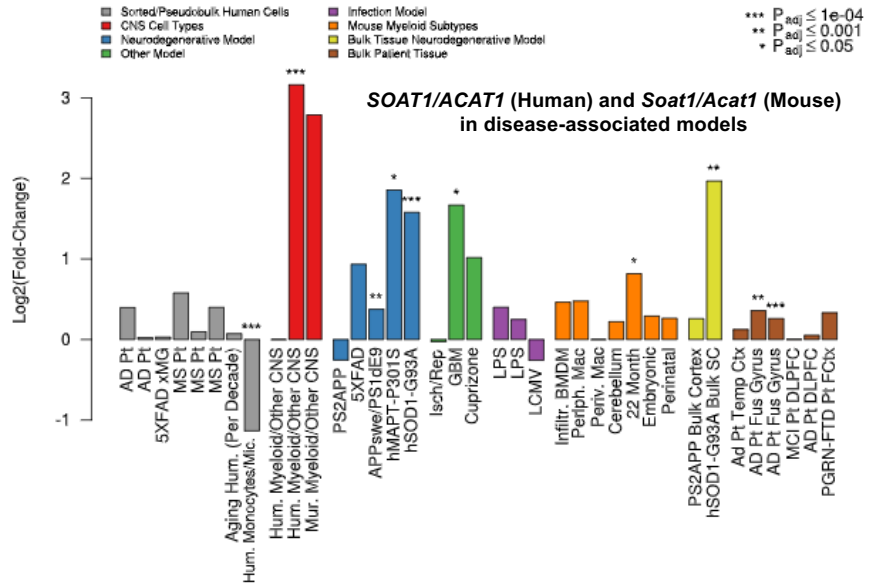


**Figure S1. ACAT1/SOAT1, but not ACAT2/SOAT2, is significantly expressed in both human and mouse microglia.** (A) Microglia expresses high levels of ACAT1/SOAT1 in human brains and (B) Acat1/Soat1 expresses more in astrocytes in the mouse brains. Gene expression data are in fragments per kilobase million (FPKM). Data are retrieved from the Barres Laboratory website [[brainrnaseq.org](http://brainrnaseq.org)]. Error bars represent  $\pm 1$  SEM.



**Figure S2. Acat1/Soat1 expression is up-regulated in several human patient brains and mouse models of neurological diseases.** Mouse model expression includes hMAPT(P301S), hSOD1-G93A, APP(Swedish)/PS1(dE9), hSOD1-G93A and Glioblastoma Multiforme. And in human AD patient tissue includes fusiform gyrus. Gene expression data are log2(fold-change). Data are retrieved from (30). Error bars represent  $\pm 1$  SEM.