

**On-line Table 1: Brain regional volumes (cc) in RTT and control subjects**

Variable	Group, Mean $\pm$ SD			
	All RTT (n = 22)	More Severe Gait (n = 12)	Less Severe Gait (n = 10)	Control Subjects (n = 25)
Brain	885.2 $\pm$ 113.8*	845.0 $\pm$ 108.9	928.6 $\pm$ 112.5	1207.9 $\pm$ 95.2
GM	536.7 $\pm$ 75.3	499.1 $\pm$ 75.8	576.9 $\pm$ 53.9*	758.1 $\pm$ 53.4
WM	348.6 $\pm$ 70.2	345.9 $\pm$ 79.6	351.8 $\pm$ 65.4	449.8 $\pm$ 55.1
Cerebrum	755.1 $\pm$ 106.1	714.7 $\pm$ 99.8	799.7 $\pm$ 103.9	1043.9 $\pm$ 83.1
GM	450.3 $\pm$ 67.5*	416.4 $\pm$ 66.4	486.8 $\pm$ 50.3*	640.2 $\pm$ 48.1
WM	304.8 $\pm$ 58.4*	298.2 $\pm$ 62.1	312.9 $\pm$ 59.0	403.8 $\pm$ 50.7
Cortex	696.2 $\pm$ 98.9	659.0 $\pm$ 92.2	737.8 $\pm$ 98.4	964.2 $\pm$ 78.7
GM	419.4 $\pm$ 63.3	387.5 $\pm$ 61.7	454.0 $\pm$ 48.2*	599.1 $\pm$ 45.5
WM	276.8 $\pm$ 54.9*	271.4 $\pm$ 59.0	283.8 $\pm$ 55.0	365.2 $\pm$ 46.3
Frontal lobe	277.7 $\pm$ 45.6	255.0 $\pm$ 40.0	303.3 $\pm$ 40.9*	380.1 $\pm$ 34.2
GM	162.8 $\pm$ 28.2	149.1 $\pm$ 28.2	178.4 $\pm$ 21.0*	228.4 $\pm$ 22.0
WM	115.0 $\pm$ 22.0	105.9 $\pm$ 17.5	124.9 $\pm$ 34.0	1515.7 $\pm$ 18.7
Parietal lobe	194.2 $\pm$ 28.9	187.2 $\pm$ 28.1	203.2 $\pm$ 30.2	276.5 $\pm$ 25.0
GM	108.4 $\pm$ 16.9*	101.4 $\pm$ 16.8	116.2 $\pm$ 14.5*	160.4 $\pm$ 13.5
WM	85.8 $\pm$ 17.0	85.7 $\pm$ 17.2	87.0 $\pm$ 18.0	116.2 $\pm$ 15.3
Temporal lobe	138.2 $\pm$ 20.4	131.2 $\pm$ 19.7	145.1 $\pm$ 20.0	188.9 $\pm$ 16.9
GM	94.6 $\pm$ 15.4	86.2 $\pm$ 14.4	103.4 $\pm$ 11.5†	134.8 $\pm$ 11.1
WM	43.6 $\pm$ 16.1‡	44.9 $\pm$ 21.0	41.7 $\pm$ 9.4	54.1 $\pm$ 9.7
Occipital lobe	86.0 $\pm$ 14.1	85.6 $\pm$ 15.1	86.1 $\pm$ 14.3	118.7 $\pm$ 12.4
GM	53.6 $\pm$ 8.0	50.7 $\pm$ 7.3	56.0 $\pm$ 7.8	75.5 $\pm$ 7.2
WM	32.4 $\pm$ 9.9	34.9 $\pm$ 11.6	30.1 $\pm$ 7.5	43.2 $\pm$ 7.1
Brain stem	32.9 $\pm$ 4.2	32.2 $\pm$ 4.8	33.9 $\pm$ 3.5	42.0 $\pm$ 6.0
GM	16.8 $\pm$ 2.6	15.8 $\pm$ 2.5	18.1 $\pm$ 2.4	23.4 $\pm$ 4.0
WM	16.1 $\pm$ 3.3	16.4 $\pm$ 3.8	15.8 $\pm$ 2.8	18.6 $\pm$ 4.4
Cerebellum	97.2 $\pm$ 11.7	98.1 $\pm$ 12.9	95.1 $\pm$ 10.7	122.0 $\pm$ 15.5
GM	69.5 $\pm$ 13.3	66.8 $\pm$ 16.7	72.1 $\pm$ 8.4	94.5 $\pm$ 13.0
WM	27.7 $\pm$ 13.7	31.3 $\pm$ 17.2	23.0 $\pm$ 7.2	27.5 $\pm$ 8.5

**Note:**—RTT indicates Rett syndrome; GM, gray matter; WM, white matter.

\*  $P < .05$ .

