

Figure S1:

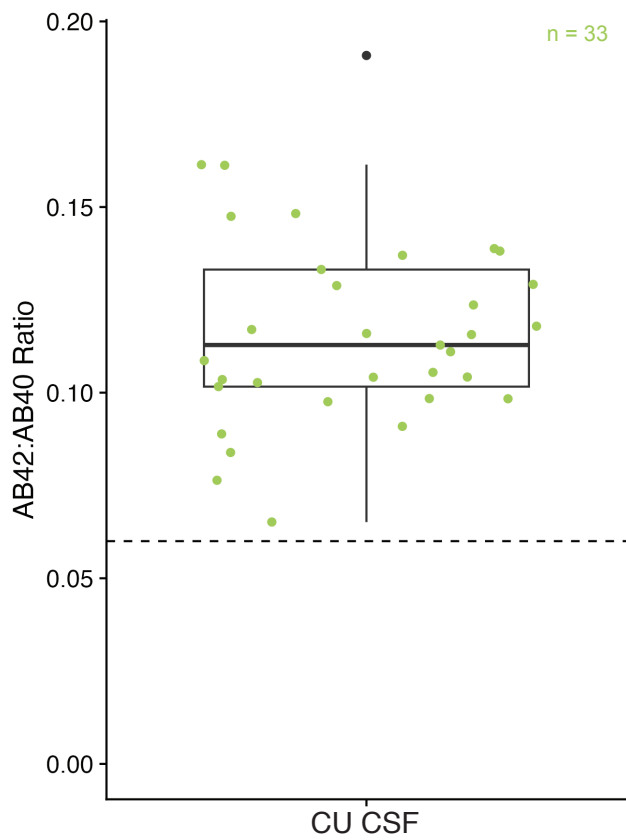


Figure S1: Box plot of CSF Aβ(1-42):Aβ(1-40) ratio of procured CU CSF (n=36). Dashed line refers to 0.06 cutoff value distinguishing between Aβ-positive (< 0.06) from Aβ-negative (>0.06) individuals.

Figure S3:

