

Supplementary Material

Plasma Biomarkers of Alzheimer's Disease in African Americans

Supplementary Table 1. Patient demographics and descriptive statistics of the plasma protein measurements stratified by diagnosis and batch.

Variables	Results	Batch 1		Batch 2	
		AD	AD	AD	Control
Age (y)	Mean ± SD	75.23 ± 9.49	80.31 ± 7.98	82.7 ± 8.15	
	Range	55.84-99.47	52.4-95.5	56.6-101.47	
	n (%)	66 (100%)	93 (36.47%)	162 (63.53%)	
		NA	<i>p</i> = 0.02 ^a		
APOE N (%)	22	1 (1.52%)	1 (1.08%)	2 (1.23%)	
	23	2 (3.03%)	5 (5.38%)	30 (18.52%)	
	24	3 (4.55%)	6 (6.45%)	7 (4.32%)	
	33	16 (24.24%)	30 (32.26%)	72 (44.44%)	
	34	30 (45.45%)	36 (38.71%)	46 (28.40%)	
	44	14 (21.21%)	15 (16.13%)	5 (3.09%)	
		NA	<i>p</i> = 0.0001 ^b		
MAPT N (%)	H1/H1	43 (65.15%)	65 (69.89%)	104 (64.20%)	
	H1/H2	20 (30.30%)	26 (27.96%)	50 (30.86%)	
	H2/H2	3 (4.55%)	2 (2.15%)	8 (4.94%)	
		NA	<i>p</i> = 0.44 ^b		
Sex N(%)	Male	21 (31.82%)	27 (29.03%)	38 (23.46%)	
	Female	45 (68.18%)	66 (70.97%)	124 (76.54%)	
		NA	<i>p</i> = 0.33 ^c		
Aβ ₄₂ (pg/mL)	Mean ± SD	12.41 ± 3.27	11.75 ± 4.96	12.58 ± 4.35	
	Range	6.01-21.17	2.69-40.02	2.08-35.61	
	N	66	93	162	
Tau (pg/mL)	Mean ± SD	3.47 ± 1.26	3.94 ± 2.87	3.84 ± 2.27	
	Range	1.7-7.56	0.37-26.79	0.18-23.49	
	N	64	93	162	
IL6 (pg/mL)	Mean ± SD	10.97 ± 28.66	9.55 ± 17.34	7.75 ± 16.53	
	Range	0.73-217.7	0.98-106.86	0.53-168.41	
	N	64	86	146	
IL10 (pg/mL)	Mean ± SD	1.93 ± 8.19	1.79 ± 5.18	1.58 ± 3.52	
	Range	0.25-66.03	0.31-49.12	0.18-30.67	
	N	66	93	155	
TNFalpha (pg/mL)	Mean ± SD	5.19 ± 8.41	13.52 ± 74.91	7.81 ± 23.21	
	Range	0.77-62.8	1.21-723.91	1.4-281.97	
	N	66	93	156	

Data are shown for all samples from both batches combined, stratified by diagnosis. Age refers to age of participant at plasma draw. ^aUnpaired t-test, two-sided *p* value, ^bChi-square, ^cFisher's exact test.

Supplementary Table 2. Association of plasma protein levels with diagnosis, age, sex, and *APOE* ϵ 4 dosage and *MAPT* H1 haplotype dosage - stratified by diagnosis and batch.

$A\beta_{42}$		<i>APOE</i> ϵ 4 dosage			<i>MAPT</i> H1 dosage			Age, 10 years			Sex, female versus male			Diagnosis, AD versus control		
		% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>
Batch 1 AD (n=66)	Model 1	-8.3	(-17.07, 1.4)	8.87E-02	6.9	(-4.27, 19.33)	2.31E-01	4.3	(-3.41, 12.51)	2.53E-01	8.4	(-5.79, 24.75)	2.56E-01	-	-	-
	Model 2	-	-	-	6.1	(-5.07, 18.59)	2.92E-01	7.2	(0, 14.87)	4.66E-02	7.3	(-6.89, 23.71)	3.23E-01	-	-	-
	Model 3	-7.9	(-16.66, 1.82)	1.07E-01	-	-	-	4.3	(-3.41, 12.51)	2.69E-01	8.0	(-6.18, 24.31)	2.80E-01	-	-	-
Batch 2 AD (n=93)	Model 1	-11.0	(-20.34, -0.55)	3.98E-02	4.4	(-9.56, 20.58)	5.52E-01	7.2	(-2.73, 18.1)	1.54E-01	-9.9	(-24, 6.88)	2.29E-01	-	-	-
	Model 2	-	-	-	2.7	(-11.18, 18.92)	7.13E-01	10.2	(0.7, 21.42)	3.60E-02	-10.5	(-24.79, 6.44)	2.07E-01	-	-	-
	Model 3	-10.7	(-19.95, -0.35)	4.39E-02	-	-	-	7.2	(-2.06, 18.1)	1.29E-01	-10.8	(-24.42, 5.41)	1.78E-01	-	-	-
Batch 1 and 2 AD (n=159)	Model 1	-9.9	(-16.49, -2.8)	7.31E-03	6.0	(-3.21, 16.07)	2.07E-01	6.4	(0.7, 13.29)	3.76E-02	-2.7	(-12.76, 8.6)	6.29E-01	-	-	-
	Model 2	-	-	-	4.6	(-4.6, 14.71)	3.32E-01	9.4	(3.53, 16.47)	1.61E-03	-3.4	(-13.67, 8)	5.37E-01	-	-	-
	Model 3	-9.5	(-16.09, -2.33)	1.03E-02	-	-	-	7.2	(0.7, 13.29)	2.99E-02	-3.6	(-13.55, 7.47)	5.07E-01	-	-	-
Control (n=162)	Model 1	-11.9	(-20.11, -2.87)	1.14E-02	4.8	(-4.47, 14.87)	3.21E-01	11.0	(2.81, 19.75)	1.05E-02	-2.8	(-14.2, 10.11)	6.52E-01	-	-	-
	Model 2	-	-	-	5.9	(-3.67, 16.23)	2.35E-01	12.5	(4.25, 22.26)	3.49E-03	-3.3	(-14.91, 9.73)	5.96E-01	-	-	-
	Model 3	-12.3	(-20.39, -3.27)	8.79E-03	-	-	-	11.7	(2.81, 20.58)	7.15E-03	-2.7	(-14.08, 10.27)	6.68E-01	-	-	-
Batch 2 AD and Control (n=255)	Model 1	-12.6	(-18.61, -6.24)	1.97E-04	5.2	(-2.46, 13.45)	1.89E-01	10.2	(3.53, 16.47)	1.58E-03	-4.3	(-13.01, 5.26)	3.64E-01	6.29	(-3.81, 17.36)	2.30E-01
	Model 2	-	-	-	5.3	(-2.6, 13.84)	1.94E-01	13.3	(7.18, 19.75)	3.33E-05	-4.5	(-13.49, 5.26)	3.49E-01	0.63	(-8.74, 10.96)	9.00E-01
	Model 3	-12.6	(-18.61, -6.31)	1.96E-04	-	-	-	10.2	(4.25, 17.28)	8.86E-04	-4.5	(-13.25, 4.97)	3.36E-01	6.66	(-3.47, 17.85)	2.03E-01
Tau		<i>APOE</i> ϵ 4 dosage			<i>MAPT</i> H1 dosage			Age, 10 years			Sex, female versus male			Diagnosis, AD versus control		
		% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>
Batch 1 AD (n=64)	Model 1	-9.2	(-20.94, 4.32)	1.69E-01	8.1	(-7.08, 25.79)	3.08E-01	1.4	(-8.62, 12.51)	7.84E-01	21.8	(-0.14, 48.66)	5.19E-02	-	-	-
	Model 2	-	-	-	7.3	(-7.85, 24.92)	3.59E-01	4.3	(-5.39, 14.87)	3.74E-01	20.8	(-1.17, 47.43)	6.46E-02	-	-	-
	Model 3	-8.7	(-20.5, 4.83)	1.91E-01	-	-	-	1.4	(-8.62, 12.51)	8.03E-01	21.3	(-0.55, 47.94)	5.68E-02	-	-	-
Batch 2 AD (n=93)	Model 1	-5.5	(-20.28, 12.04)	5.11E-01	11.4	(-10.68, 38.99)	3.33E-01	17.3	(1.4, 35.66)	2.98E-02	19.0	(-8.43, 54.76)	1.90E-01	-	-	-
	Model 2	-	-	-	10.6	(-11.18, 37.65)	3.64E-01	19.8	(4.25, 36.6)	1.28E-02	18.5	(-8.68, 53.9)	1.98E-01	-	-	-
	Model 3	-4.7	(-19.56, 12.9)	5.76E-01	-	-	-	18.9	(2.81, 37.55)	2.06E-02	16.0	(-10.25, 49.9)	2.54E-01	-	-	-
Batch 1 and 2 AD (n=157)	Model 1	-6.8	(-16.84, 4.39)	2.22E-01	10.6	(-3.47, 26.66)	1.45E-01	9.4	(0.7, 19.75)	4.12E-02	16.6	(-1.24, 37.46)	6.95E-02	-	-	-
	Model 2	-	-	-	9.7	(-4.21, 25.53)	1.79E-01	11.7	(2.81, 21.42)	8.85E-03	15.9	(-1.79, 36.7)	8.03E-02	-	-	-
	Model 3	-6.1	(-16.14, 5.26)	2.80E-01	-	-	-	10.2	(0.7, 20.58)	3.13E-02	14.6	(-2.87, 35)	1.05E-01	-	-	-

