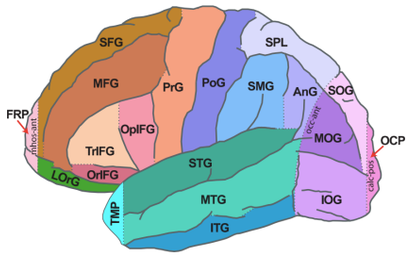
slice 98

Update View

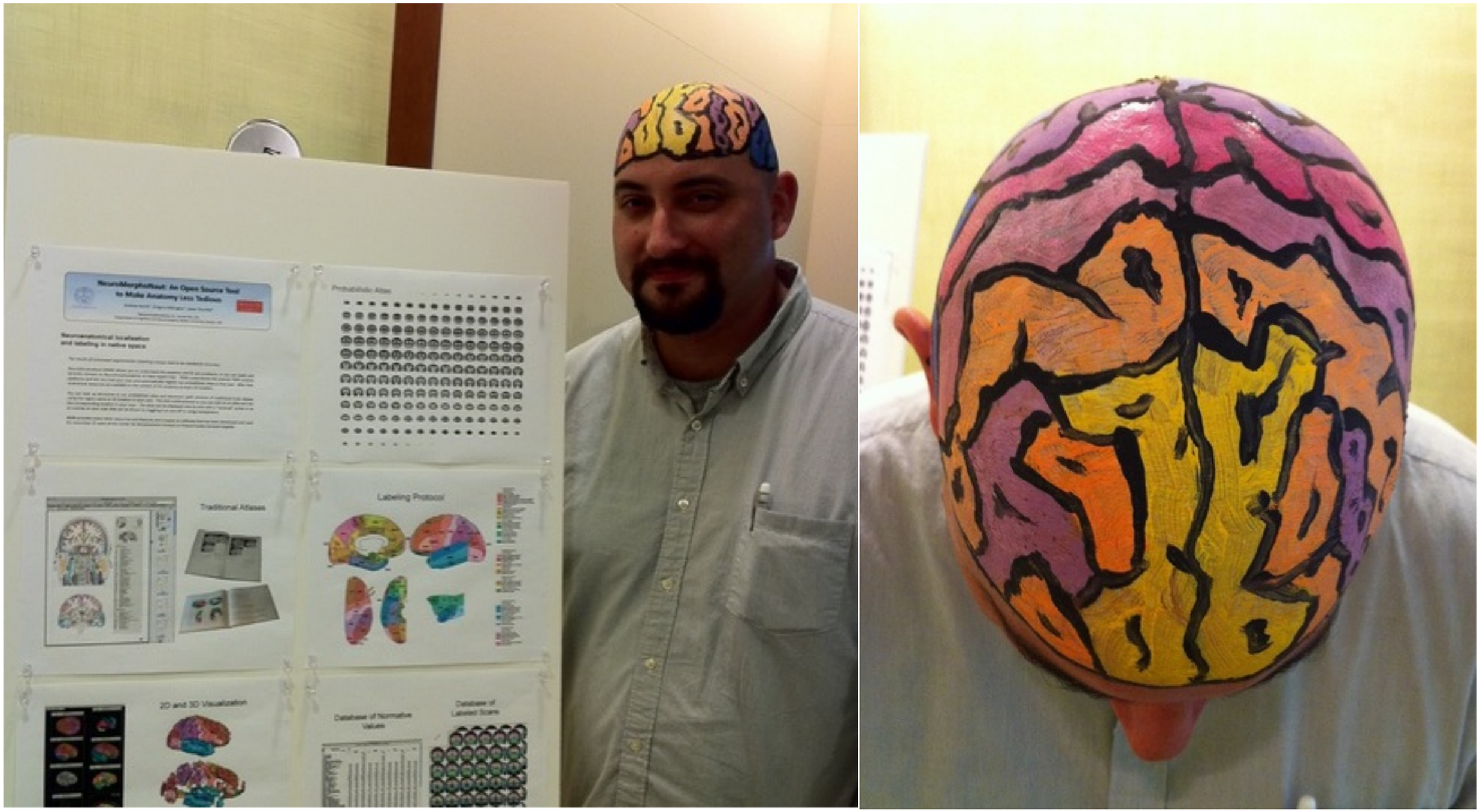
slice 99

http://
www.neuromorphometrics.org



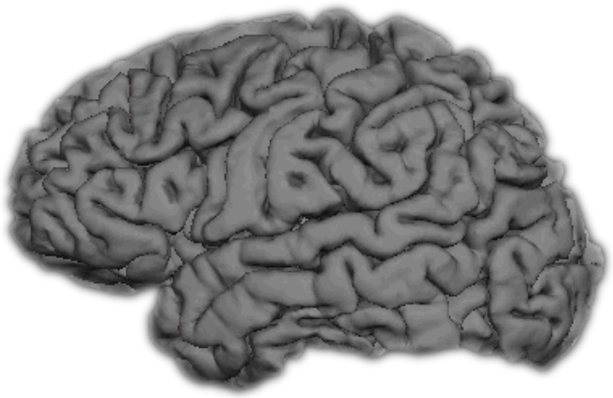


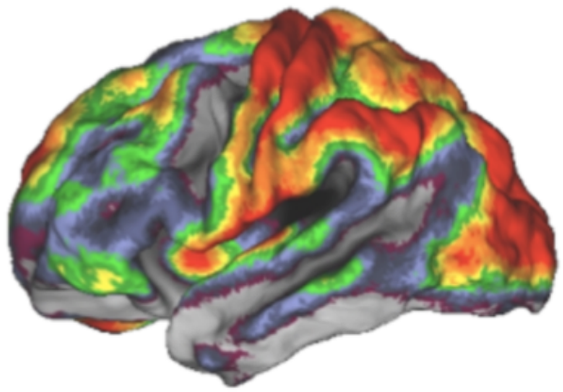
A dedicated human labeler

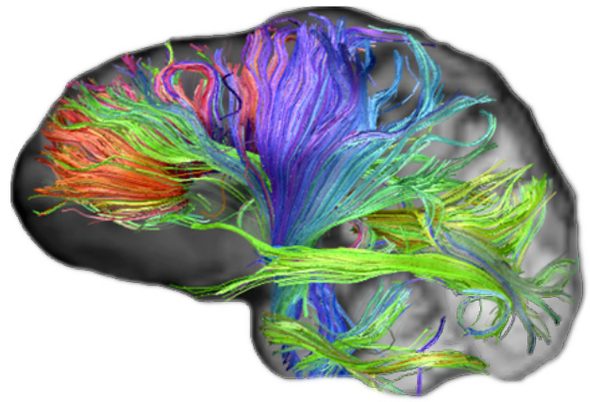


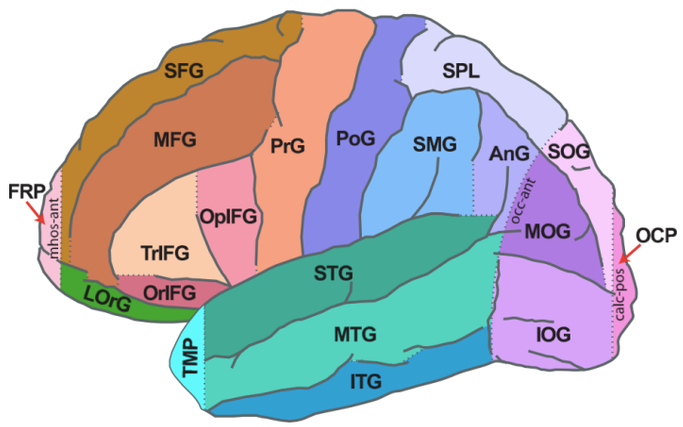
Greg Millington

Neuromorphometrics








SFG
MFG
PrG
PoG
SPL
SMG
AnG
SOG
FRP
rhos-ant
OpIFG
TrIFG
OrIFG
LOrG
STG
MTG
ITG
TMP
occ-ant
MOG
IOG
OCP
calc-pos

