

Supplemental Table 1. MRI and ¹¹C-(R)-PK11195 PET characteristics of the healthy controls (*n* = 8) and RRMS patients (*n* = 10) at baseline and 6 months after treatment.

	Mean (SD) values		Controls Baseline	Difference of means in RRMS vs. controls % difference <i>P</i> value*	Difference of means in RRMS baseline vs. 6 months % change (SD) <i>P</i> value†
	RRMS				
	Baseline	6 months			
MRI volumes (cm³)					
Total T2 lesion volume	10.0 (13.1)	11.7 (15.6)	NA	NA	+3.76% (26.0) <i>0.320</i>
WM volume	486.4 (53.8)	485.0 (52.4)	485.9 (60.1)	-0.10% <i>0.333</i>	-0.27% (0.86) <i>0.816</i>
GM volume	420.9 (37.4)	423.9 (39.1)	432.2 (49.1)	+2.61% <i>0.222</i>	+0.05% (1.07) <i>1.000</i>
NAWM volume	476.4 (60.1)	473.3 (59.9)	NA	NA	-0.66% (0.65) <i>0.855</i>
¹¹C-(R)-PK11195 DVR					
T2 lesional	1.15 (0.16)	1.04 (0.13)	NA	NA	-12.31% (16.82) <i>0.040‡</i>
NAWM	1.26 (0.04)	1.27 (0.03)	1.24 (0.03)	-2.00% <i>0.096</i>	+0.63% (2.98) <i>0.512</i>
GMctx	1.35 (0.06)	1.36 (0.06)	1.32 (0.02)	+2.20% <i>0.052‡</i>	+0.85% (2.07) <i>0.223</i>
Striatum	1.20 (0.05)	1.21 (0.04)	1.17 (0.06)	-2.80% <i>0.332</i>	+0.11% (2.31) <i>0.901</i>
Thalamus	1.61 (0.15)	1.60 (0.15)	1.47 (0.08)	-9.87% <i>0.006‡</i>	-0.72% (5.22) <i>0.737</i>
Cerebellum	1.13 (0.05)	1.11 (0.04)	1.08 (0.03)	-4.26% <i>0.072</i>	-1.21% (2.91) <i>0.219</i>
Global (GMWM)	1.24 (0.03)	1.25 (0.03)	1.22 (0.03)	-2.35% <i>0.021‡</i>	+0.47% (1.89) <i>0.440</i>

MRI = magnetic resonance imaging; PET = positron emission tomography; RRMS = relapsing remitting multiple sclerosis; SD = standard deviation; WM = white matter; GM = grey matter; NAWM = normal appearing white matter; DVR = distribution volume ratio; GMctx = gray matter cortex; GMWM = gray matter white matter

* Analysis of variance with age as covariate for comparisons between groups

† Analysis of variance with Bonferroni correction for comparisons of PET variables within RRMS group

‡ Statistically significant with the level of *P* < 0.05

Supplemental Table 2. Serial MRI and ¹¹C-(R)-PK11195 PET imaging data of RRMS patients (*n* = 7) at baseline, and 2 months and 6 months after initiation of treatment.

	Mean (SD) values			Differences of means between time points within the RRMS group % change (SD) <i>P</i> value*			overall <i>P</i> value†
	Baseline	2 months	6 months	baseline vs. 2 months	2 vs. 6 months	baseline vs. 6 months	
MRI volumes (cm³)							
Total T2 lesion volume	4.90 (4.85)	6.33 (7.30)	5.92 (6.79)	+16.8% (11.9) <i>0.247</i>	+15.3% (38.8) <i>0.334</i>	+4.02% (30.6) <i>0.302</i>	<i>0.541</i>
WM volume	492.0 (58.5)	491.7 (58.3)	489.8 (57.2)	-0.05% (0.65) <i>0.865</i>	-0.38% (0.57) <i>0.077</i>	-0.43% (0.94) <i>0.293</i>	<i>0.212</i>
GM volume	426.6 (31.1)	425.1 (34.5)	426.8 (34.3)	-0.38% (1.49) <i>0.604</i>	+0.40% (1.29) <i>0.406</i>	+0.01% (1.23) <i>0.918</i>	<i>0.737</i>
NAWM volume	487.1 (59.5)	485.4 (60.6)	483.9 (59.0)	-0.38% (0.60) <i>0.512</i>	-0.29% (0.48) <i>0.444</i>	-0.66% (0.79) <i>0.229</i>	<i>0.240</i>
¹¹C-(R)-PK11195 DVR							
T2 lesional	1.16 (0.18)	1.04 (0.20)	1.04 (0.13)	-9.63% (14.33) <i>0.285</i>	+1.00% (9.15) <i>1.000</i>	-9.36% (12.71) <i>0.198</i>	<i>0.215</i>
NAWM	1.22 (0.04)	1.24 (0.04)	1.24 (0.02)	+2.12% (4.23) <i>0.742</i>	-0.60% (2.94) <i>1.000</i>	+1.45% (3.50) <i>1.000</i>	<i>0.540</i>
GMctx	1.36 (0.07)	1.40 (0.08)	1.38 (0.06)	+3.30% (3.74) <i>0.192</i>	-1.45% (2.24) <i>0.451</i>	+1.74% (1.86) <i>0.161</i>	<i>0.176</i>
Striatum	1.22 (0.05)	1.23 (0.03)	1.21 (0.03)	+1.23% (5.00) <i>1.000</i>	-1.38% (3.20) <i>0.848</i>	-0.29% (2.32) <i>1.000</i>	<i>0.392</i>
Thalamus	1.58 (0.10)	1.58 (0.07)	1.57 (0.05)	+0.34% (3.59) <i>1.000</i>	-0.81% (3.65) <i>1.000</i>	-0.48% (5.03) <i>1.000</i>	<i>0.829</i>
Cerebellum	1.11 (0.05)	1.11 (0.04)	1.10 (0.02)	-0.39% (2.92) <i>1.000</i>	-0.84% (2.75) <i>1.000</i>	-1.26% (3.00) <i>0.861</i>	<i>0.575</i>
Global (GMWM)	1.25 (0.04)	1.27 (0.04)	1.26 (0.03)	+2.16% (3.54) <i>0.491</i>	-1.00% (2.20) <i>0.825</i>	+1.07% (2.02) <i>0.662</i>	<i>0.410</i>

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* Repeated measures analysis of variance used for MRI variables and repeated measures analysis of variance with Bonferroni correction for multiple comparisons of PET variables

† Overall *P* value for analysis of variance without correction for multiple comparisons

‡ Statistically significant with the level of *P* < 0.05

Supplemental Table 3. Demographics of the relapsing-remitting multiple sclerosis patients.

ID	Age (y)	Sex	Disease duration (y)	EDSS		Relapses during disease	Relapses during study	Washout (mo)
				baseline	6 mo			
C01	37	F	8.8	3.5	3.5	5	0	3.7
C02	53	F	13.3	3.5	3.5	6	0	3.6
C03	48	F	14.8	2.5	2.5	9	0	4.4
C04	38	F	4.5	2.5	Drop out	3	Drop out	2.0
C05	38	F	6.0	2.5	2.0	2	0	2.0
C06	52	F	3.8	2.5	2.5	4	0	1.0
C07	45	F	10.3	2.0	2.0	4	0	2.0
C08	28	F	2.3	2.0	1.5	3	0	2.0
C09	29	F	2.8	3.0	3.5	8	0	2.0
C10	37	M	6.1	3.0	2.0	2	0	1.0
C11	52	F	6.1	2.5	2.5	4	0	2.0

C = case, F = female, M = male, EDSS = expanded disability status scale