Supplementary Materials for

The uniqueness of human vulnerability to brain aging in great ape evolution

Sam Vickery et al.

Corresponding author: Sam Vickery, s.vickery18@gmail.com; Felix Hoffstaedter, f.hoffstaedter@fz-juelich.de

Sci. Adv. 10, eado2733 (2024)
DOI: 10.1126/sciadv.ado2733

This PDF file includes:

Figs. S1 to S4
Figure S1. Deformation map quality control. Davi130 chimpanzee parcellation in chimpanzee (A) and human (B) template space used for visual quality control of chimpanzee to human deformation map.
**Figure S2. Comparison of aging effect on GM volume.** Aging effect on GM volume across all cortical and sub-cortical Davi130 regions in chimpanzees (A) and human (B) samples. Significant regions at $p \leq 0.05$ are presented following correcting for multiple comparisons using FWE.
Figure S3. Aging – expansion comparison (Davi130). Scatter plots showing of cross-species expansion and aging effect between A – chimpanzee to human expansion and human aging effect (Pink), B – macaque to chimpanzee expansion and chimpanzee aging effect (Blue) and baboon to chimpanzee expansion and chimpanzee aging effect (Yellow). Significance (p) of correlation (Person’s r) for cross-species expansion and aging effect relationship is determined by permutation testing (k = 100 000). Note, two Davi130 regions presented positive t-statistics and therefore could not be inversed as seen in all other age regression models.
Figure S4. Aging – expansion comparison (1:1 matched). Scatter plots showing of cross-species expansion and aging effect using the whole IXI sample OPNMF 17-factor solution to extract aging effect for each factor using the 1:1 matched IXI sample (n=189, 112 females; 20 – 61 y/o; mean age = 33.2 ± 8.7). A selection of OPNMF factors are projected onto volume slice or rendering of the MNI human template. Significance (p) of correlation (Person’s r) for cross-species expansion and aging effect relationship is determined by permutation testing (k = 100 000).