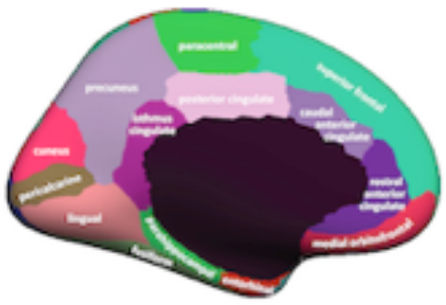
Mindboggle

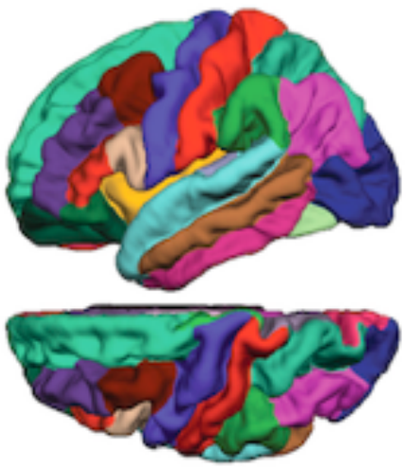
Software Data Papers People

Data

Welcome to the largest collection of publicly available, manually labeled human brain image data in the world!
Please cite the following article and this website when making use of Mindboggle-101 data:
101 labeled brain images and a consistent human cortical labeling protocol
Arno Klein, Jason Tourville. Frontiers in Brain Imaging Methods. 6:171. DOI: 10.3389/fnins.2012.00171

See the README, labeling protocol, the CHANGELOG, and MD5SUMS,
which describe the labeled nifti volumes (nii), vtk surfaces (vtk), and FreeSurfer files (mgh, etc.).
Except where noted, all data are licensed under a Creative Commons License: (cc) BY-NC-SA





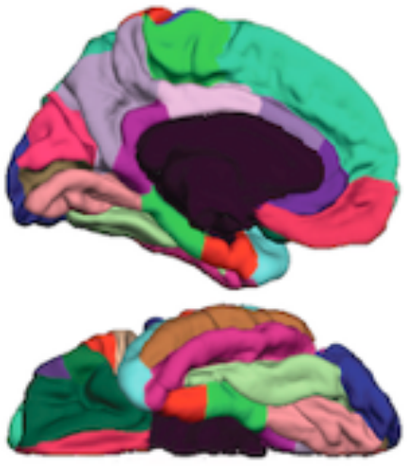
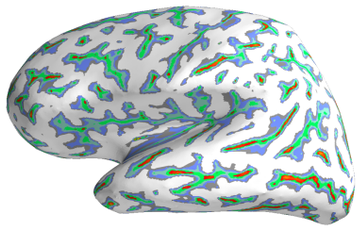
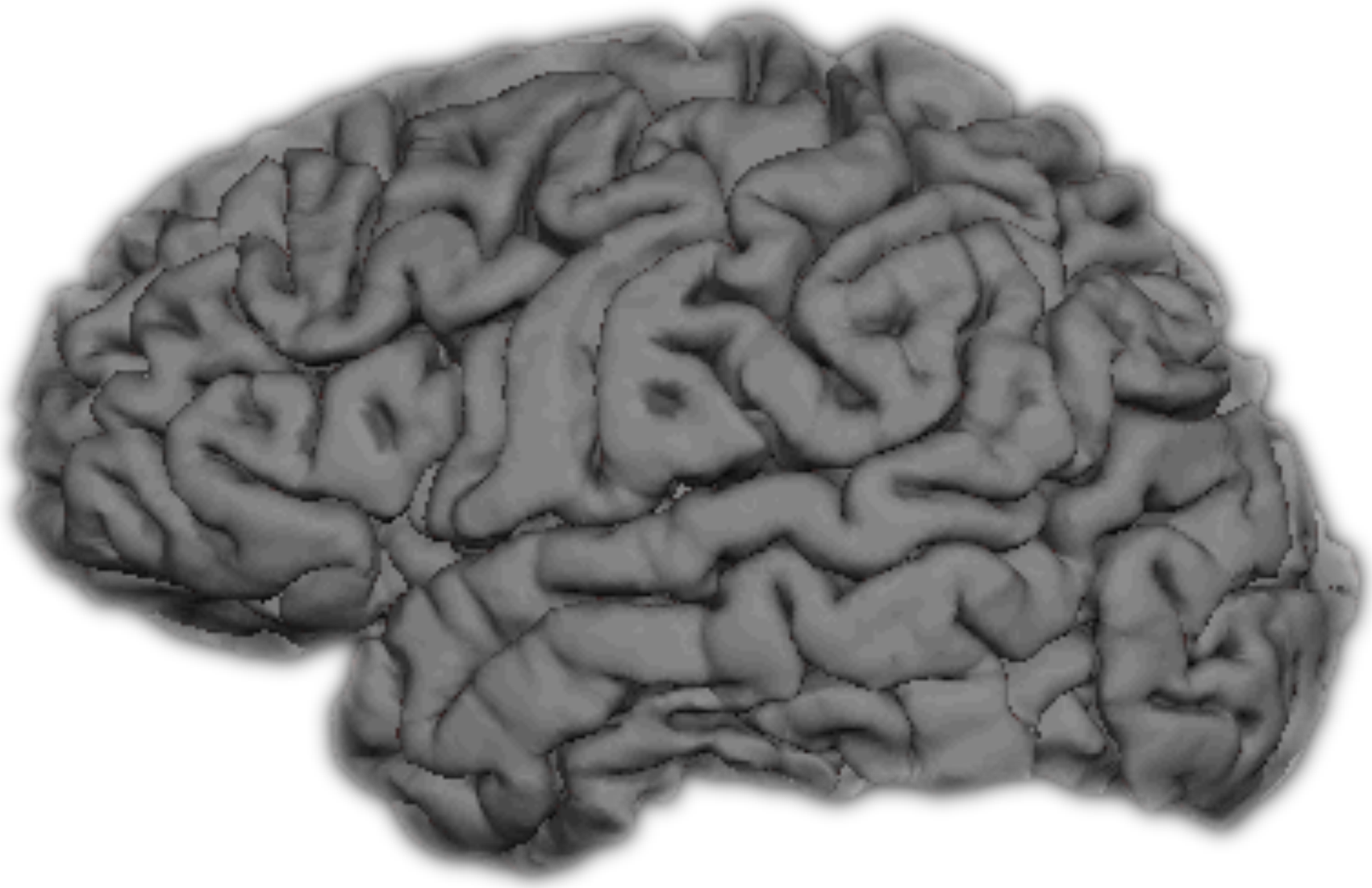
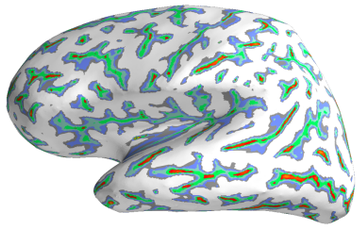