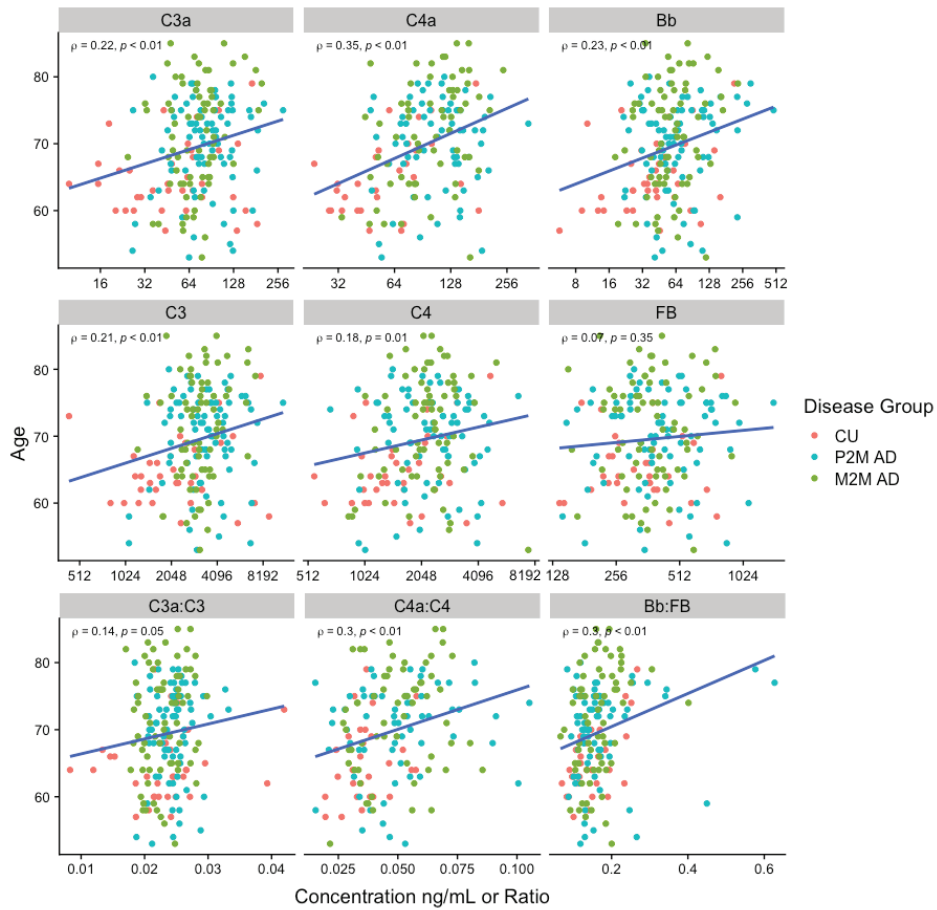


Figure S3: Spearman's rank correlation between baseline CSF complement protein concentrations (ng/mL) (on a log2 scale) or ratios and age of P2M AD, M2M AD, and CU participants. Blue lines represent the linear regression lines fitted between complement levels and age.

Figure S4:

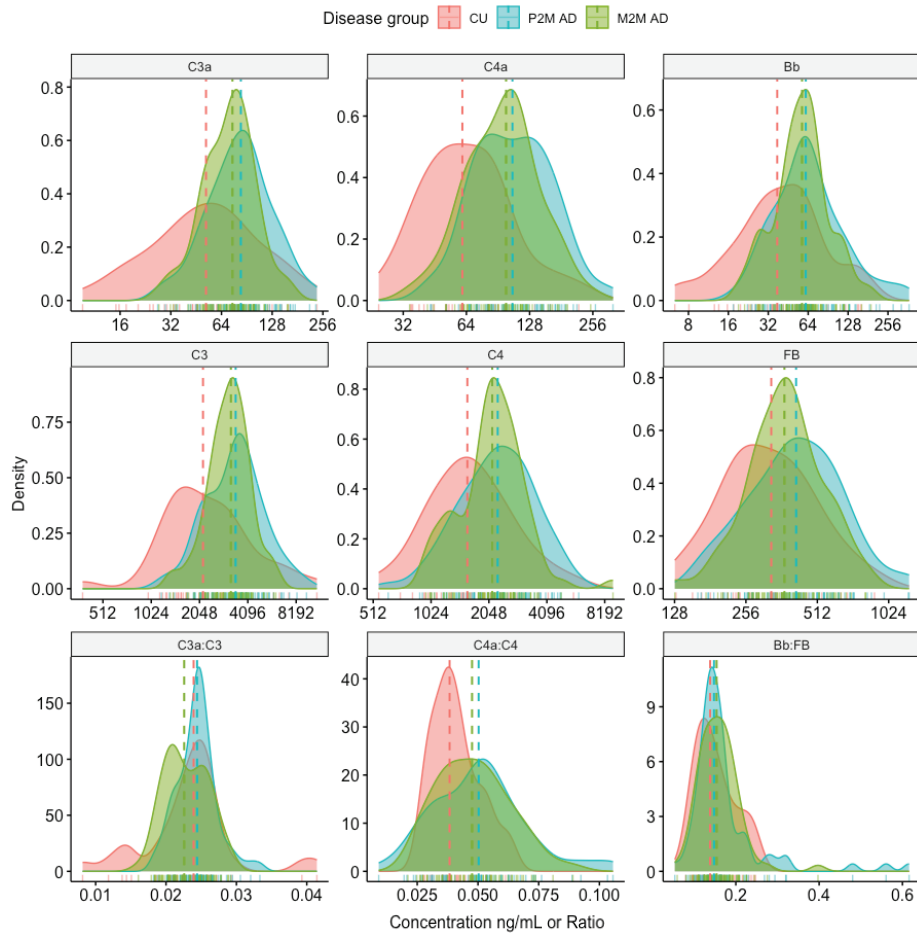


Figure S4: Density distribution of age- and gender-adjusted CSF complement protein concentrations (ng/mL) (on a log₂ scale) or ratios by disease group. Dashed lines indicate the median value for each disease group.

