

Supplementary Table1: **Effect of subcutaneous immunization on total and fibrillar A β in the brains of J20 APP transgenic mice: A β levels for individual mice according to age.**

Control			A β			MOG		
Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS	Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS	Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS
12.3 M	1671	2.41	11.3 M	921	0.22	11.3 M	163	0.28
13.4 M	1595	3.39	11.8 M	947	1.09	11.7 M	21	0.11
13.4 F	1910	3.66	11.8 F	1225	1.67	12.6 M	58	0.06
13.8 F	1250	2.27	12.6 F	146	1.39	12.8 F	197	0.25
13.8 F	719	1.14	13.3 F	1135	0.74	12.8 F	108	0.13
16.5 M	1125	3.45	13.4 F	126	0.32	13.3 F	134	0.40
17.1 F	1596	3.72	13.4 F	413	0.47	13.3 F	31	0.03
			15.0 F	152	0.69	13.3 F	41	0.07
						13.6 F	74	0.32
						15.0 F	47	0.13
14.3\pm0.7	1409.4 \pm 152.7	2.9 \pm 0.4	12.8 \pm 0.4	633.3\pm 166.8^a	0.83 \pm 0.3^a	13.0 \pm 0.3	87.7 \pm 19.2^b	0.22 \pm 0.1^b

MOG -/-			GA		
Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS	Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS
13.2 M	73	0.01	12.3 M	118	0.01
13.4 M	32	0.29	16.8 M	267	0.27
13.4 F	211	0.43	15.0 F	271	0.22
15.0 F	133	0.29	15.8 F	490	0.27
15.1 F	144	0.18	17.1 F	885	0.50
15.6 F	120	0.34			
14.3 \pm 0.4	118.8 \pm 25.2^b	0.27 \pm 0.04^c	15.4 \pm 0.9	406.7 \pm 133.6^c	0.26 \pm 0.1^c

^a p<0.05 vs. control; ^b p<0.001 vs. control; p<0.05 vs. A β ; ^c p<0.001 vs. control;

Statistical analysis was performed using the one way ANOVA, Bonferroni test.

Supplementary Table2. Effect of subcutaneous immunization on total and fibrillar A β in the brains of T2576 APP transgenic mice : A β levels for individual mice according to age.

Control			PLP		
Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS	Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS
13.2 M	831	1.58	13.3 F	508	0.47
15.5 M	1089	1.89	13.3 F	651	0.99
16.4 M	1614	2.92	15.4 M	831	0.63
17.9 M	2390	3.88	16.4 M	732	0.44
20.5 F	2489	3.18	20.6 M	637	0.83
16.7\pm1.2	1683 \pm 334.1	2.67 \pm 0.4	15.8 \pm 1.4	672.1 \pm 53.6^a	0.68 \pm 0.2^b

^a p<0.02 vs. control (untreated mice).

^b p<0.002 vs. control. Statistical analysis was performed using the student's t test .

Supplementary Table 3: **Effect of nasal immunization on total and fibrillar A β in the brains of J20 APP transgenic mice: A β levels for individual mice according to age**

Control			Control (Age matched)		
Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS	Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS
12.3 M	1671	2.41	12.3 M	1671	2.41
13.4 M	1595	3.39	13.4 M	1595	3.39
13.4 F	1910	3.66	13.4 F	1910	3.66
13.8 F	1250	2.27	13.8 F	1250	2.27
13.8 F	719	1.14	13.8 F	719	1.14
16.5 M	1125	3.45			
17.1 F	1596	3.72			
14.3\pm0.7	1409.4 \pm 152.7	2.9 \pm 0.4	13.3\pm0.3	1429 \pm 233	2.6 \pm 0.4

GA			IVX-908			GA+IVX-908		
Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS	Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS	Age (months)/ Gender	Total brain A β (ng/g)	% Area of ThS
12.5 M	1207	2.47	13.0 M	635	2.19	12.5 M	158	0.12
12.8 M	823	1.78	15.2 M	802	1.67	12.5 F	120	0.36
14.5 F	968	0.71	15.2 M	292	0.65	12.8 F	435	0.38
15.1 F	1068	3.29	12.7 F	948	2.10	13.0 M	593	0.54
			12.9 F	435	0.98	13.0 M	356	0.18
			13.0 F	681	1.63	13.3 M	129	0.47
			14.8 F	743	1.83	13.5 F	604	0.71
						15.8 F	630	0.69
13.7 \pm 0.6	1017 \pm 81	2.06 \pm 0.8	13.8 \pm 0.5	648.1 \pm 84^a	1.5 \pm 0.2	13.3 \pm 0.4	402.7 \pm 70.5^b	0.48 \pm 0.09^c

^a p<0.02 vs. control; ^b p<0.001 vs. control; ^c p<0.001 vs. control; p<0.05 vs. GA

Statistical analysis was performed using the one way ANOVA, Bonferroni test.

Supplementary Table 4: Reduction of total and fibrillar A β following GA+IVX-908 and MOG immunization in the brains of aged match J20 APP transgenic mice.

Group	Age (months)	Total Brain Aβ (ng/g)	Fibrillar Aβ % Area ThS	
Control (n=5)	13.3 \pm 0.3	1429.1 \pm 233	2.60 \pm 0.40	
GA+IVX-908 (n=8)	13.3 \pm 0.4	402.7 \pm 70.5	0.48 \pm 0.09	P<0.001
EAE (MOG) (n=8)	13.3 \pm 0.3	86.5 \pm 20.2	0.17 \pm 0.05	P<0.001

Statistical analysis was performed using the one way ANOVA, Bonferroni test.

Supplementary Table 5: **Reduction of fibrillar A β following GA+IVX-908 immunization in the brains of age and sex match J20 APP transgenic mice.**

Control		PLP	
Gender	% Area of ThS	Gender	% Area of ThS
M	2.11	M	0.41
M	2.31	M	0.37
M	1.88	M	0.33
M	2.64	M	0.28
M	1.98	M	0.38
F	2.06	F	0.35
F	2.57	F	0.27
F	2.79	F	0.48
F	2.62		
Total	2.3\pm 0.11	Total	0.4 \pm 0.03^a

^a p<0.0001 vs. control (untreated mice). Statistical analysis was performed using the student's t test.