Image Processing and Registration

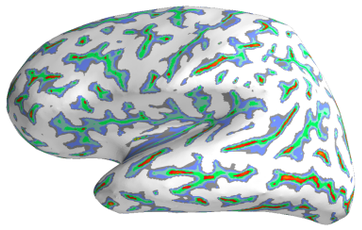


Cortical surface

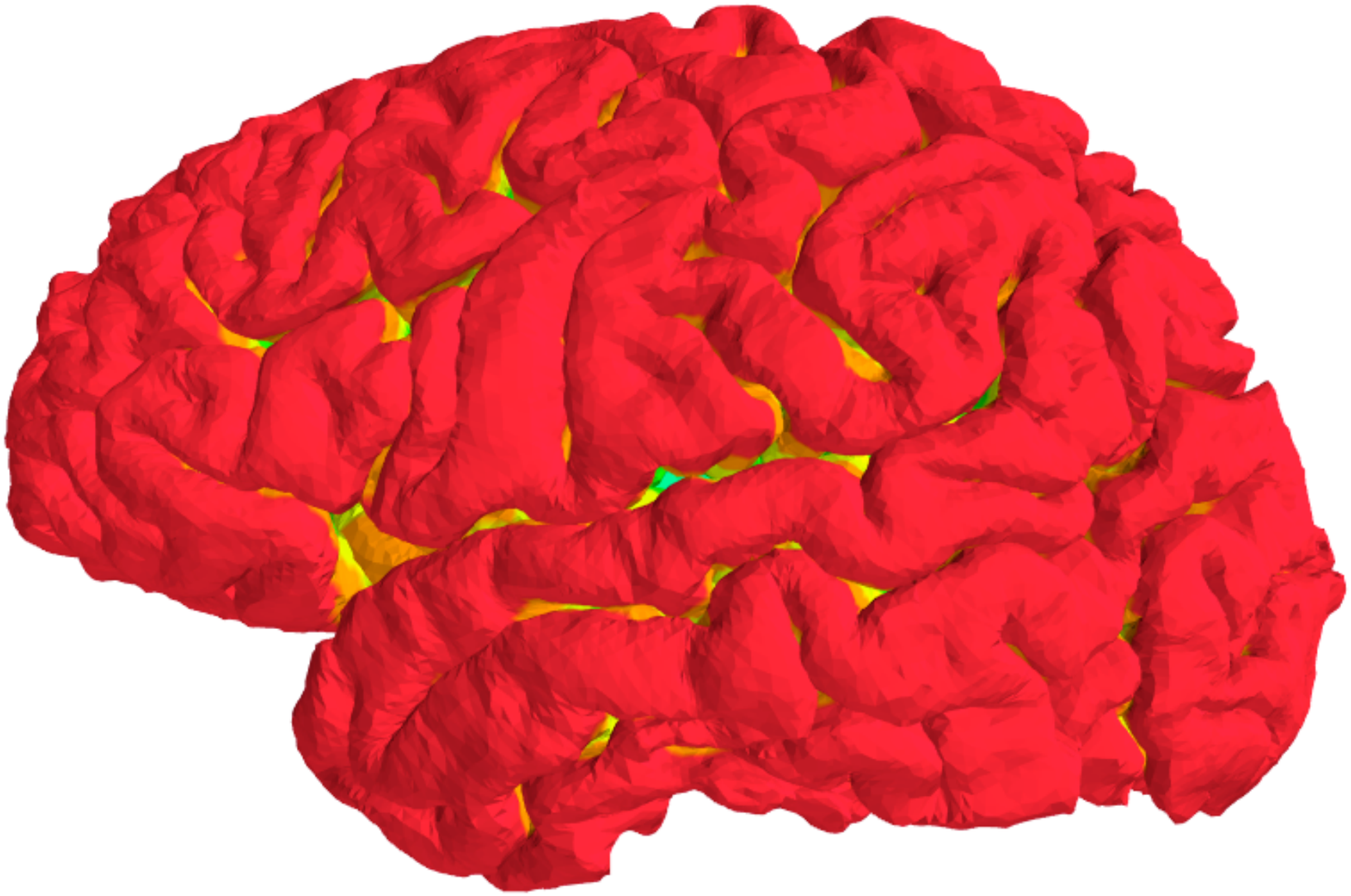


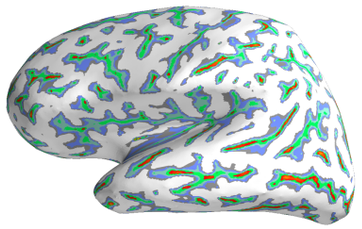


Mean curvature

