

## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: Detailed routine CSF parameters for each COVID-19 patient.

File Name: Supplementary Data 2

Description: NMDS components.

File Name: Supplementary Data 3

Description: Log<sub>2</sub> scaled CSF/plasma ratio for each individual analyte and differences across study cohorts.

File Name: Supplementary Data 4

Description: Nomenclature of relevant proteins in the study.

File Name: Supplementary Data 5

Description: Marginalized individual protein values and contrasts between different groups.

File Name: Supplementary Data 6

Description: ROC-AUC analysis of individual proteins in different NeuroCOVID classes.

File Name: Supplementary Data 7

Description: Brain MRI and cranial CT results per Neuro-COVID class.

File Name: Supplementary Data 8

Description: Brain imaging questionnaire.

File Name: Supplementary Data 9

Description: Main demographics and clinical variables of the COVID-19 imaging group and the volumetric imaging control group.

File Name: Supplementary Data 10

Description: Mean GMV across voxels belonging to each structure label.

File Name: Supplementary Data 11

Description: Clinical trial protocol.