Control (n=162)	Model 1	-10.6	(-23.42, 4.32)	1.52E-01	2.5	(-11.36, 18.67)	7.33E-01	7.2	(-5.39, 21.42)	2.75E-01	-5.5	(-22.46, 15.03)	5.68E-01	-	-	-
	Model 2	-	-	-	3.5	(-10.56, 19.75)	6.43E-01	8.7	(-4.07, 23.11)	1.86E-01	-6.0	(-22.89, 14.55)	5.38E-01	-	-	-
	Model 3	-10.8	(-23.53, 3.96)	1.42E-01	-	-	-	7.2	(-4.74, 21.42)	2.54E-01	-5.5	(-22.35, 15.03)	5.72E-01	-	-	-
Batch 2 AD and Control (n=255)	Model 1	-9.0	(-18.49, 1.54)	9.13E-02	4.3	(-7.34, 17.36)	4.87E-01	11.0	(1.4, 21.42)	2.54E-02	1.3	(-12.7, 17.45)	8.70E-01	16.96	(0.21, 36.6)	4.72E-02
	Model 2	-	-	-	4.3	(-7.34, 17.45)	4.83E-01	13.3	(3.53, 23.97)	5.82E-03	1.1	(-12.94, 17.28)	8.91E-01	12.58	(-3, 30.68)	1.18E-01
	Model 3	-9.1	(-18.49, 1.54)	9.03E-02	-	-	-	11.0	(1.4, 21.42)	1.97E-02	1.1	(-12.88, 17.12)	8.93E-01	17.36	(0.56, 36.89)	4.27E-02
IL6	<i>APOE ε4 dosage</i>			<i>MAPT H1 dosage</i>			<i>Age, 10 years</i>			<i>Sex, female versus male</i>			<i>Diagnosis, AD versus control</i>			
	% change	95% CI	p	% change	95% CI	p	% change	95% CI	p	% change	95% CI	p	% change	95% CI	p	
Batch 1 AD (n=64)	Model 1	5.6	(-37.93, 79.63)	8.38E-01	5.6	(-39.46, 84.04)	8.46E-01	-8.6	(-37.58, 33.79)	6.39E-01	21.9	(-40.99, 151.75)	5.87E-01	-	-	-
	Model 2	-	-	-	5.9	(-38.99, 83.53)	8.38E-01	-9.9	(-36.27, 26.58)	5.36E-01	22.9	(-39.79, 151.23)	5.65E-01	-	-	-
	Model 3	5.9	(-37.5, 79.13)	8.30E-01	-	-	-	-8.6	(-37.58, 33.79)	6.31E-01	21.6	(-40.75, 149.32)	5.88E-01	-	-	-
Batch 2 AD (n=86)	Model 1	3.8	(-29.24, 52.41)	8.45E-01	0.5	(-37.67, 62)	9.84E-01	29.2	(-5.39, 76.54)	1.03E-01	-25.4	(-57.69, 31.77)	3.09E-01	-	-	-
	Model 2	-	-	-	1.1	(-36.89, 61.89)	9.64E-01	28.3	(-4.07, 71.71)	9.49E-02	-25.3	(-57.49, 31.4)	3.07E-01	-	-	-
	Model 3	3.9	(-28.8, 51.57)	8.41E-01	-	-	-	29.2	(-4.74, 76.54)	9.71E-02	-25.4	(-57.28, 30.31)	2.98E-01	-	-	-
Batch 1 and 2 AD (n=150)	Model 1	6.1	(-22.14, 44.59)	7.06E-01	6.4	(-25.41, 51.68)	7.31E-01	12.5	(-11.12, 41.42)	3.22E-01	-12.3	(-43.04, 34.91)	5.47E-01	-	-	-
	Model 2	-	-	-	7.0	(-24.74, 52.2)	7.04E-01	10.2	(-10.5, 36.6)	3.58E-01	-11.9	(-42.64, 35.28)	5.59E-01	-	-	-
	Model 3	6.6	(-21.54, 44.89)	6.80E-01	-	-	-	12.5	(-10.5, 41.42)	3.08E-01	-13.1	(-43.28, 33.24)	5.17E-01	-	-	-
Control (n=146)	Model 1	8.4	(-20.72, 48.14)	6.11E-01	-34.9	(-50.72, -14.02)	2.74E-03	20.6	(-5.39, 52.63)	1.27E-01	-26.1	(-49.55, 8.3)	1.20E-01	-	-	-
	Model 2	-	-	-	-35.6	(-51.03, -15.21)	1.93E-03	18.9	(-6.05, 50.52)	1.41E-01	-25.9	(-49.34, 8.45)	1.22E-01	-	-	-
	Model 3	15.9	(-15.68, 59.44)	3.60E-01	-	-	-	15.7	(-9.25, 47.43)	2.43E-01	-26.0	(-50.1, 9.66)	1.33E-01	-	-	-
Batch 2 AD and Control (n=232)	Model 1	7.6	(-14.5, 35.47)	5.30E-01	-23.0	(-39.16, -2.53)	3.01E-02	24.8	(4.25, 49.48)	1.64E-02	-24.2	(-43.98, 2.74)	7.39E-02	32.32	(-3, 80.63)	7.69E-02
	Model 2	-	-	-	-23.2	(-39.29, -2.8)	2.81E-02	23.1	(3.53, 46.41)	2.02E-02	-24.1	(-43.9, 2.81)	7.45E-02	36.41	(1.47, 83.4)	3.98E-02
	Model 3	8.6	(-13.85, 36.98)	4.83E-01	-	-	-	22.3	(2.1, 46.41)	3.08E-02	-23.1	(-43.36, 4.39)	9.19E-02	29.41	(-5.33, 77.03)	1.05E-01
IL10	<i>APOE ε4 dosage</i>			<i>MAPT H1 dosage</i>			<i>Age, 10 years</i>			<i>Sex, female versus male</i>			<i>Diagnosis, AD versus control</i>			
	% change	95% CI	p	% change	95% CI	p	% change	95% CI	p	% change	95% CI	p	% change	95% CI	p	
Batch 1 AD (n=66)	Model 1	31.2	(-8.04, 87.12)	1.32E-01	16.8	(-20.39, 71.36)	4.21E-01	40.4	(7.92, 82.77)	1.25E-02	-40.7	(-63.55, -3.54)	3.58E-02	-	-	-
	Model 2	-	-	-	18.9	(-19.22, 75.08)	3.74E-01	29.2	(1.4, 63.58)	3.92E-02	-38.7	(-62.42, 0.07)	5.04E-02	-	-	-
	Model 3	32.3	(-7.08, 88.43)	1.18E-01	-	-	-	39.5	(7.92, 81.5)	1.31E-02	-41.1	(-63.75, -4.41)	3.27E-02	-	-	-
Batch 2 AD (n=93)	Model 1	4.3	(-20.23, 36.23)	7.58E-01	3.6	(-27.05, 47.12)	8.43E-01	0.7	(-19.89, 26.58)	9.49E-01	-26.7	(-51.43, 10.57)	1.36E-01	-	-	-
	Model 2	-	-	-	4.2	(-26.34, 47.32)	8.14E-01	-0.7	(-19.89, 23.97)	9.74E-01	-26.5	(-51.13, 10.57)	1.38E-01	-	-	-
	Model 3	4.5	(-19.73, 36.23)	7.38E-01	-	-	-	0.7	(-19.34, 26.58)	9.28E-01	-27.3	(-51.33, 8.6)	1.18E-01	-	-	-

