**Assessment of Neurovascular Coupling and Cortical Spreading Depression in Mixed Mouse Models of Atherosclerosis and Alzheimer’s Disease – O Shabir et al, 2021. eLife**

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Data was collected between 1st July 2017 – 30th September 2020 primarily by OS at the University of Sheffield. Data types include raw and processed haemodynamic and electrophysiology data derived from in vivo mouse experiments using 2D-optical imaging spectroscopy and multichannel electrodes. Other data include immunohistochemical and qRT-PCR analysis from post-mortem tissue. Please refer to the manuscript for full details regarding data curation, processing, and analysis methods. All data files, manuscript and other information are in English.

In each of the following files, WT mice = 1, AD = 2, ATH = 3 & MIX = 4. Variables measured include HbT, HbO and HbR in addition to MUA. A = arterial region, W = whisker region, AUC = area under curve.

**MATLAB Files**

Each of the MATLAB files generate the figures presented (titled accordingly).

**SPSS Files**

Each of the SPSS files generate the statistics for the metric named in each file. The type of test is described in the corresponding figure legend.