

## Supporting Information

Supplemental table 1: EMM  $\pm$  SE values of whole-blood, plasma, metabolite-corrected plasma and percentage of parent fraction at different PET scans.

Scan	EMM $\pm$ SE	Comparison	p values
<b>Whole-blood TAC</b>			
Anesthesia-exposed	1.12 $\pm$ 0.04	Anesthesia-exposed-Test	0.018*
Test	0.96 $\pm$ 0.05	Test-Retest	0.001*
Retest	1.12 $\pm$ 0.03	Retest-Anesthesia-exposed	0.886
<b>Plasma TAC</b>			
Anesthesia-exposed	1.25 $\pm$ 0.05	Anesthesia-exposed-Test	0.009*
Test	1.02 $\pm$ 0.07	Test-Retest	0.002*
Retest	1.2 $\pm$ 0.07	Retest-Anesthesia-exposed	0.521
<b>Metabolite-corrected plasma TAC</b>			
Anesthesia-exposed	1.2 $\pm$ 0.05	Anesthesia-exposed-Test	0.003*
Test	0.96 $\pm$ 0.07	Test-Retest	> 0.001*
Retest	1.14 $\pm$ 0.06	Retest-Anesthesia-exposed	0.482
<b>% Parent Fraction throughout scan-time</b>			
Anesthesia-exposed	80.39 $\pm$ 0.7	Anesthesia-exposed-Test	> 0.001*
Test	75.53 $\pm$ 0.5	Test-Retest	0.005*
Retest	78.93 $\pm$ 1.07	Retest-Anesthesia-exposed	0.263
* Significant differences in the SUV-TAC between scans.			

Supplemental table 2: Mean  $\pm$  SE of AIC, SE%V<sub>T</sub>, SE%K<sub>1</sub> and SE%k<sub>2</sub> of all the brain region in the three different PET scan using 60-min acquisition time.

<b>"Anesthesia-Exposed" PET</b>								
Regions	1TCM				2TCM			
	AIC $\pm$ SD	SE%V <sub>T</sub> $\pm$ SD	SE%K <sub>1</sub> $\pm$ SD	SE%K <sub>2</sub> $\pm$ SD	AIC $\pm$ SD	SE%V <sub>T</sub> $\pm$ SD	SE%K <sub>1</sub> $\pm$ SD	SE%K <sub>2</sub> $\pm$ SD
<b>Amygdala</b>	54.77 $\pm$ 6.33	9.75 $\pm$ 1.12	5.21 $\pm$ 0.86	12.55 $\pm$ 1.57	32.78 $\pm$ 8.53	9.23 $\pm$ 2.66	18.71 $\pm$ 20.65	49.06 $\pm$ 28.06
<b>Cerebellum</b>	51.92 $\pm$ 6.13	8.51 $\pm$ 1.14	4.73 $\pm$ 0.7	10.97 $\pm$ 1.46	9.33 $\pm$ 12.34	3.78 $\pm$ 0.78	8.07 $\pm$ 3.01	25.53 $\pm$ 7.45
<b>Corpus Callosum</b>	37.4 $\pm$ 7.24	6.71 $\pm$ 0.94	3.44 $\pm$ 0.6	8.6 $\pm$ 1.21	13.02 $\pm$ 13.52	5.02 $\pm$ 1.36	7.63 $\pm$ 2.45	39.84 $\pm$ 13.74
<b>Medial Geniculate</b>	80.5 $\pm$ 11.5	17.69 $\pm$ 4.73	9.92 $\pm$ 2.9	22.87 $\pm$ 6.3	75.27 $\pm$ 13.61	21.23 $\pm$ 11.05	76.93 $\pm$ 52.1	159.41 $\pm$ 75.91
<b>Mesencephalic Region</b>	50.08 $\pm$ 6.56	7.94 $\pm$ 1.39	4.49 $\pm$ 0.75	10.24 $\pm$ 1.75	26.52 $\pm$ 8.66	5.49 $\pm$ 1.25	12.96 $\pm$ 7.3	43.69 $\pm$ 16.31
<b>Septum</b>	63 $\pm$ 6.3	11.33 $\pm$ 1.82	6.24 $\pm$ 1.09	14.61 $\pm$ 2.4	54.28 $\pm$ 8.57	18.43 $\pm$ 12.7	14.39 $\pm$ 5.17	61.33 $\pm$ 21.39