Batch 1 and 2 AD (n=159)	Model 1	13.4	(-8.3, 40.15)	2.44E-01	8.3	(-15.97, 39.57)	5.36E-01	16.5	(-1.38, 37.55)	7.55E-02	-28.6	(-47.3, -3.34)	2.97E-02	-	-	-
	Model 2	-	-	-	9.9	(-14.68, 41.42)	4.64E-01	12.5	(-4.07, 31.04)	1.45E-01	-27.8	(-46.71, -2.19)	3.55E-02	-	-	-
	Model 3	14.2	(-7.6, 40.93)	2.18E-01	-	-	-	16.5	(-1.38, 37.55)	6.75E-02	-29.5	(-47.8, -4.87)	2.27E-02	-	-	-
Control (n=155)	Model 1	-5.4	(-26.74, 22.26)	6.71E-01	-10.4	(-29.29, 13.52)	3.59E-01	-8.0	(-24.74, 12.51)	4.28E-01	-0.6	(-27.9, 37.08)	9.70E-01	-	-	-
	Model 2	-	-	-	-9.8	(-28.65, 13.92)	3.84E-01	-7.3	(-24.21, 13.29)	4.57E-01	-0.8	(-28, 36.51)	9.57E-01	-	-	-
	Model 3	-3.9	(-25.41, 23.8)	7.57E-01	-	-	-	-8.6	(-25.26, 11.73)	3.66E-01	-1.3	(-28.35, 36.04)	9.37E-01	-	-	-
Batch 2 AD and Control (n=248)	Model 1	2.4	(-14.32, 22.43)	7.92E-01	-3.8	(-20.5, 16.31)	6.87E-01	-5.4	(-18.21, 9.43)	4.56E-01	-16.7	(-34.43, 5.78)	1.33E-01	8.30	(-15.5, 38.8)	5.27E-01
	Model 2	-	-	-	-3.9	(-20.5, 16.23)	6.81E-01	-6.1	(-18.21, 8.67)	4.00E-01	-16.7	(-34.34, 5.78)	1.33E-01	9.35	(-13.67, 38.61)	4.57E-01
	Model 3	2.5	(-14.2, 22.52)	7.83E-01	-	-	-	-5.4	(-18.21, 8.67)	4.25E-01	-16.6	(-34.3, 5.85)	1.35E-01	8.00	(-15.68, 38.22)	5.41E-01
TNFalpha		<i>APOE</i> ε4 dosage			<i>MAPT</i> H1 dosage			Age, 10 years			Sex, female versus male			Diagnosis, AD versus control		
		% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>	% change	95% CI	<i>p</i>
Batch 1 AD (n=66)	Model 1	30.0	(-2.46, 73.27)	7.27E-02	-3.8	(-29.44, 31.22)	8.04E-01	10.2	(-10.5, 36.6)	3.59E-01	-3.0	(-34.57, 43.79)	8.76E-01	-	-	-
	Model 2	-	-	-	-2.1	(-28.6, 34.16)	8.93E-01	1.4	(-16.49, 23.97)	8.67E-01	0.2	(-32.82, 49.38)	9.93E-01	-	-	-
	Model 3	29.7	(-2.4, 72.43)	7.23E-02	-	-	-	10.2	(-10.5, 36.6)	3.50E-01	-2.9	(-34.25, 43.49)	8.83E-01	-	-	-
Batch 2 AD (n=93)	Model 1	-8.6	(-30.98, 21)	5.24E-01	2.0	(-29.44, 47.32)	9.16E-01	-4.1	(-24.74, 22.26)	7.33E-01	-36.3	(-58.65, -1.99)	4.05E-02	-	-	-
	Model 2	-	-	-	0.6	(-30.07, 44.89)	9.72E-01	-2.1	(-22.08, 23.11)	8.77E-01	-36.8	(-58.85, -2.94)	3.65E-02	-	-	-
	Model 3	-8.5	(-30.65, 20.75)	5.27E-01	-	-	-	-4.1	(-24.21, 22.26)	7.39E-01	-36.6	(-58.39, -3.41)	3.42E-02	-	-	-
Batch 1 and 2 AD (n=159)	Model 1	5.4	(-13.91, 29.06)	6.09E-01	0.9	(-20.78, 28.52)	9.41E-01	5.0	(-10.5, 22.26)	5.71E-01	-21.2	(-41.03, 5.26)	1.06E-01	-	-	-
	Model 2	-	-	-	1.5	(-20.17, 29.06)	9.02E-01	2.8	(-11.12, 19.75)	6.81E-01	-20.8	(-40.66, 5.63)	1.11E-01	-	-	-
	Model 3	5.5	(-13.73, 28.88)	6.01E-01	-	-	-	5.0	(-10.5, 22.26)	5.65E-01	-21.3	(-40.91, 4.68)	9.94E-02	-	-	-
Control (n=156)	Model 1	0.6	(-18.94, 24.92)	9.55E-01	-12.3	(-28.2, 7.25)	1.99E-01	22.3	(3.53, 45.4)	2.06E-02	-2.1	(-25.46, 28.43)	8.75E-01	-	-	-
	Model 2	-	-	-	-12.3	(-28.1, 6.88)	1.91E-01	22.3	(3.53, 44.39)	1.94E-02	-2.1	(-25.36, 28.34)	8.76E-01	-	-	-
	Model 3	2.5	(-17.3, 27.1)	8.20E-01	-	-	-	20.6	(2.1, 43.4)	2.91E-02	-3.0	(-26.13, 27.37)	8.27E-01	-	-	-
Batch 2 AD and Control (n=249)	Model 1	-1.9	(-16.78, 15.67)	8.20E-01	-5.5	(-20.78, 12.58)	5.22E-01	12.5	(-2.06, 28.34)	9.24E-02	-17.0	(-33.43, 3.45)	9.67E-02	-0.90	(-21.16, 24.57)	9.38E-01
	Model 2	-	-	-	-5.5	(-20.67, 12.58)	5.25E-01	12.5	(-1.38, 28.34)	7.14E-02	-17.1	(-33.43, 3.31)	9.52E-02	-1.65	(-20.94, 22.35)	8.80E-01
	Model 3	-1.7	(-16.61, 15.83)	8.35E-01	-	-	-	11.7	(-2.06, 27.46)	1.05E-01	-16.8	(-33.29, 3.6)	9.98E-02	-1.38	(-21.49, 23.97)	9.07E-01