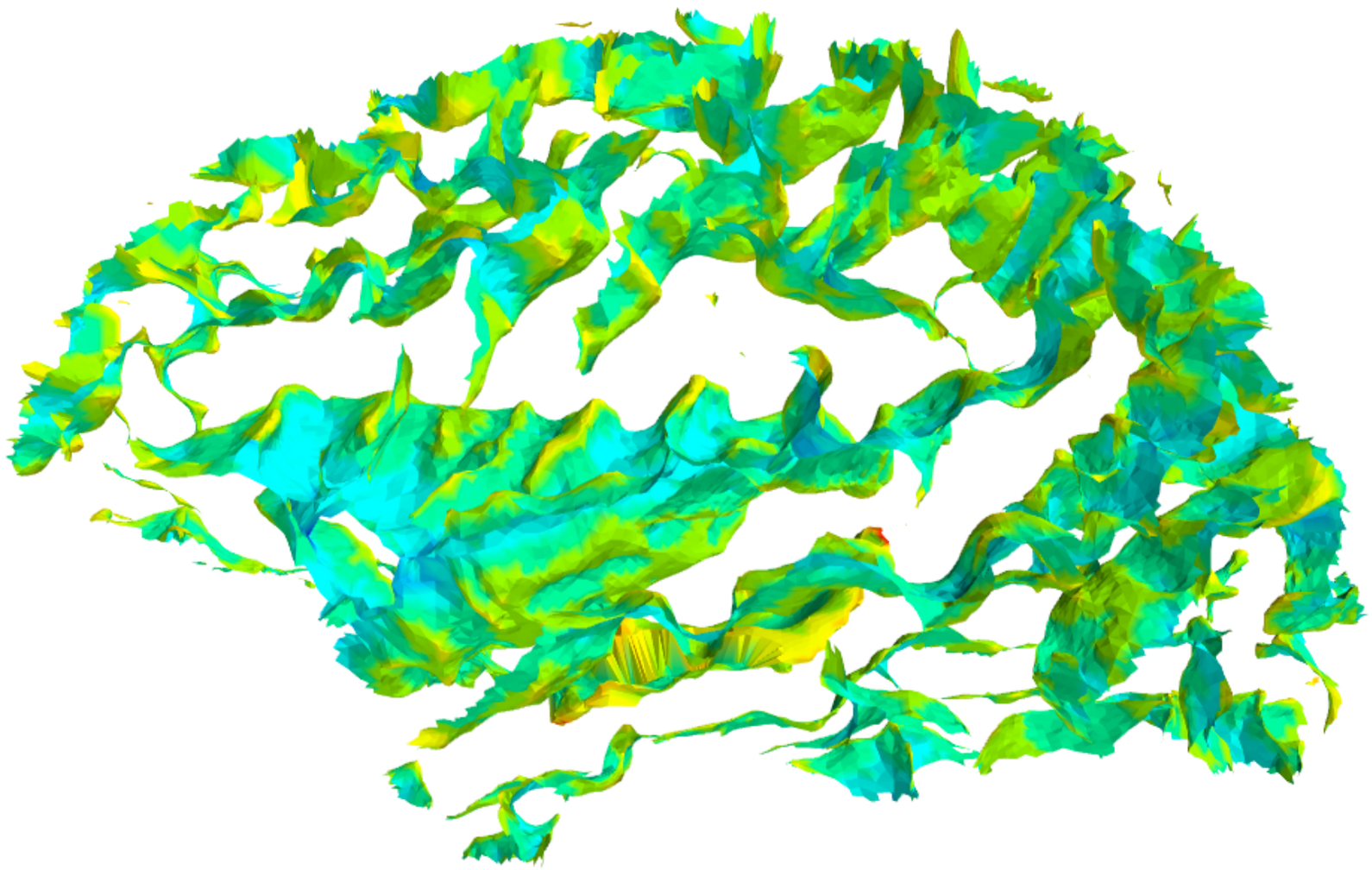


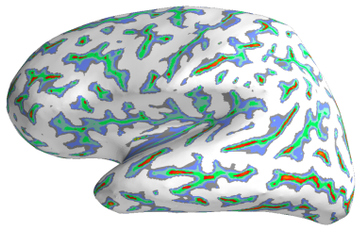
Travel depth



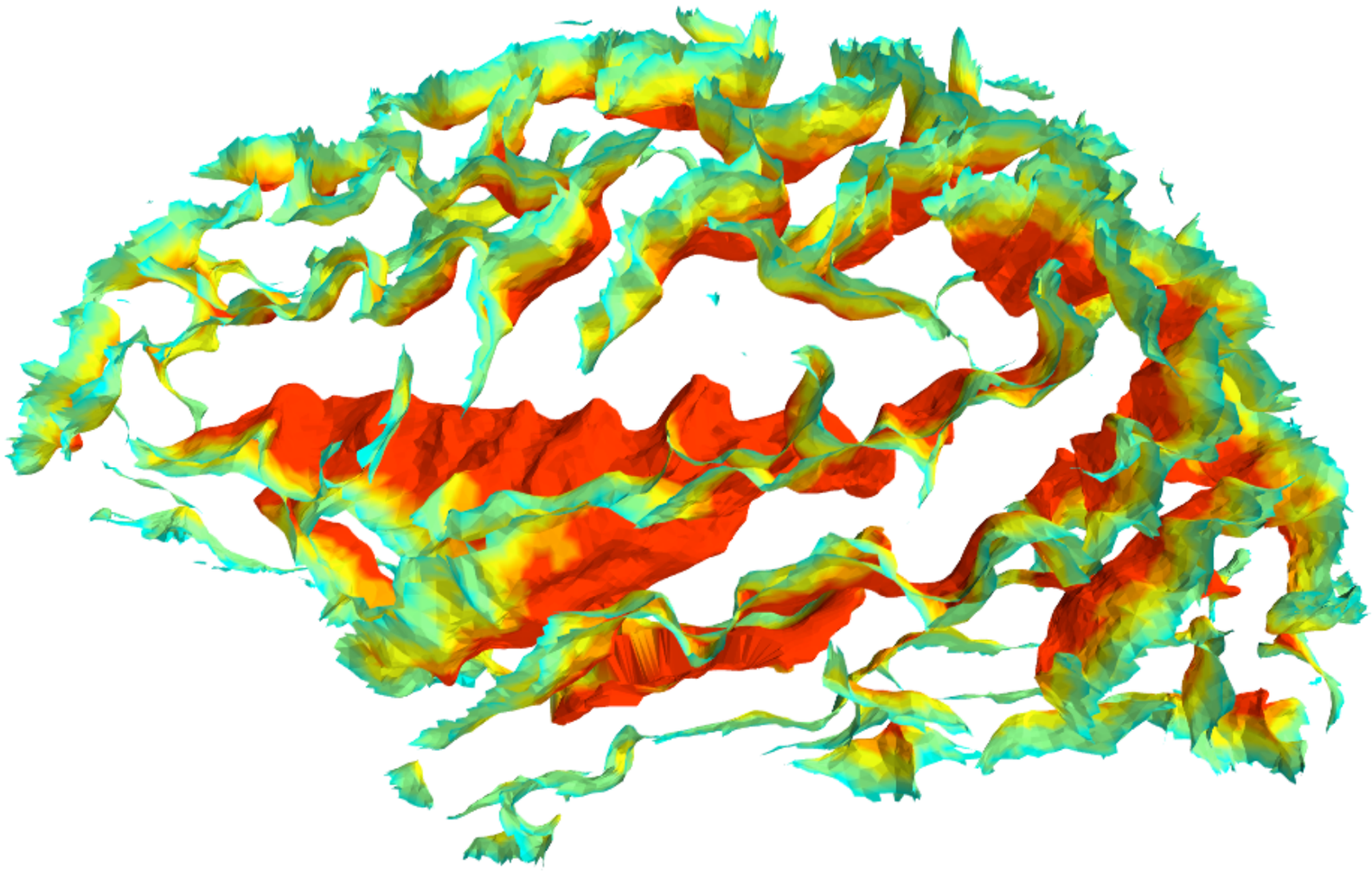


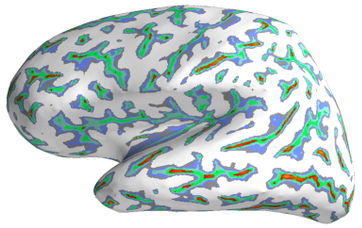
Mean curvature (folds)