†  $P < .10$  when comparing relative volumes between more severe and less severe (gait criterion) groups.

‡  $P < .10$  when comparing relative volumes between RTT and control subjects.

**On-line Table 2: Significantly different subobar regional volumes (cc) in RTT and control subjects**

Variable	Group, Mean $\pm$ SD			
	All RTT (n = 22)	More Severe Gait (n = 12)	Less Severe Gait (n = 10)	Control Subjects (n = 25)
Subfrontal				
Prefrontal	116.1 $\pm$ 21.5	104.9 $\pm$ 18.1	127.6 $\pm$ 20.2*	155.5 $\pm$ 19.0
GM	80.6 $\pm$ 15.1	72.6 $\pm$ 14.5	89.5 $\pm$ 11.5*	109.5 $\pm$ 13.5
WM	35.4 $\pm$ 9.8	32.3 $\pm$ 9.3	38.1 $\pm$ 10.2	46.0 $\pm$ 8.4
Subparietal				
Posterior dorsal parietal	38.4 $\pm$ 7.3	36.2 $\pm$ 6.8	40.3 $\pm$ 7.5	58.0 $\pm$ 7.6
GM	27.2 $\pm$ 5.0*	25.8 $\pm$ 4.9	28.9 $\pm$ 5.0	41.7 $\pm$ 5.2
WM	10.8 $\pm$ 2.9	10.4 $\pm$ 2.6	11.4 $\pm$ 3.3	16.3 $\pm$ 3.7
Inferior parietal lobule	52.9 $\pm$ 8.9	51.9 $\pm$ 8.6	54.2 $\pm$ 9.6	75.2 $\pm$ 8.0
GM	33.7 $\pm$ 6.0†	31.7 $\pm$ 5.8	36.2 $\pm$ 5.5	50.6 $\pm$ 5.0
WM	19.3 $\pm$ 6.1	20.2 $\pm$ 6.9	18.5 $\pm$ 5.0	24.6 $\pm$ 4.0
Subtemporal				
Anterior STG	17.5 $\pm$ 4.8	14.8 $\pm$ 4.0	20.7 $\pm$ 3.5*	26.4 $\pm$ 3.7
GM	14.7 $\pm$ 3.8	12.3 $\pm$ 2.8	17.6 $\pm$ 2.7*	22.1 $\pm$ 3.9
WM	2.8 $\pm$ 1.7*	2.5 $\pm$ 2.1	3.2 $\pm$ 1.2	4.3 $\pm$ 1.8
Ventral temporal lobe	12.5 $\pm$ 2.7	12.4 $\pm$ 2.8	12.5 $\pm$ 3.2	16.8 $\pm$ 2.9
GM	8.4 $\pm$ 2.1	8.0 $\pm$ 2.1	8.9 $\pm$ 2.0	12.2 $\pm$ 2.0
WM	4.1 $\pm$ 1.9*	4.5 $\pm$ 2.2	3.6 $\pm$ 1.3	4.8 $\pm$ 1.5
Limbic lobe	24.9 $\pm$ 4.0	24.3 $\pm$ 4.0	25.5 $\pm$ 4.1	33.5 $\pm$ 3.2
GM	18.6 $\pm$ 2.7	17.7 $\pm$ 2.6	19.6 $\pm$ 2.7	25.5 $\pm$ 2.4
WM	6.3 $\pm$ 2.3*	6.6 $\pm$ 2.7	5.9 $\pm$ 1.7	8.3 $\pm$ 2.2

**Note:**—RTT indicates Rett syndrome; GM, gray matter; WM, white matter; STG, superior temporal gyrus.

\*  $P < .05$ .

†  $P < .10$  when comparing relative volumes between RTT and control subjects.