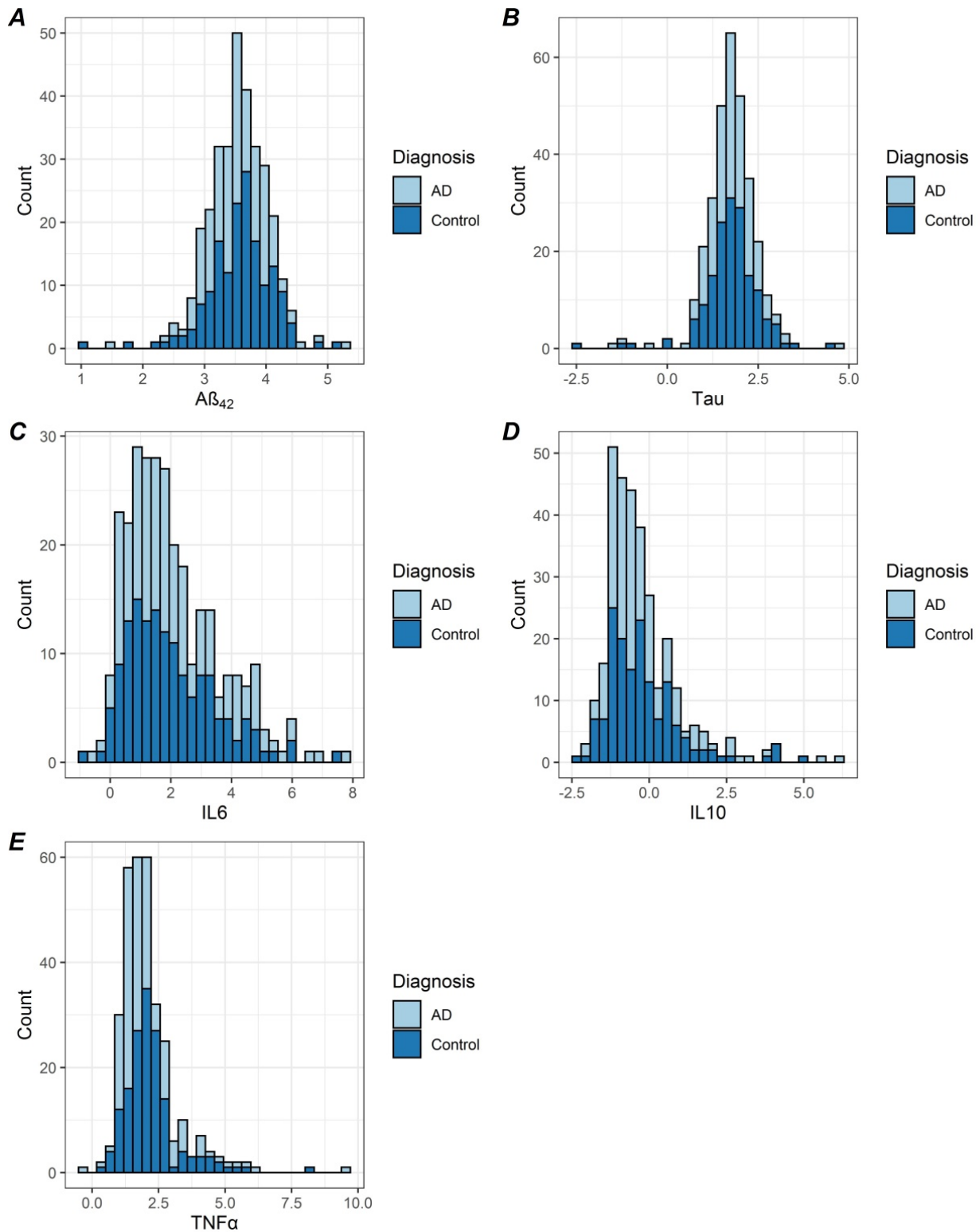
Plasma protein levels (log 2) of all samples were analyzed using a multivariable linear regression analysis accounting for technical variables (plate, batch and years of plasma storage), *APOE* ε4 dosage, *MAPT* H1 haplotype dosage, age, sex, and diagnosis (Model 1). Model 2 excluded *APOE* ε4 dosage, and Model 3 excluded *MAPT* H1 haplotype dosage. Batch 1 was composed of AD patients only, whereas batch 2 has both AD and control participants. All analyses were conducted separately in AD samples from each batch (batch 1 AD, batch 2 AD), all AD samples combined (batch 1 and 2 AD), in Control samples only (batch 2) and in batch 2 AD and Control samples combined. To aid interpretability of results, the estimated coefficients were transformed to provide estimates of percent change in plasma level associated with the specified change in value of the explanatory variable: one copy of *APOE* ε4, one copy of *MAPT* H1, 10 years of age, female versus male, AD versus control. The transformation was: $(100 * (2^{\beta} - 1))$ where beta was the raw estimated coefficient. 95% CI refer to 95% confidence intervals of the change.

