

Supplementary Material

Plasma High Density Lipoprotein Small Subclass Is Reduced in Alzheimer's Disease Patients and Correlates with Cognitive Performance

Supplementary Table 1. Comparison of lipid distribution with regards to *APOE* ϵ 4 status in HC, MCI, and AD groups.

HC			
	<i>APOE</i> ϵ 4- (n = 271)	<i>APOE</i> ϵ 4+ (n = 76)	p
Cholesterol (mg/dl)	220 \pm 37	231 \pm 38	0.018
LDL (mg/dl)	131 \pm 32	145 \pm 35	0.001
HDL (mg/dl)	66 \pm 18	65 \pm 17	0.792
TG (mg/dl)	114 \pm 51	107 \pm 47	0.195
MCI			
	<i>APOE</i> ϵ 4- (n = 23)	<i>APOE</i> ϵ 4+ (n = 32)	p
Cholesterol (mg/dl)	213 \pm 39	216 \pm 37	0.973
LDL (mg/dl)	126 \pm 36	130 \pm 32	0.878
HDL (mg/dl)	62 \pm 13	63 \pm 16	0.993
TG (mg/dl)	127 \pm 67	113 \pm 46	0.595
AD			
	<i>APOE</i> ϵ 4- (n = 36)	<i>APOE</i> ϵ 4+ (n = 48)	p
Cholesterol (mg/dl)	222 \pm 46	229 \pm 42	0.616
LDL (mg/dl)	132 \pm 40	137 \pm 38	0.714
HDL (mg/dl)	65 \pm 17	66 \pm 18	0.651
TG (mg/dl)	124 \pm 51	132 \pm 104	0.640

Non-parametric Mann-Whitney U Test was used and regarded as significant when $p < 0.05$ (bold). Values are presented as mean \pm S.D.

Supplementary Table 2. Comparison of HDL sub-distribution with regards to *APOE* ϵ 4 status in the HC, MCI, and AD groups, expressed as % or mg/dl.

HC						
	HDL Subdistribution (% of total HDL)			HDL Subdistribution (mg/dl)		
	<i>APOE</i> ϵ 4-	<i>APOE</i> ϵ 4+	p	<i>APOE</i> ϵ 4-	<i>APOE</i> ϵ 4+	p
HDL L	34.5 \pm 10.1	34.2 \pm 10.5	0.95	24.2 \pm 12.7	23.5 \pm 11.7	0.80
HDL I	53.8 \pm 6.8	54.2 \pm 6.5	0.99	34.9 \pm 7.6	34.9 \pm 7.8	0.85
HDL S	11.6 \pm 5.5	11.5 \pm 6.1	0.86	7.2 \pm 3.0	7.1 \pm 3.5	0.72
MCI/AD						
	HDL Subdistribution (% of total HDL)			HDL Subdistribution (mg/dl)		
	<i>APOE</i> ϵ 4-	<i>APOE</i> ϵ 4+	p	<i>APOE</i> ϵ 4-	<i>APOE</i> ϵ 4+	p
HDL L	32.2 \pm 10.4	36.2 \pm 9.5	0.10	20.9 \pm 10.6	24.0 \pm 10.7	0.27
HDL I	55.3 \pm 6.7	53.1 \pm 5.5	0.20	33.8 \pm 5.1	33.2 \pm 6.7	0.33
HDL S	12.4 \pm 6.7	10.6 \pm 5.5	0.33	7.4 \pm 3.5	6.4 \pm 2.9	0.30
AD						
	HDL Subdistribution (% of total HDL)			HDL Subdistribution (mg/dl)		
	<i>APOE</i> ϵ 4-	<i>APOE</i> ϵ 4+	p	<i>APOE</i> ϵ 4-	<i>APOE</i> ϵ 4+	p
HDL L	38.7 \pm 9.7	38.0 \pm 11.0	0.94	25.9 \pm 10.7	25.9 \pm 11.6	0.97
HDL I	52.8 \pm 6.7	53.3 \pm 8.0	0.79	34.0 \pm 7.3	34.8 \pm 9.2	0.74
HDL S	8.3 \pm 5.6	8.6 \pm 5.2	0.66	5.4 \pm 4.0	5.3 \pm 3.1	0.69

ANCOVA (analyses were adjusted for sex, age and site) or non-parametric Mann-Whitney U Test were used and regarded as significant when $p < 0.05$. For HDL S (% and mg/dl), HDL L (mg/dl) and HDL I (mg/dl) non-parametric tests were used. Values are presented as mean \pm S.D.