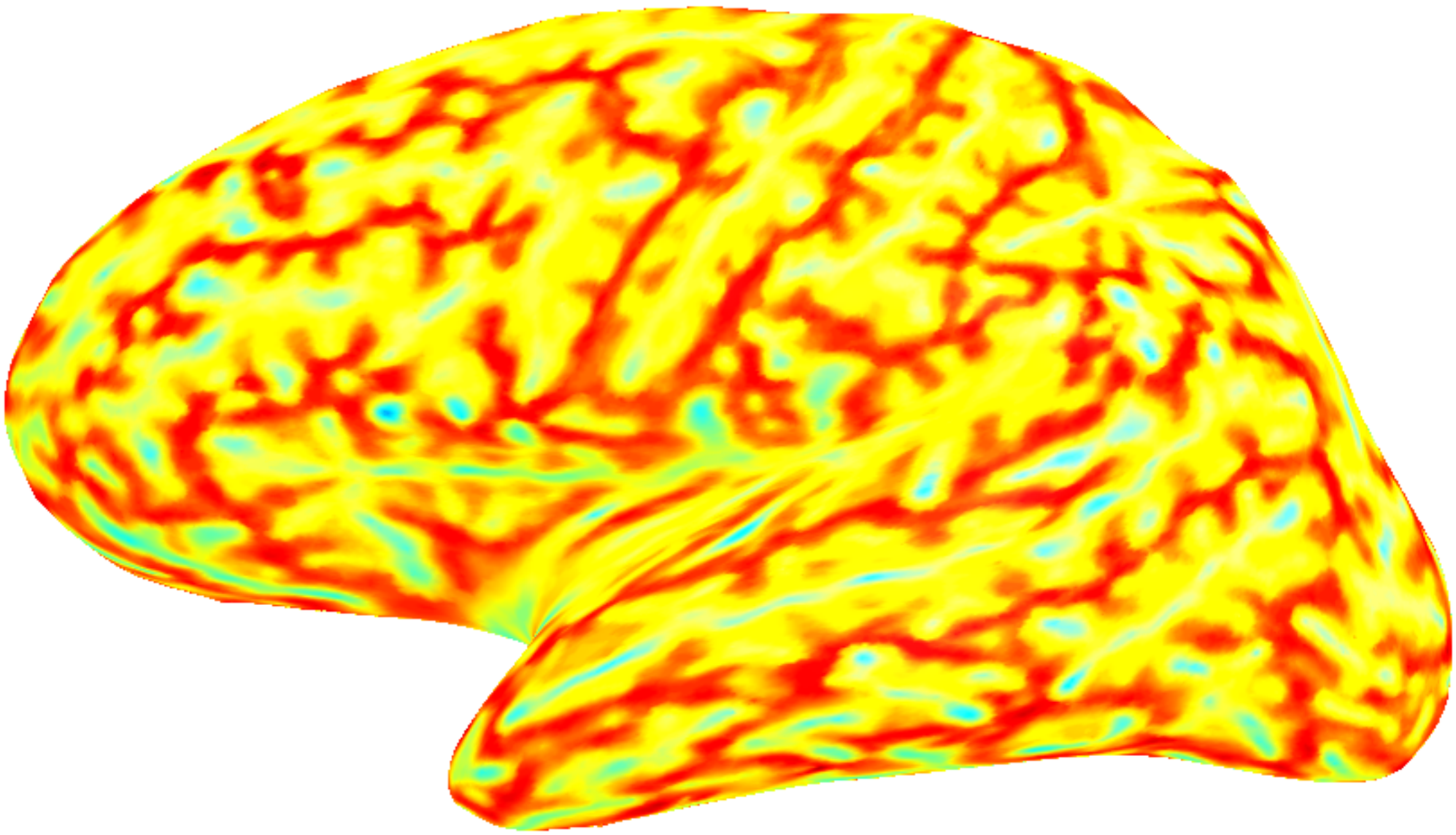


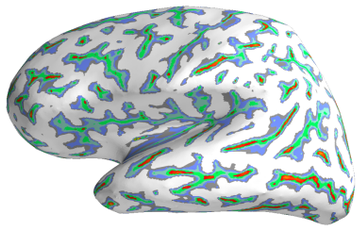
Travel depth (folds)



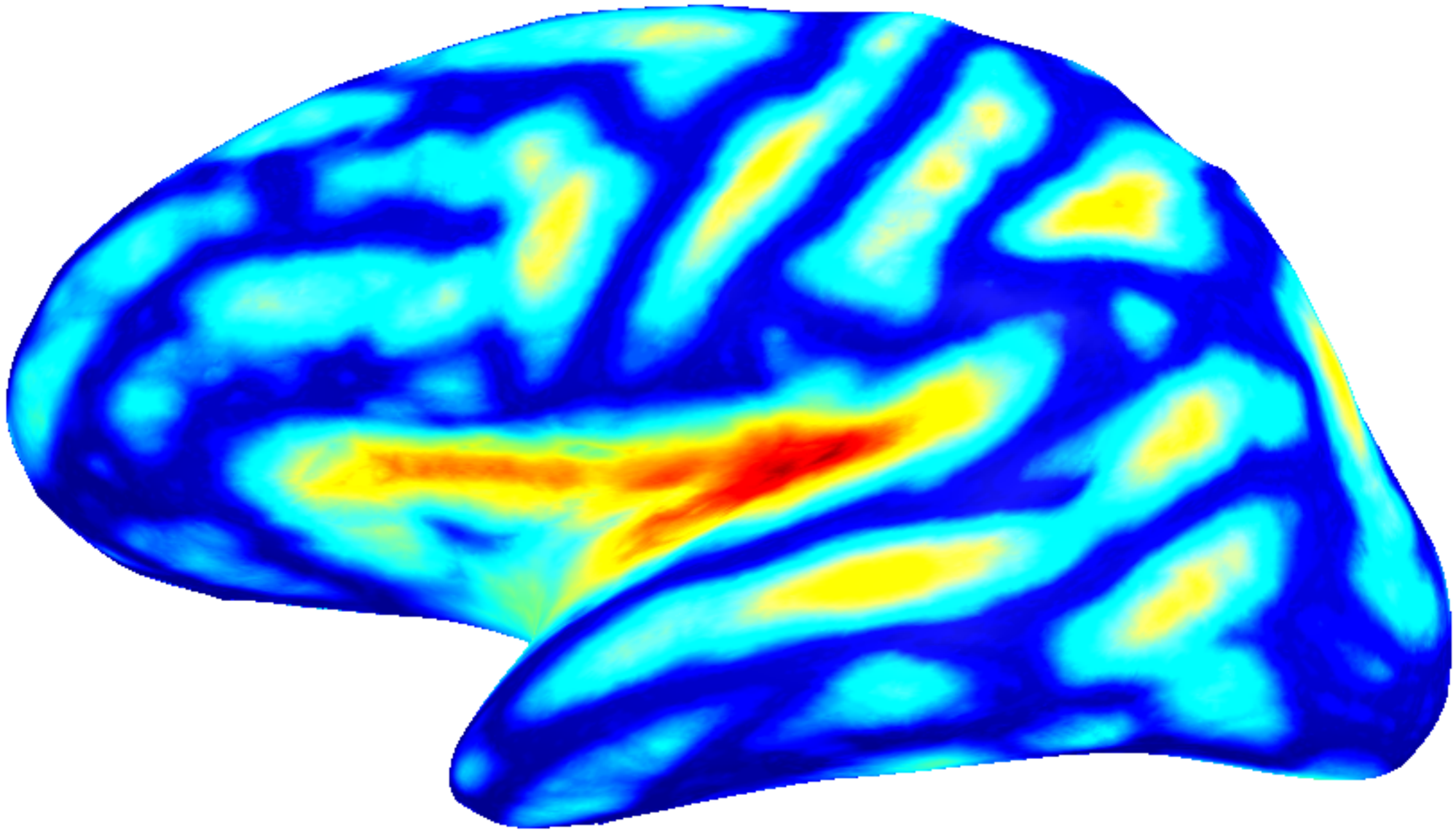


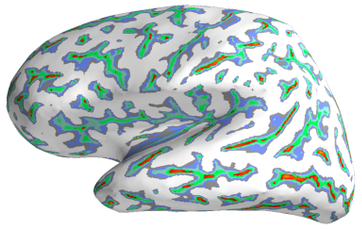
Mean curvature (inflated surface)



