

**Figure e-7: Metabolite correlations between measurements and over time for apoA1 and the S-HDL-FC ratio.** To investigate for stability of apoA1 and S-HDL-FC ratio measurements between 82 samples temporally separate from 41 participants (27 migraine patients and 14 controls). ApoA1 (A) levels between the two temporally separate plasma samples were highly correlated in all subjects (r=0.859, p< 0.0001), the S-HDL-FC ratio (B) correlated to a lesser degree in all subjects (r=0.497, p=0.0009) and did not correlate in migraine patients (r=0.296, p=0.134). The difference of ApoA1 (C) levels and S-HDL-FC ratio (D) over time (measurement 1- measurement 2) did not reveal a strong temporal correlation for both measures. The dotted line represents r=1 in A and B, and r=0 in C and D. ApoA1=Apolipoprotein A1, S-HDL-FC=Free cholesterol to total lipids ratio in small high-density lipoprotein.