Supplementary Table 3. Pairwise association of plasma protein levels - stratified by AD and control participants.

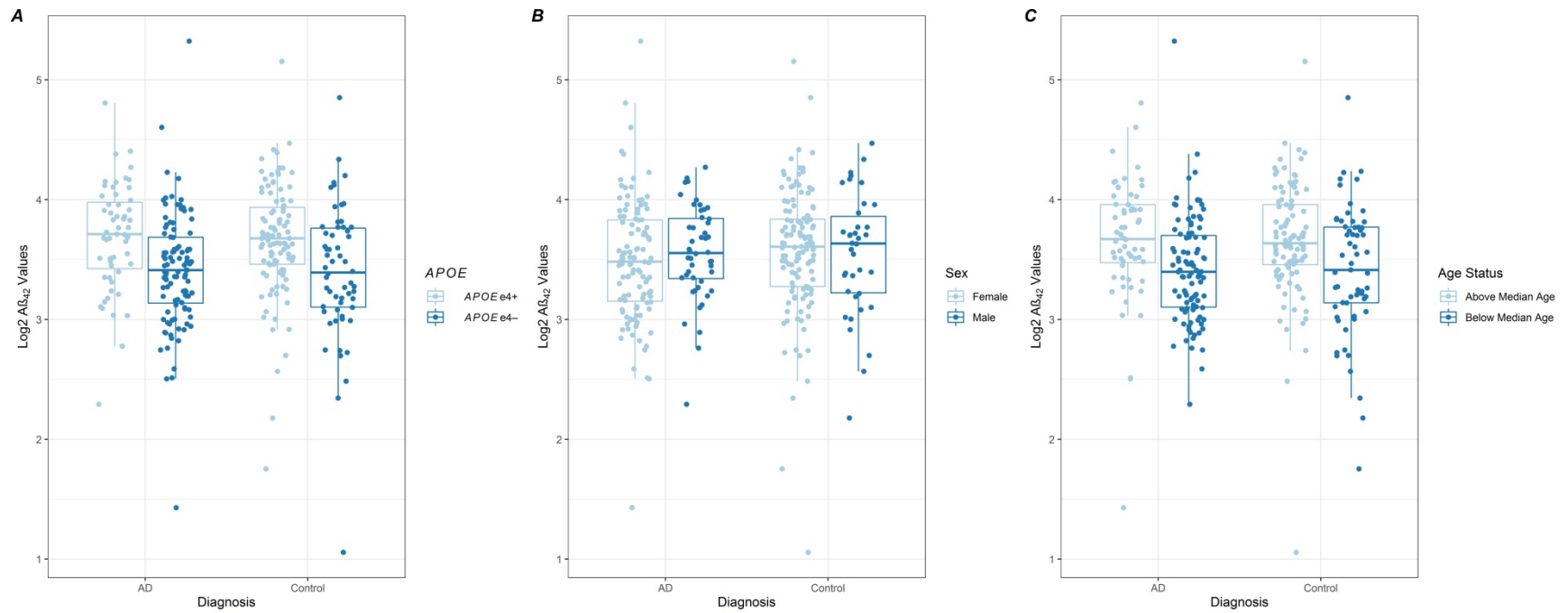
Batch 1 and 2 AD	A β ₄₂				Tau				IL6				IL10				TNF α			
	N	% change	95% CI	<i>p</i>	N	% change	95% CI	<i>p</i>	N	% change	95% CI	<i>p</i>	N	% change	95% CI	<i>p</i>	N	% change	95% CI	<i>p</i>
A β ₄₂	–	–	–	–	157	55.4	(33.15, 81.38)	8.89E-08	150	66.4	(7.77, 156.86)	2.19E-02	159	19.7	(-12.64, 63.92)	2.62E-01	159	67.0	(25.09, 122.99)	6.04E-04
Tau	157	22.0	(13.84, 30.86)	8.56E-08	–	–	–	–	148	15.7	(-13.79, 55.08)	3.29E-01	157	9.7	(-11.3, 35.75)	3.88E-01	157	20.0	(-1.85, 46.71)	7.57E-02
IL6	150	3.7	(0.56, 6.95)	2.00E-02	148	2.5	(-2.33, 7.4)	3.21E-01	–	–	–	–	150	15.8	(8.98, 22.86)	3.95E-06	150	22.9	(17.69, 28.34)	1.12E-16
IL10	159	2.5	(-1.79, 6.81)	2.63E-01	157	2.7	(-3.61, 9.35)	4.15E-01	150	63.6	(34.35, 99.17)	2.24E-06	–	–	–	–	159	55.8	(43.69, 68.88)	1.82E-20
TNF α	159	8.1	(3.6, 12.66)	3.66E-04	157	6.0	(-0.62, 13.13)	7.73E-02	150	154.7	(109.51, 209.51)	1.18E-16	159	63.0	(49.17, 78.14)	1.82E-20	–	–	–	–

