

Supplementary Figure 1. Raw T2-weighted MRI image before segmentation (**A**). MRI image with filtering applied to measure parenchyma volume by removing CSF (**B**). MRI image with filtering applied to measure ventricle volume (**C**). Examples of line scan images obtained in different areas and depths of the rat brain. 3 to 5 different positions were chosen per brain to perform 2-photon line scans of capillary vessels. In each position, lines scans were performed with at least 3 different depths, and each vessel was imaged at least 6 times resulting in an average of 70 line scans per animal (**D**).