Figure S5:

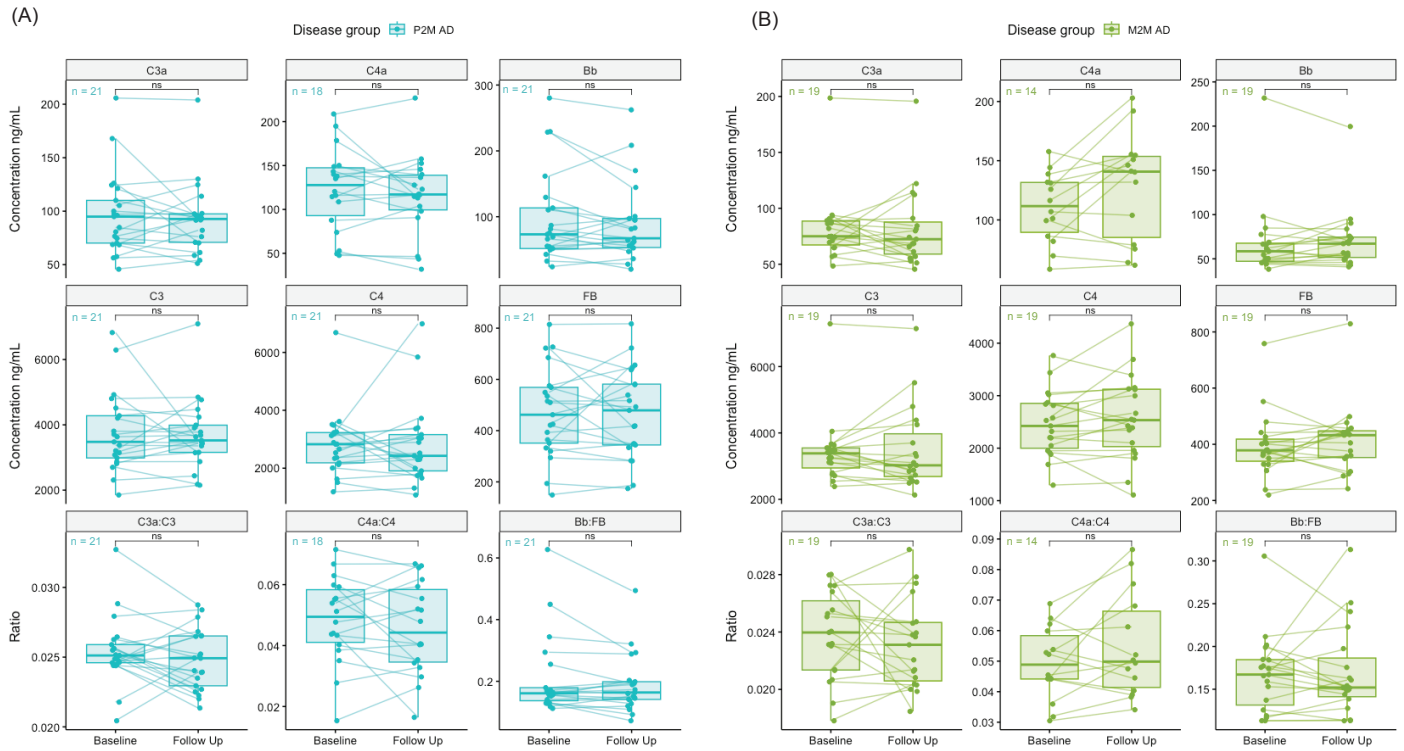


Figure S5: Box plots of CSF complement protein concentrations (ng/mL) or ratios at baseline and follow-up at (A) weeks 49 or 73 for Tauriel P2M AD patients and (B) weeks 49 or 61 for Lauriet M2M AD patients treated with placebo. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$, ns (not significant) $p \geq 0.05$, paired t-test on log2 transformed concentrations or ratios.