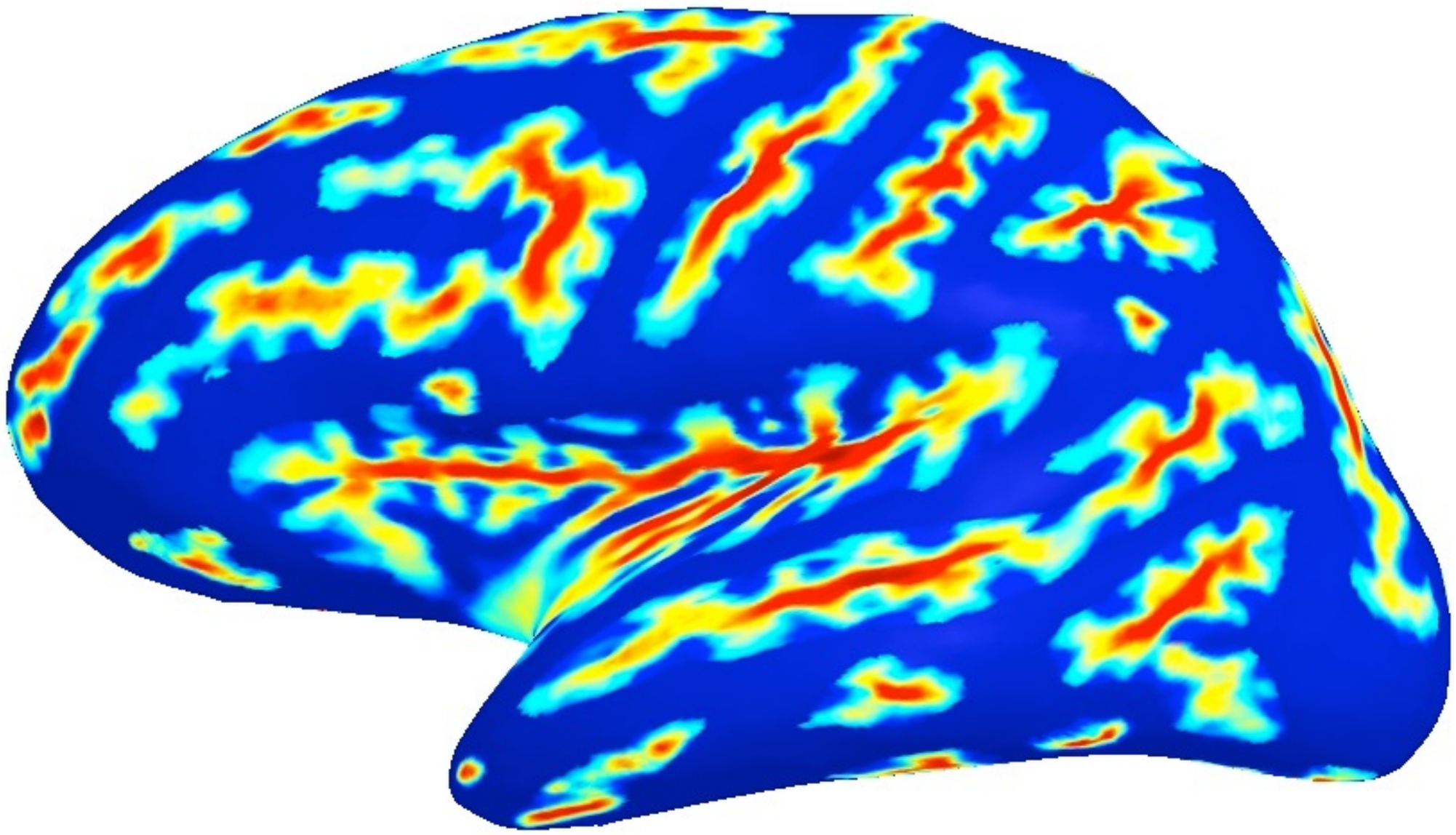


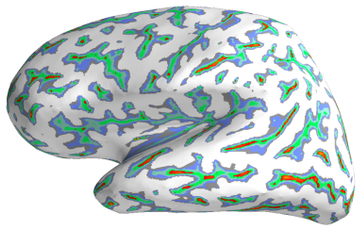
Travel depth (inflated surface)



