

		Wild Type (N=11)		rTg-DI (N=10)						
Tissue Compartment	Age group (month)	Mean mm ³	SE	Mean mm ³	SE	Diff	SE	P-value	L95%	U95%
Gray Matter Volume (mm ³)	3	1137.2	9.8	1124.6	12.3	-12.7	15.7	0.430	-45.4	20.1
	6	1108.5	11.1	1123.1	9.8	14.6	14.7	0.334	-16.2	45.4
	9	1083.0	10.9	1086.1	13.6	3.1	17.4	0.861	-33.2	39.4
	11	1077.7	11.4	1080.4	12.0	2.7	16.6	0.872	-31.8	37.3
White Matter Volume (mm ³)	3	554.4	5.8	531.6	8.7	-22.8	10.5	0.042	-44.6	-0.9
	6	603.3	6.5	590.1	9.0	-13.3	11.1	0.244	-36.3	9.8
	9	601.2	6.0	549.5	8.1	-51.7	10.1	<0.001	-72.7	-30.7
	11	605.8	6.9	531.2	7.5	-74.5	10.1	<0.001	-95.7	-53.4
Cerebral Spinal Fluid Volume (mm ³)	3	260.2	6.1	247.5	5.3	-12.7	8.1	0.131	-29.5	4.1
	6	278.2	6.6	264.0	4.8	-14.2	8.1	0.096	-31.1	2.7
	9	258.0	5.5	267.8	5.6	9.8	7.9	0.229	-6.6	26.1
	11	251.3	6.2	289.6	6.7	38.3	9.1	<0.001	19.2	57.3
Total Intracranial (mm ³)	3	1951.8	18.1	1903.7	20.8	-48.1	27.6	0.096	-105.6	9.4
	6	1990.1	19.3	1977.2	21.7	-12.9	29.1	0.663	-73.5	47.8
	9	1942.2	19.1	1903.4	20.6	-38.9	28.0	0.181	-97.3	19.6
	11	1934.8	20.8	1901.3	19.9	-33.6	28.8	0.257	-93.6	26.5

Supplementary Table 1: Summary of volume

umetric tissue compartment changes in WT and rTg-DI rats

Data are presented a means and SE's Generalized Estimating Equations (GEE). Mean differences compare rTg-DI vs WT groups at each age group.

Age group midpoints* (month)	Wild Type		rTg-DI		Diff	SE	P-value	L95%
	Mean FA	SE	Mean FA	SE				
3.28 ± 0.19	0.370	0.003	0.368	0.002	-0.003	0.004	0.421	-0.010
6.23 ± 0.50	0.377	0.004	0.369	0.004	-0.009	0.005	0.114	-0.019
8.22 ± 0.45	0.387	0.003	0.378	0.002	-0.010	0.004	0.010	-0.017
11.33 ± 0.55	0.402	0.002	0.375	0.002	-0.026	0.002	<0.001	-0.031

Supplementary Table 2: Summary of FA changes in white matter compartment in WT and rTg-DI rats

Data are presented as means and SE's Generalized Estimating Equations (GEE). Pairwise comparisons between the two strains at each age were investigated. The p-values were not adjusted for multiple comparisons

*The age categories for statistical analysis comparison of FA values between the two strains are listed. These age groupings were used for the statistical analysis as well as for the voxel-wise analysis. The number of rats and gender distribution for each age group are as follows: 3 month groups: WT, N=7 (7 Females, 0 Males); rTg-DI, N=7 (7 Females, 0 Males); 6 month groups: WT, N=15 (11 Females, 4 Males); rTg-DI, N=14 (11 Females, 3 Males); 8 month groups: WT, N=10 (9 Females, 1 Male); rTg-DI, N=10 (8 Females, 2 Males); 11 month groups: WT, N=12 (10 Females, 2 Males); rTg-DI, N=13 (11 Females, 2 Males).

		Wild Type (N=11)		rTg-DI (N=10)						
Parameter	Age group (month)	Mean	SE	Mean	SE	Diff	SE	P-value	L95%	U95%
T2* Thalamus (ms)	3	28.9	0.20	28.9	0.26	0.01	0.33	0.988	-0.7	0.7
	6	29.6	0.32	27.8	0.30	-1.8	0.44	0.001	-2.7	-0.9
	9	28.8	0.36	25.9	0.25	-2.9	0.44	<.001	-3.8	-2.0
	11	28.4	0.24	25.4	0.17	-3.0	0.29	<.001	-3.6	-2.4
Thalamic Microbleed Volume (mm ³)	3	0.61	0.076	0.80	0.130	0.19	0.150	0.229	-0.13	0.50
	6	0.43	0.101	1.27	0.294	0.84	0.311	0.013	0.19	1.49
	9	0.47	0.118	4.90	0.543	4.43	0.556	0.000	3.27	5.59
	11	0.76	0.121	6.96	0.448	6.20	0.464	0.000	5.23	7.17

Supplementary Table 3: Summary of T2* Microbleed Volume changes WT and rTg-DI rats

Data are presented a means and SE's Generalized Estimating Equations (GEE). Pairwise comparisons between the two strains at each age were investigated. The p-values were not adjusted for multiple comparisons