<b>Superior Colliculus</b>	63.36± 5.32	10.88± 1.71	6.23± 0.91	14.06± 2.13	37.68± 9.49	6.89± 1.26	24.94± 18.62	54.29± 25.15
<b>Striatum</b>	43.06± 9.11	7.32± 1.54	3.95± 0.83	9.42± 1.94	19.84± 20.8	6.61± 4.68	7.32± 2.58	35.74± 15.43
<b>Cortex</b>	30.48± 5.98	6.15± 0.7	2.92± 0.45	7.82± 0.92	-5.64± 9.32	4.15± 1.45	5.02± 2.94	25.59± 5.36
<b>Hippocampus</b>	48.04± 7.82	8.3± 1.28	4.45± 0.92	10.69± 1.76	8.36± 13.22	4.67± 1.42	6.9± 3.42	24.84± 8.26
<b>Hypothalamus</b>	53.63± 9.43	9.13± 1.53	5.04± 1.18	11.79± 2.14	31.4± 8.06	7.3± 1.59	19.66± 16.3	52.24± 24.65
<b>MidBrain</b>	55.18± 5.25	8.97± 1.1	5.07± 0.6	11.58± 1.36	30.13± 11.89	6.49± 1.73	10.98± 4.94	40.97± 17.76
<b>Brainstem</b>	47.49± 2.62	7.23± 0.35	4.13± 0.32	9.35± 0.46	18.49± 21.16	5.32± 3.9	7.15± 2.66	32.41± 18.77
<b>Thalamus</b>	56.77± 8.31	9.48± 2.43	5.41± 1.4	12.25± 3.14	26.47± 8.26	6.01± 1.7	11.21± 7.07	33.28± 6.81
<b>Basal Ganglia</b>	47.32± 5.34	7.82± 1.27	4.31± 0.63	10.08± 1.58	28.84± 8.48	6.98± 1.53	13.71± 10.99	47.99± 20.63
<b>Whole Brain</b>	41.75± 4.86	7.1± 0.75	3.75± 0.5	9.12± 0.99	5.08± 14.09	3.21± 0.83	5.19± 2.94	20.54± 6.46

"Test" PET								
Regions	1-TCM				2-TCM			
	AIC± SD	SE%V <sub>T</sub> ± SD	SE%K <sub>1</sub> ± SD	SE%K <sub>2</sub> ± SD	AIC± SD	SE%V <sub>T</sub> ±S D	SE%K <sub>1</sub> ± SD	SE%K <sub>2</sub> ± SD
<b>Amygdala</b>	60.23± 3.67	12.63± 3.67	5.93± 1.44	15.82± 4.43	36.09± 10.06	11.08± 4.67	15.57± 5.53	46.2± 9.77
<b>Cerebellum</b>	50.75± 1.49	8.73± 1.49	4.47± 0.63	11.03± 1.8	-0.32± 11.76	3.62± 1.83	5.98± 2.15	19.69± 4.2
<b>Corpus Callosum</b>	40.07± 1.23	7.81± 1.23	3.56± 0.51	9.77± 1.48	17.17± 8.1	7.9± 2.93	7.21± 1.81	37.16± 9.28
<b>Medial Geniculate</b>	68.95± 4.11	13.9± 4.11	7.18± 2.15	17.59± 5.22	64.02± 13.37	259709.42± 580689.72	44.79± 45.17	98.85± 56.68
<b>Mesencephalic Region</b>	57.33± 1.85	9.83± 1.85	5.21± 0.84	12.46± 2.25	28.07± 9.54	6.16± 1.86	11.76± 1.53	37.15± 7.58
<b>Septum</b>	71.02± 2.16	14.69± 2.16	7.41± 1.04	18.55± 2.68	61.74± 8.43	38± 54.88	64.25± 41.08	108.98± 55.66
<b>Superior Colliculus</b>	60.34± 3.55	10.94± 3.55	5.83± 1.84	13.86± 4.43	35.32± 9.63	7.15± 1.73	12.79± 8.15	45.39± 11.71
<b>Striatum</b>	44.38± 2.35	8.42± 2.35	4.02± 0.99	10.57± 2.87	19.87± 8.54	6.56± 2.71	22.86± 18.25	53.27± 24.01
<b>Cortex</b>	29.88± 1.9	7.11± 1.9	2.88± 0.68	8.78± 2.28	-10.02± 9.84	3.75± 1.28	10.94± 10.96	33.01± 17.34
<b>Hippocampus</b>	49.2± 1.7	9.14± 1.7	4.41± 0.69	11.49± 2.1	17.68± 9.55	6.2± 2	8.77± 1.88	32.98± 10.65
<b>Hypothalamus</b>	52.53± 1.23	9.45± 1.23	4.69± 0.65	11.91± 1.54	31.35± 8.39	7.89± 1.94	18.81± 16.3	50.99± 27.04
<b>MidBrain</b>	55.55± 2.47	9.73± 2.47	5.07± 1.18	12.31± 3.05	28.99± 10.47	6.91± 1.9	11.92± 8.04	38.05± 8.45
<b>Brainstem</b>	49.85± 1.77	8.21± 1.77	4.32± 0.81	10.39± 2.17	10.05± 6.84	3.86± 0.87	6.74± 2.64	25.72± 3.78
<b>Thalamus</b>	52.66± 2.09	9.02± 2.09	4.74± 0.93	11.41± 2.55	20.59± 10.79	5.39± 1.43	7.65± 12.09	35.43± 15.71
<b>Basal Ganglia</b>	52.09± 0.9	9.23± 0.9	4.67± 0.42	11.66± 1.08	28.1± 4.31	6.84± 1.54	27.25± 23.58	56.69± 30.05
<b>Whole Brain</b>	42.01± 1.66	7.86± 1.66	3.72± 0.66	9.86± 2	-9.91± 10.73	3.11± 1.09	5.32± 2.22	19.51± 4.56