Figure S6:

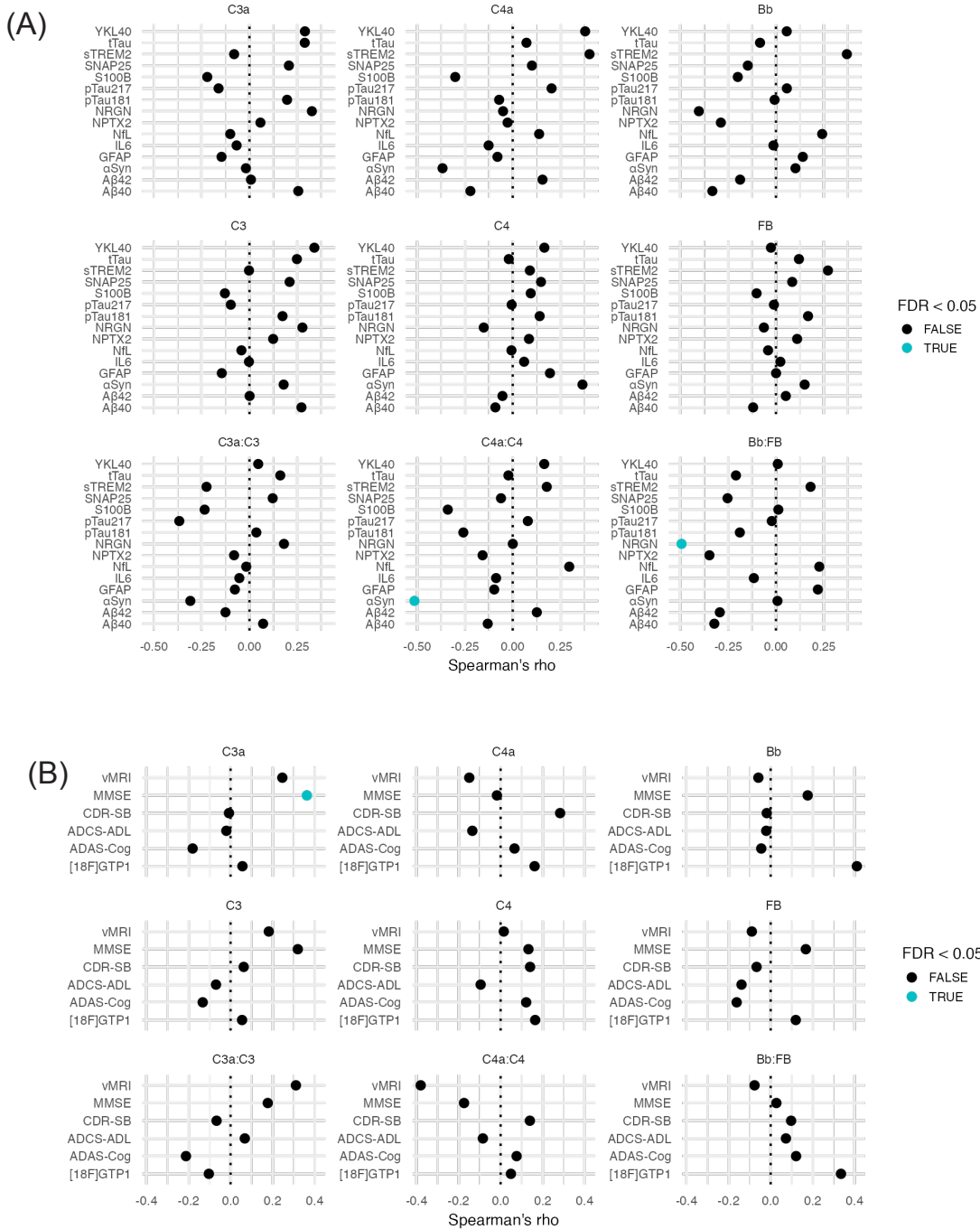


Figure S6: (A) Spearman's rank correlation between the change from baseline at follow-up of CSF complement proteins or ratios, and the change from baseline at follow-up of NeuroToolKit proteins in P2M AD and M2M AD (placebo only). Blue and black dots indicate the FDR adjusted p-value less than or greater than 0.05, respectively. **(B)** Spearman's rank correlation between the absolute change from baseline at follow-up in CSF complement proteins and ratios, and the change from baseline at follow-up in cognitive/functional scores, [18F]GTP1 tau PET SUVRs, and whole brain vMRI scan measurements in P2M AD (Tauriel, placebo and semorinemab arms, see Methods) and M2M AD (Lauriet, placebo only, see Methods). Percent changes from baseline are represented for ADAS-Cog only as Adas-Cog13 and Adas-Cog11 were used in Tauriel and Lauriet, respectively [17,18]. Blue and black dots indicate the FDR adjusted p-value less than or greater than 0.05, respectively.