Batch 2 Control	A β ₄₂				Tau				IL6				IL10							
	N	% change	95% CI	<i>p</i>	N	% change	95% CI	<i>p</i>	N	% change	95% CI	<i>p</i>	N	% change	95% CI	<i>p</i>	N	% change	95% CI	<i>p</i>
A β ₄₂	–	–	–	–	162	56.7	(33.33, 84.17)	1.58E-07	146	23.6	(-12.76, 75.32)	2.31E-01	155	21.3	(-9.31, 62.23)	1.92E-01	156	45.7	(14.55, 85.32)	2.36E-03
Tau	162	19.8	(12.27, 27.9)	1.56E-07	–	–	–	–	146	14.0	(-7.92, 41.23)	2.26E-01	155	0.3	(-16.2, 19.91)	9.78E-01	156	8.1	(-7.15, 25.79)	3.12E-01
IL6	146	2.6	(-1.45, 6.81)	2.08E-01	146	4.3	(-2.33, 11.42)	2.04E-01	–	–	–	–	145	15.6	(6, 26.05)	1.22E-03	146	22.5	(16.8, 28.52)	6.31E-14
IL10	155	3.2	(-1.31, 7.85)	1.66E-01	155	0.5	(-6.5, 8)	8.94E-01	145	28.9	(10.73, 49.9)	1.22E-03	–	–	–	–	155	42.9	(32.13, 54.54)	1.14E-15
TNF α	156	8.4	(3.17, 13.92)	1.56E-03	156	5.0	(-3.34, 14.08)	2.45E-01	146	126.9	(87, 175.3)	6.31E-14	155	63.4	(46.71, 81.76)	1.14E-15	–	–	–	–

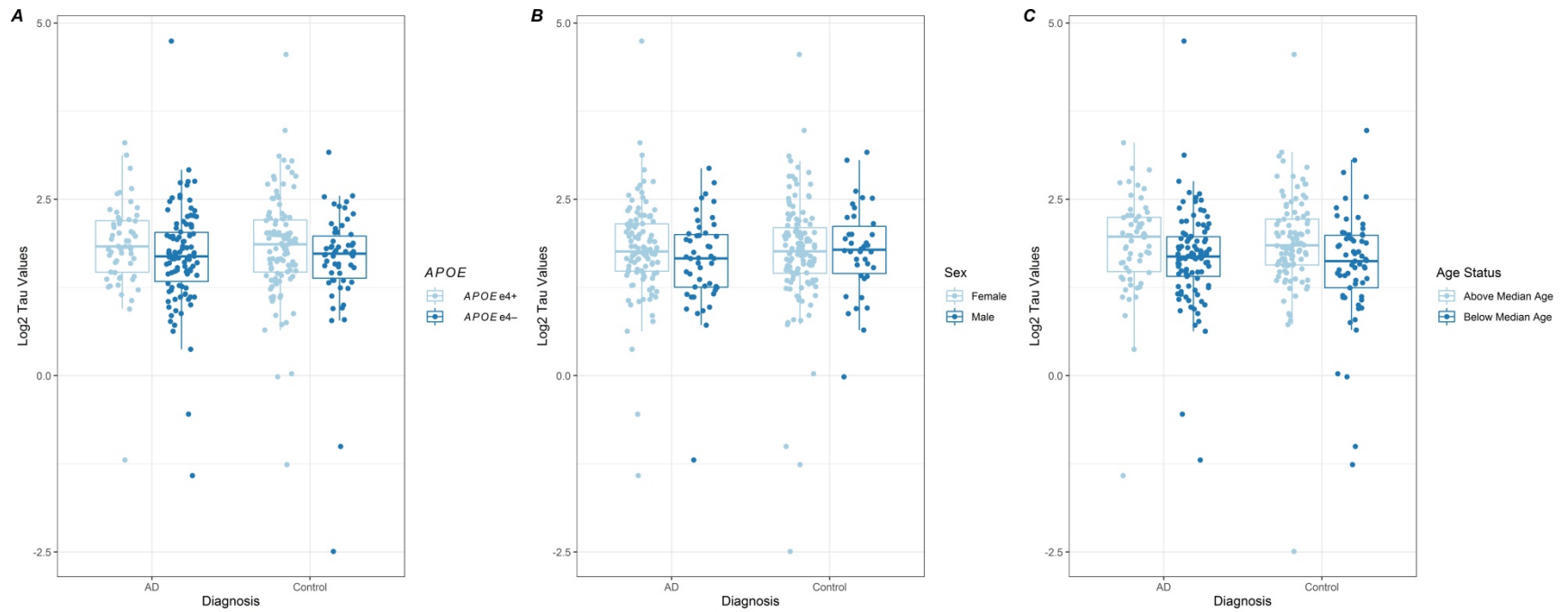
Plasma protein levels (log 2) of all samples were analyzed for pairwise associations using a multivariable linear regression analysis. All analyses were adjusted for technical variables, *APOE* ϵ 4 dosage, age, and sex. Variables in the rows represent the dependent variables and those in the columns the tested independent variables in the models. To aid interpretability of results, the estimated coefficients were transformed to provide estimates of percent change in plasma level associated with the specified change in value of the independent variable. The transformation was: $(100 * (2^{\beta} - 1))$ where β was the raw estimated coefficient. 95% CI refer to 95% confidence intervals of the change.



