## **Description of Additional Supplementary Files**

File Name: Supplementary Movie 1

Description: Deformed atlas overlay on motif-based functional maps (MBFMs), n = 37 mice.

File Name: Supplementary Movie 2

Description: Screen capture of code demo video shows five easy-to-use automated pipelines.

File Name: Supplementary Movie 3

Description: Screen capture of code demo video shows automated atlas-to-brain alignment and

segmentation of brain images.

File Name: Supplementary Movie 4

Description: Screen capture of code demo video shows automated brain to atlas transformation of brain

images.

File Name: Supplementary Movie 5

Description: Screen capture of code demo video shows sensory map-based atlas alignment.

File Name: Supplementary Movie 6

Description: Screen capture of code demo video shows anatomical atlases are directly predicted using a

pre-trained MBFM-U-Net model.

File Name: Supplementary Movie 7

Description: Screen capture of code demo video shows atlas alignment using a pre-trained VoxelMorph

model.

File Name: Supplementary Movie 8

Description: Screen capture of code demo video shows online training of landmark estimation.

File Name: Supplementary Movie 9

Description: Screen capture of code demo video shows online training of U-Net.

File Name: Supplementary Movie 10

Description: Screen capture of code demo video shows data augmentation.