

1 Article

2 Peripheral acid sphingomyelinase activity is associated 3 with biomarkers and phenotypes of alcohol use and 4 dependence in patients and controls

5 Christiane Mühle^{1*} (ORCID 0000-0001-7517-9154), Christian Weinland¹ (ORCID
6 0000-0002-0007-4902), Erich Gulbins², Bernd Lenz^{1,†} (ORCID 0000-0001-6086-0924), Johannes
7 Kornhuber^{1,†} (ORCID 0000-0002-8096-3987)

8

9

10 **Table S1.** Total and sex-specific correlations of peripheral S-ASM activity with sub-items of the
11 Clinical Institute Withdrawal Assessment for Alcohol revised scale (CIWA-Ar) in
12 alcohol-dependent patients.

13

CIWA-Ar sub-item	total group (n=146)		♂ (n=83)		♀ (n=63)	
	Rho	p	Rho	p	Rho	p
nausea/vomiting	0.232	0.005	0.261	0.017	0.209	0.100
tremor	0.351	1.4 × 10⁻⁵	0.395	2.4 × 10⁻⁴	0.250	0.048
hyperhidrosis	0.195	0.018	0.146	0.186	0.225	0.076
tactile disturbances	0.005	0.953	-0.034	0.763	0.006	0.965
auditory disturbances	-0.006	0.947	-0.052	0.638	0.058	0.653
visual disturbances	-0.032	0.701	-0.106	0.340	0.068	0.599
orientation	0.088	0.290	0.110	0.320	-0.023	0.859
concentration	0.226	0.006	0.185	0.095	0.283	0.024
nervousness/anxiety	0.077	0.357	0.019	0.863	0.151	0.236
headache	-0.078	0.348	-0.126	0.258	0.038	0.770
CIWA-Ar total	0.242	0.003	0.194	0.079	0.267	0.034

14

15

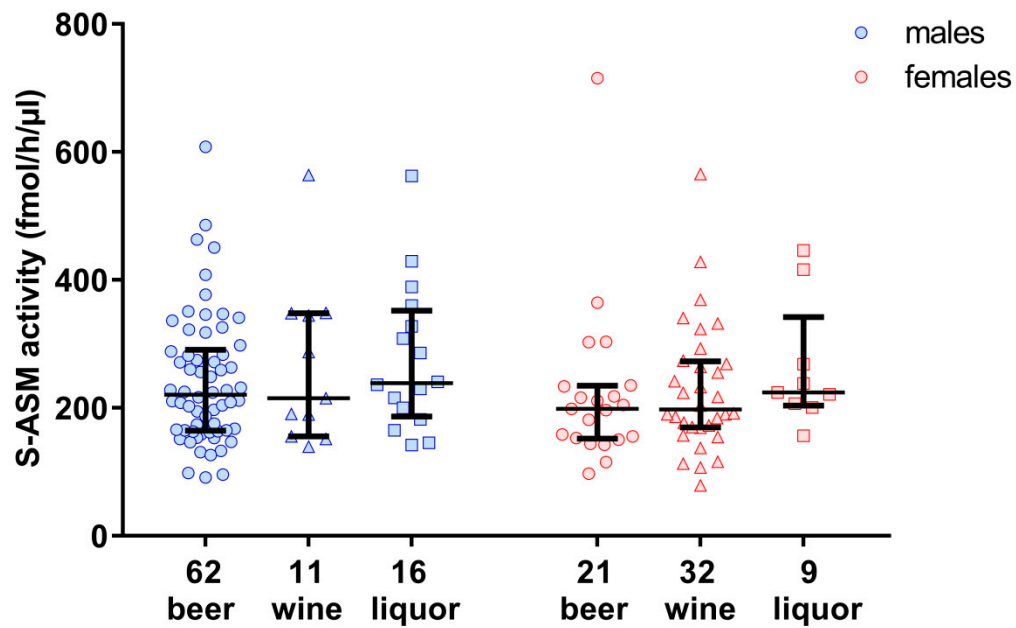
16 **Table S2.** Activity of serum acid sphingomyelinase (S-ASM) in control subjects subdivided
17 according to the presence or absence of at least one binge-drinking episode within the past 24
18 months.

	Binge drinkers		Non-binge drinkers	
	♂	♀	♂	♀
n	29	7	104	100
Age (years)	41 (34 - 52)	47 (28 - 54)	48 (39 - 57)	49 (40 - 55)
S-ASM activity (fmol/h/μl serum)	139 (97 - 177)	128 (110 - 219)	156 (121 - 197)	135 (97 - 181)

19 Medians with interquartile range.

20

21



22

23

24

25

26

Supplemental Figure S1. Sex-specific activity of the secretory acid sphingomyelinase (S-ASM) in alcohol-dependent male and female patients subdivided according to their predominantly consumed type of alcoholic beverage during early abstinence. Boxplots show individual data, and the median and interquartile range. The numbers of male and female individuals is provided below the x-axis.

27