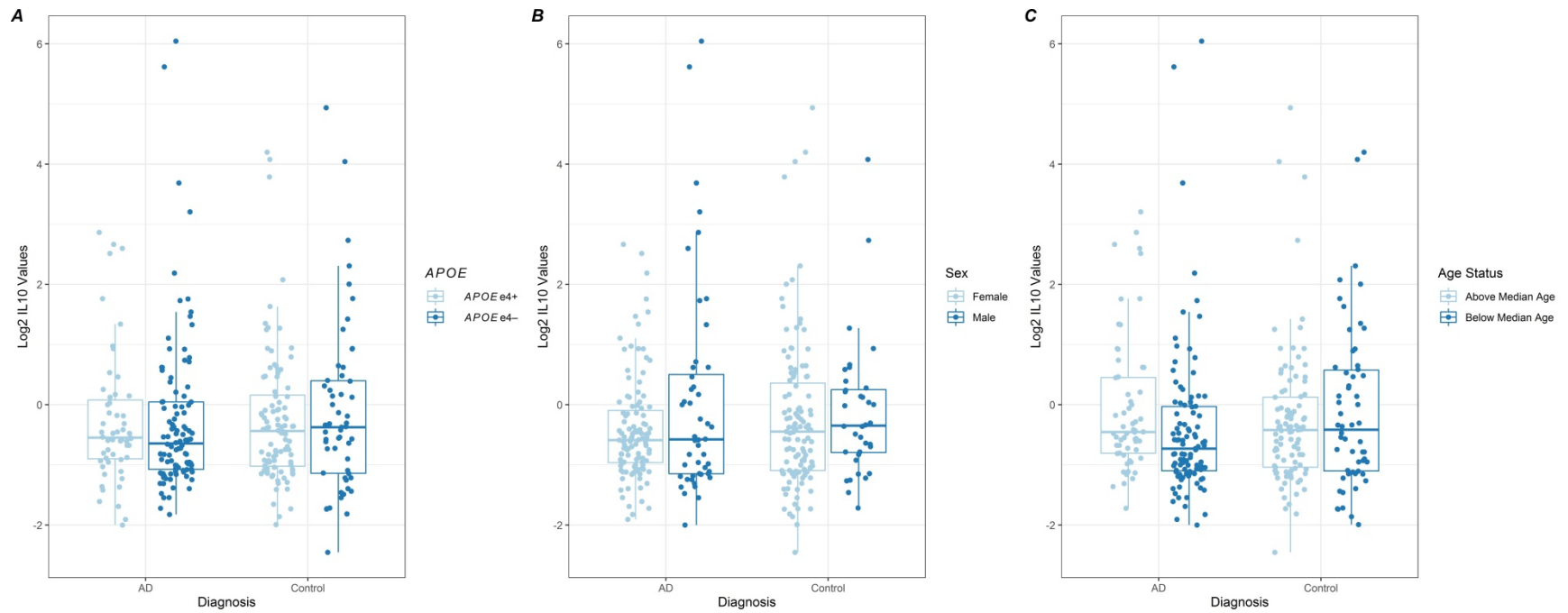
Supplementary Figure 1. Histograms of plasma protein levels (A-E). Data are shown for log₂ transformed values of proteins of all AD cases and controls. Mean values of duplicate measurements were utilized in all analyses. Results are color-coded for AD cases (light blue) and controls (dark blue).



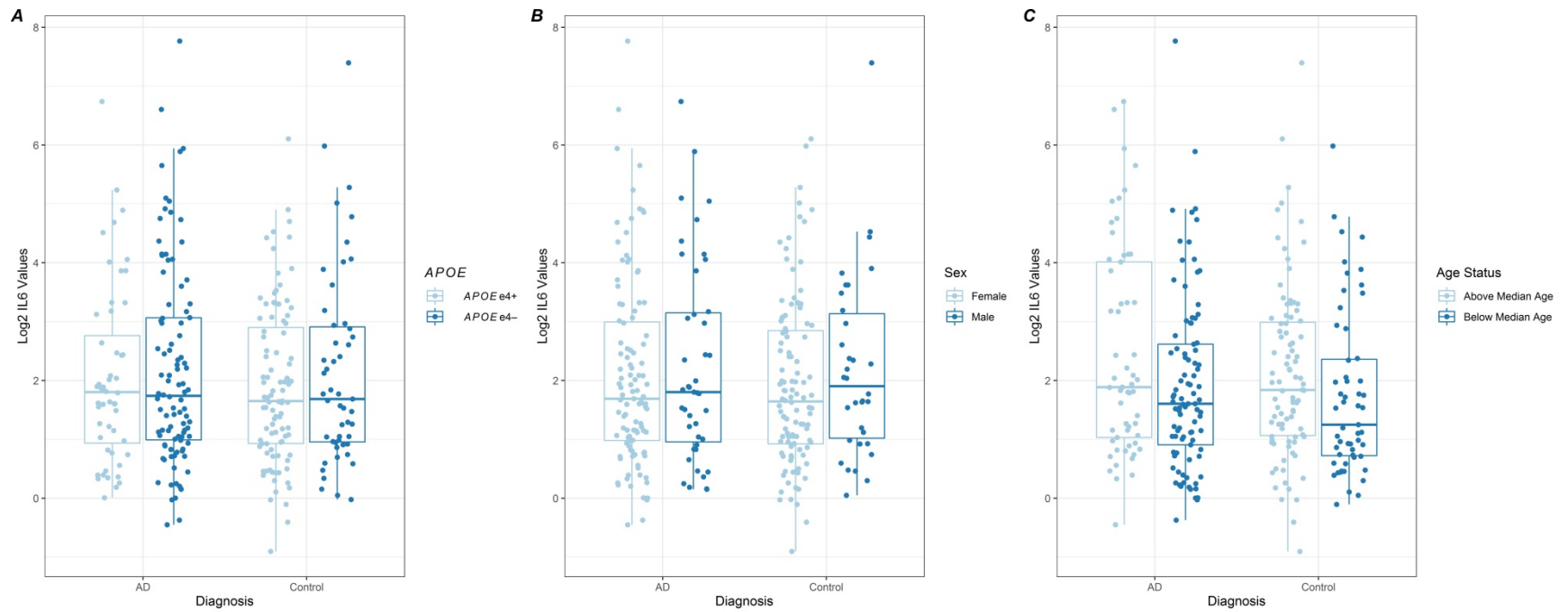
Supplementary Figure 2. Box plots of log₂ transformed Aβ₄₂ values stratified by *APOE* ε4 carrier status (A), sex (B), and median age (C).



