Supplementary Material

Plasma TNFSF10 levels associated with acamprosate treatment response in patients with alcohol use disorder

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**Supplementary Figure 1.** PACS was reduced in after acamprosate treatment. **(A)** PACS in the relapse group of AUD patients without a history of SUD, (*F (2, 164)* = 16.18, p<0.0001). **(B)** PACS inthe non-relapse group of AUD patients without a history of SUD, **(***F (2, 291)* = 31.6**,** p<0.0001). **(C)** PACS in the relapse group of AUD patients with a history of SUD, (*F (2, 96)*= 5.991, p=0.003). **(D)** PACS in the non-relapse group in AUD patients with a history of SUD, (*F (2, 128)* = 31.95, p<0.0001). Relapse was defined as taking one drink during three months of acamprosate treatment, while non-relapse was defined as remaining abstinent during three months of acamprosate treatment.

**Supplementary Table 1.** Olink Proteomics inflammatory panel and missing data frequency.

**Supplementary Table 2.** Plasma concentrations of inflammatory markers in relapse and non-relapse groups. Relapse was defined as taking one drink during three months of acamprosate treatment, while non-relapse was defined as remaining abstinent during three months of acamprosate treatment.

**Supplementary Table 3.** Plasma concentrations of inflammatory markers in heavy relapse and non-heavy relapse groups. Heavy relapse was defined as four or more standard drinks per day for a woman and five or more standard drinks per day for a man.

**Supplementary Table 4.** Correlation of time till relapse and baseline inflammatory markers. Number of sober days was included as a covariate.

**Supplementary Table 5.** Correlation of time till heavy relapse and baseline inflammatory markers. Number of sober days was included as a covariate.

**Supplementary Table 6.** Correlation of baseline PACS and plasma proteomics. Number of sober days prior to enrollment was included as a covariate.

**Supplementary Table 7,** Sex-specific differences in protein concentrations.

**Supplementary Table 8.** History of substance dependence for the 442 AUD subjects enrolled in the acamprosate clinical trial.

**Supplementary Table 9.** RNA-seq in PBMC from AUD patients. Relapse: n=27, non-relapse: n=26. Relapse was defined as taking one drink during three months of acamprosate treatment, while non-relapse was defined as remaining abstinent during three months of acamprosate treatment.

**Supplementary Table 10.** Pathway analysis using RNA-seq data in PBMC from AUD patients. Relapse: n=27, non-relapse: n=26. Relapse was defined as taking one drink during three months of acamprosate treatment, while non-relapse was defined as remaining abstinent during three months of acamprosate treatment.