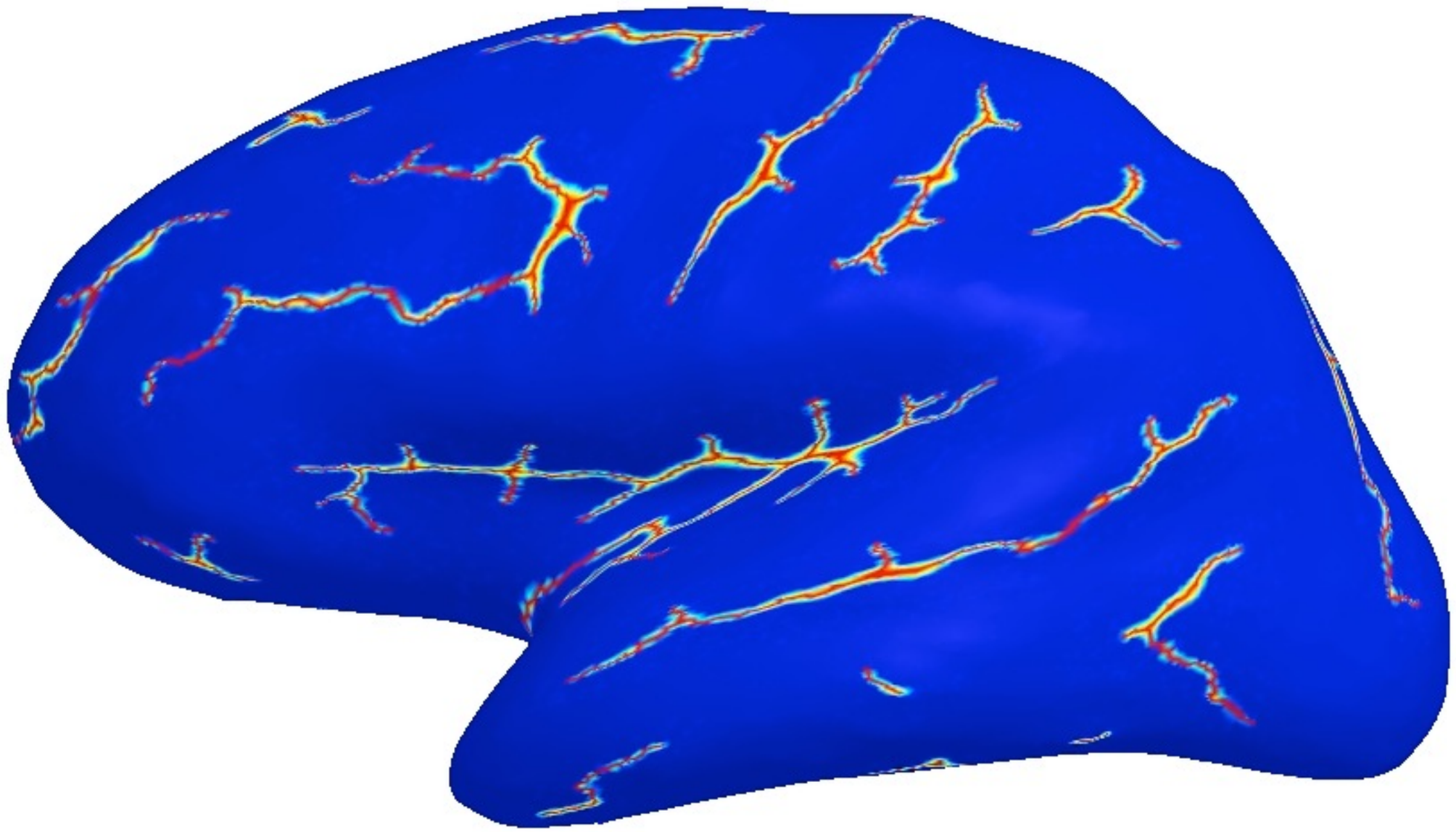


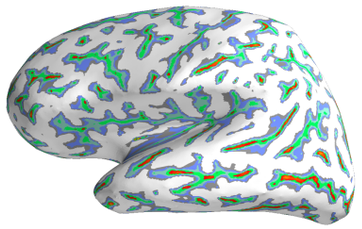
Fundus curves



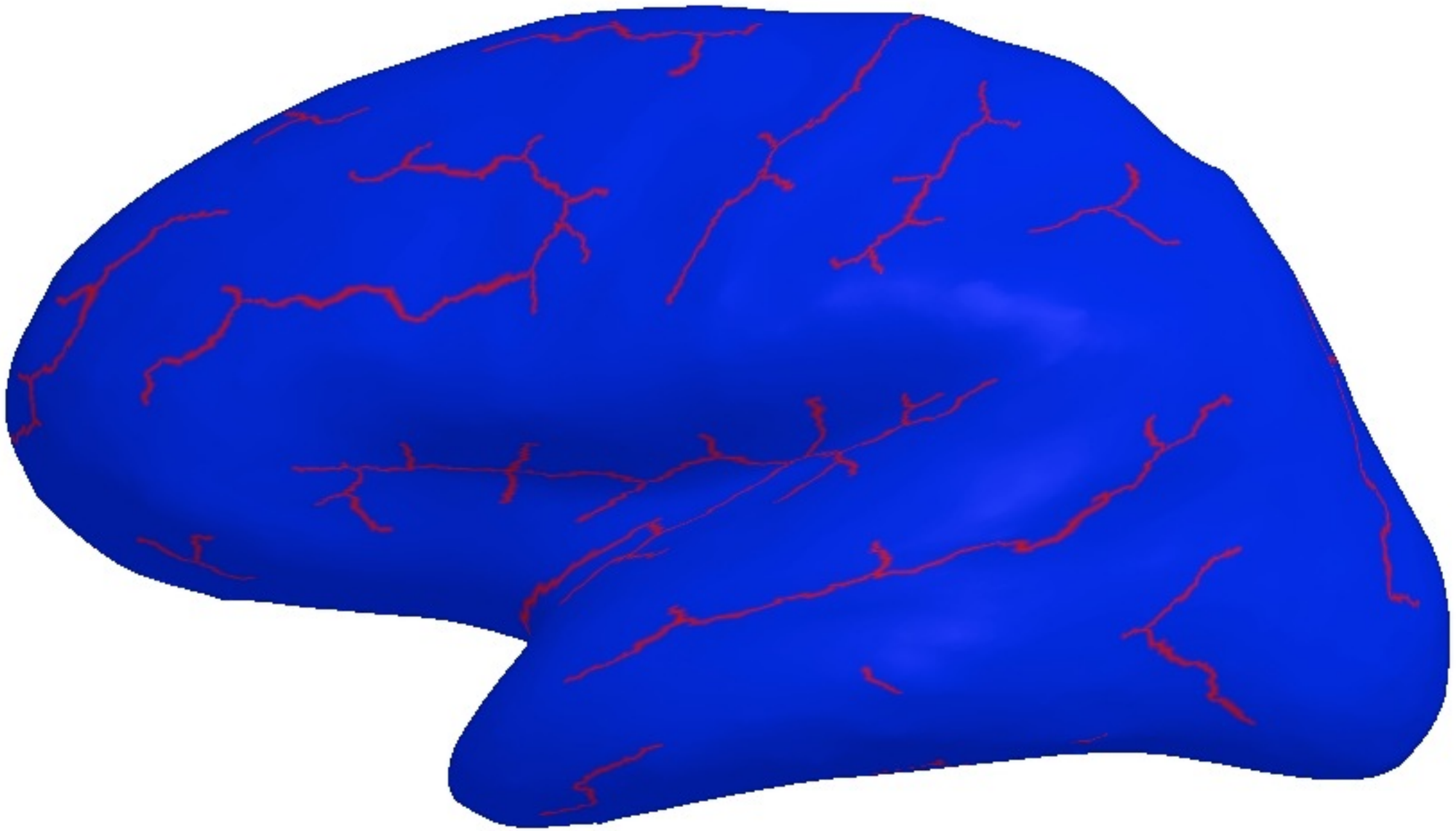