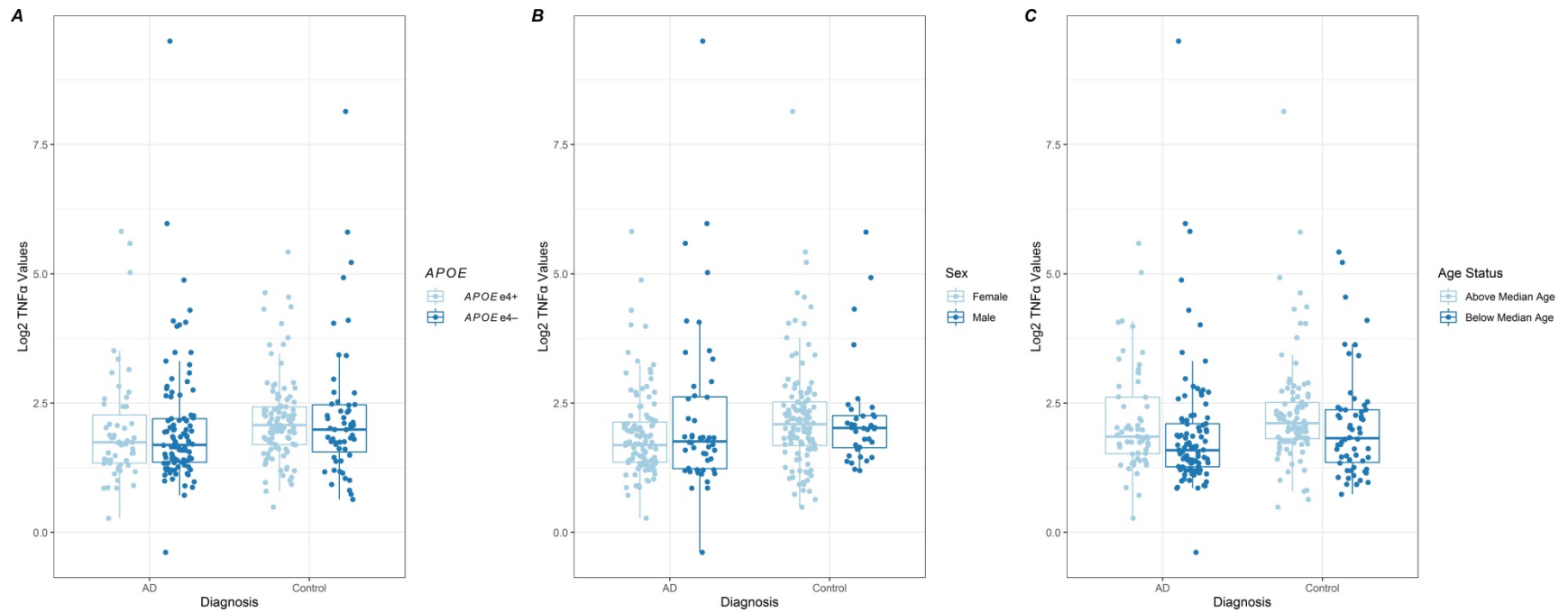
Supplementary Figure 3. Box plots of log₂ transformed tau values stratified by *APOE* ε4 carrier status (A), sex (B), and median age (C).



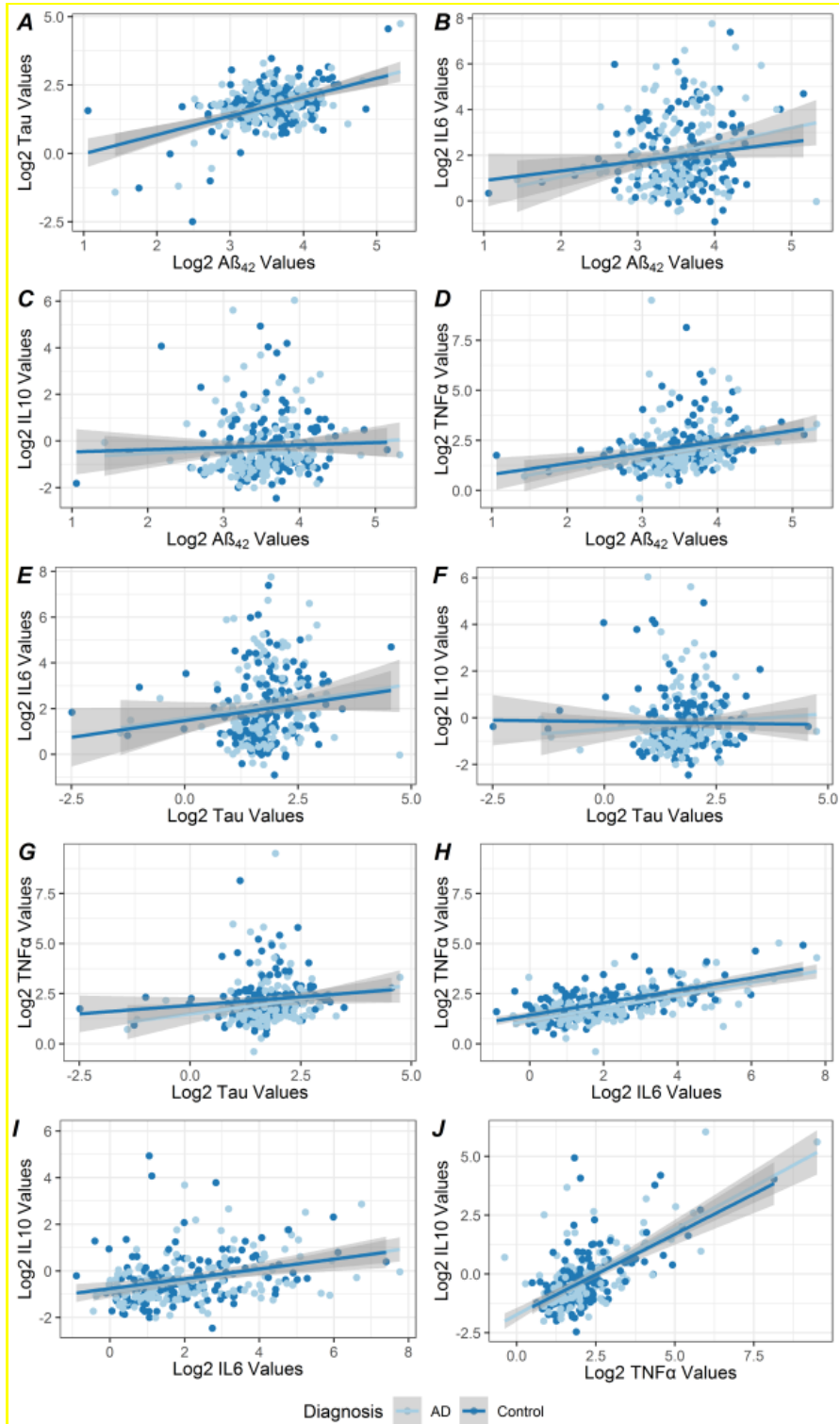
Supplementary Figure 4. Box plots of log₂ transformed IL10 values stratified by *APOE* ε4 carrier status (A), sex (B), and median age (C).



Supplementary Figure 5. Boxplots of log₂ transformed IL6 values stratified by *APOE* ε4 carrier status (A), sex (B), and median age (C).



Supplementary Figure 6. Boxplots of log₂ transformed TNF α values stratified by *APOE* ϵ 4 carrier status (A), sex (B), and median age (C).



Supplementary Figure 7. Scatter plots showing pairwise protein correlations (A-J). Data are shown for log₂ transformed values of proteins of all AD cases and controls. Mean values of duplicate measurements were utilized in all analyses. Results are color-coded for AD cases (light blue) and controls (dark blue).