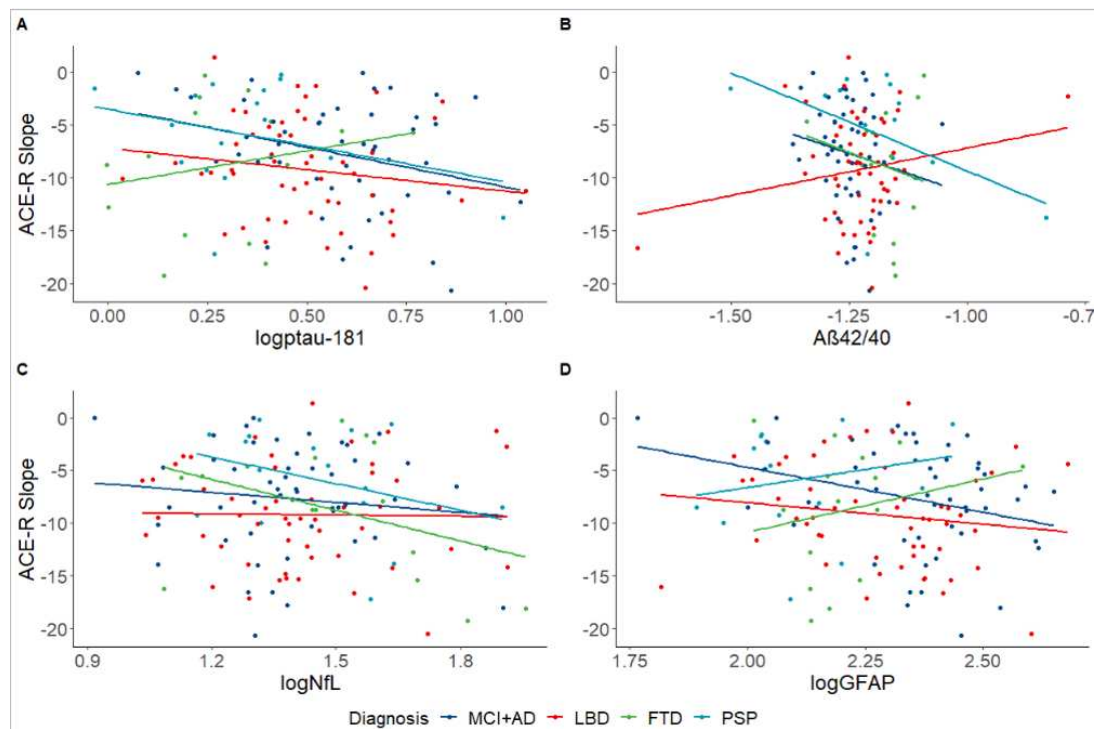Supplementary Figure 1. Correlations between baseline cognitive function and plasma biomarkers. Baseline cognitive function was measured using the Addenbrooke's cognitive examination-revised version (ACE-R). Associations between ACE-R and the four plasma biomarkers were tested for each diagnostic group separately to examine disease specific effects. Age and sex were used as covariates. Lower ACE-R at baseline was associated with higher levels of Ptau-181 in the PSP group (A; $\beta=-29.17$, $p=0.026$), higher NfL in the MCI+AD group (C; $\beta=-26.42$, $p=0.045$) and higher GFAP in the PSP group (D; ($\beta=-73.64$, $p=0.019$). No associations were detected between ACE-R and Aβ42/40 (B).

Supplementary Figure 2. Longitudinal cognitive decline and plasma biomarkers. Slopes of longitudinal cognitive decline were extracted from the annual decline in cognitive function measured using the ACE-R. Associations between ACE-R slopes and the four plasma biomarkers were tested for each diagnostic group separately to examine disease specific effects. Age and sex were used as covariates. P-tau181 (A; $\beta=-7.4$, $p=0.040$) and GFAP (D; $\beta=-9.75$, $p=0.016$) were associated with cognitive decline in the MCI+AD group. No significant associations were detected between ACE-R slopes and Aβ42/40 or NfL (B, C).