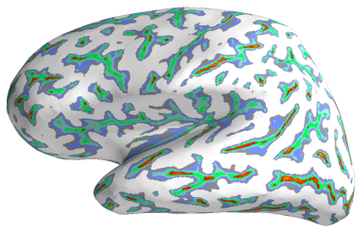
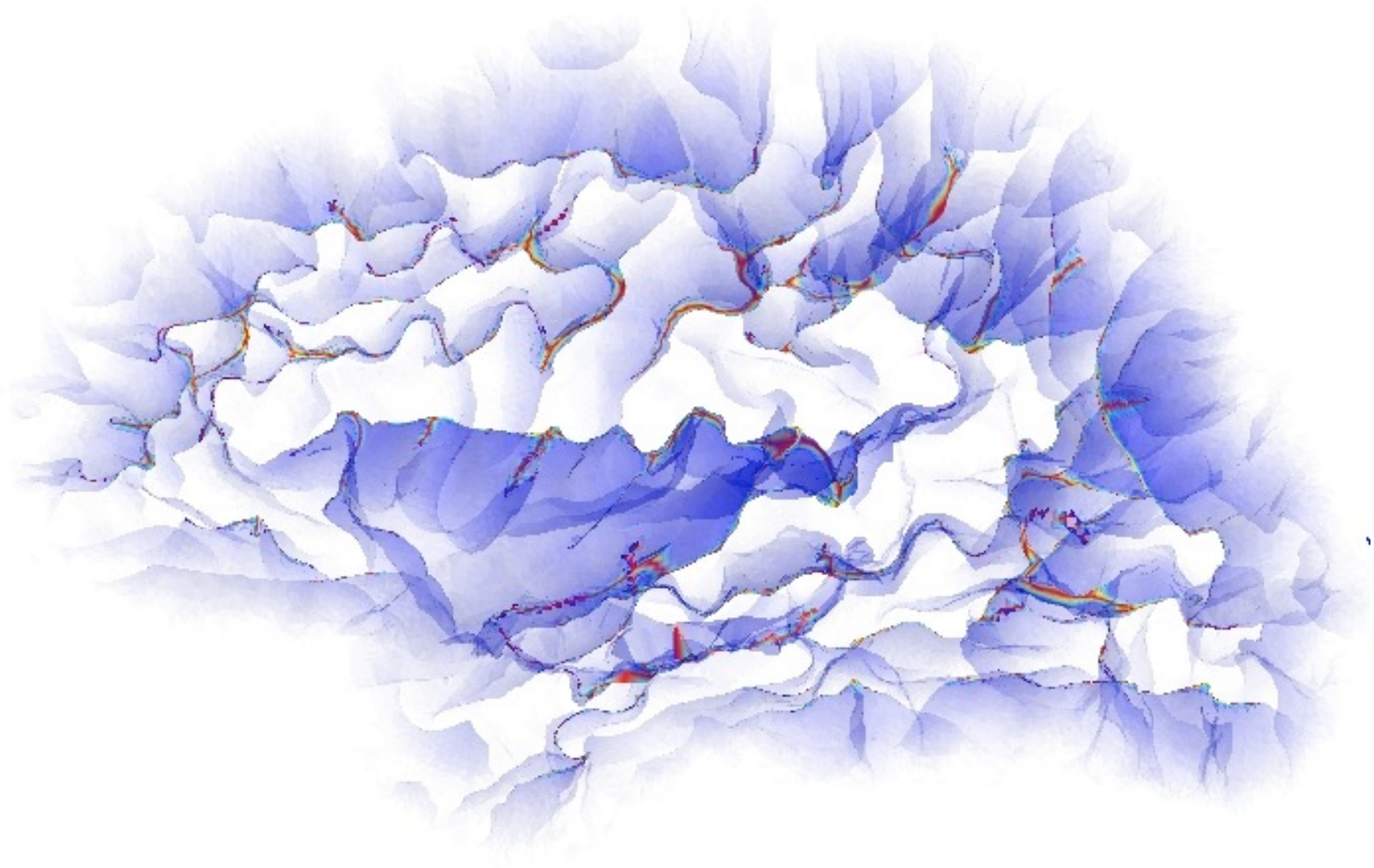
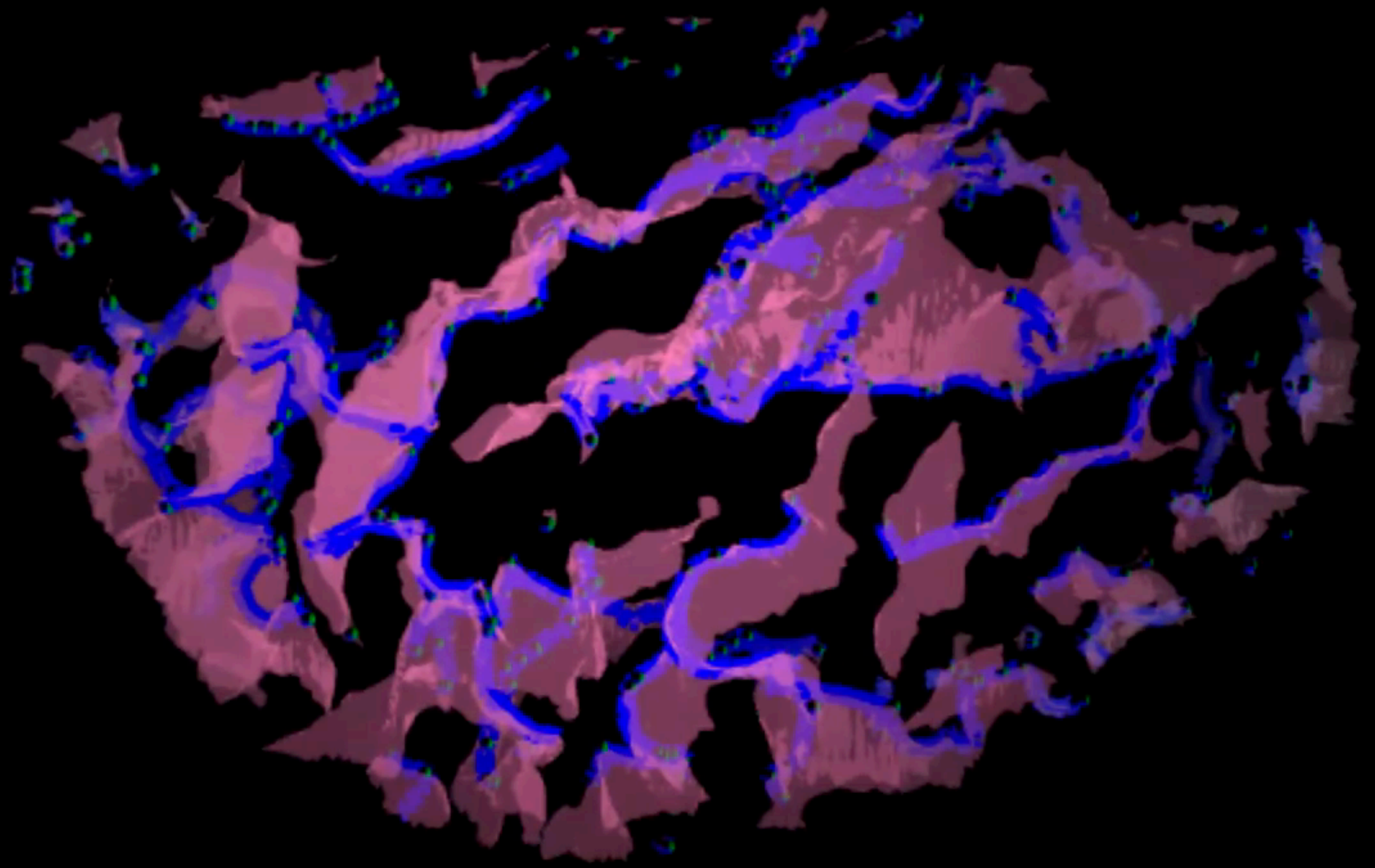
Fundus curves





Fundus curves





Folds + fundus curves