"Retest" PET								
Regions	1-TCM				2-TCM			
	AIC± SD	SE%V <sub>1</sub> ± SD	SE%K <sub>1</sub> ± SD	SE%K <sub>2</sub> ± SD	AIC± SD	SE%V <sub>1</sub> ± SD	SE%K <sub>1</sub> ± SD	SE%K <sub>2</sub> ± SD
<b>Amygdala</b>	60.81± 1.76	11.5± 1.03	5.95± 0.27	14.95± 1.18	37.6± 4.69	8.36± 1.41	44.25± 30.64	79.07± 39.17
<b>Cerebellum</b>	53.75± 4.94	8.9± 0.83	4.89± 0.62	11.34± 1.12	8.07± 7.56	3.52± 0.66	10.45± 3.69	28.11± 8.89
<b>Corpus Callosum</b>	38.65± 4.46	7± 0.57	3.49± 0.36	8.85± 0.71	11.53± 12.59	4.4± 0.94	29.15± 34.15	71.65± 61.17
<b>Medial Geniculate</b>	75.83± 9.72	15.69± 4.59	8.61± 2.2	19.53± 5.66	66.05± 13.63	29.54±31 .51	35.44± 28.51	82.04± 39.21
<b>Mesencephalic Region</b>	54.39± 6.79	8.87± 1.27	4.97± 0.92	11.66± 1.73	27.79± 5.26	5.69± 1.44	26.96± 21.54	59.82± 31.15
<b>Septum</b>	63.22± 15.06	12.24± 3.89	6.58± 2.34	16.73± 5.02	51.66± 10.31	940983345.97 ± 2304929016.4	13.38± 5	49.87± 10.36
<b>Superior Colliculus</b>	63.12± 9.29	10.99± 2.6	6.24± 1.53	12.97± 3.33	32.43± 10.62	6.51± 1.49	22.93± 25.17	44.33± 37.65
<b>Striatum</b>	48.22± 5.22	8.39± 1.02	4.42± 0.59	10.41± 1.3	19.05± 13.37	5.11± 2.14	30.52± 31.44	63.56± 43.69
<b>Cortex</b>	36.31± 6.94	7.28± 0.9	3.36± 0.52	9.02± 1.12	-10.41± 13.13	3.18± 1.26	9.06± 8.01	29.38± 15.96
<b>Hippocampus</b>	48.46± 6.06	8.51± 1.15	4.43± 0.63	10.36± 1.45	11.89± 9.99	4.58± 1.03	12.83± 11.35	35.92± 20.17
<b>Hypothalamus</b>	59.39± 5.26	10.63± 1.61	5.68± 0.68	13.83± 1.94	33.07± 8.09	6.76± 1.61	37.2± 33.52	69.21± 44.16
<b>MidBrain</b>	58.33± 6.14	9.89± 1.63	5.49± 0.89	11.96± 2.04	31.28± 9.46	5.92± 1.4	31.3± 26.4	63.53± 32.77
<b>Brainstem</b>	53.87± 5.04	8.56± 0.91	4.83± 0.63	10.85± 1.23	15.88± 8.29	4.07± 1	15.49± 16.37	37.24± 21.89
<b>Thalamus</b>	53.88± 5.98	8.77± 1.32	4.94± 0.77	10.67± 1.67	30.06± 25.36	7.5± 7.02	14.02± 6.89	48.9± 25.92
<b>Basal Ganglia</b>	55.6± 5.3	9.52± 1.38	5.22± 0.68	11.69± 1.69	28.5± 10.47	6.18± 1.47	12.56± 8.17	35.8± 25.62
<b>Whole Brain</b>	45.9± 4.24	7.95± 0.55	4.12± 0.44	10± 0.74	-3.24± 9.25	3.04± 0.7	8.02± 3.82	24.67± 9.03