Investigation of the structure-activity relationships of psilocybin analogues

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Table S1. Summary of the head-twitch response (HTR) data.

Drug	One-Way ANOVA	Duration (min)	*N*	Dose (mg/kg)	HTR Counts (mean ± SEM)	ED_{50} (95% CI) (mg/kg)	ED_{50} (95% CI) (μmol/kg)
Psilocin	$F(4,18)=15.09$, $p<.0001$	15	4	0	2.8 ± 0.8	0.17 (0.12 – 0.23)	0.81 (0.57 – 1.15)
			5	0.1	8.8 ± 1.4		
			4	0.3	19.8 ± 3.1 **		
			5	1	20.8 ± 2.4 **		
			5	3	6.2 ± 1.9		
4-AcO-DMT	$F(5,24)=14.04$, $p<0.0001$	30	5	0	7.8 ± 2.9	0.41 (0.24 – 0.69)	1.12 (0.66 – 1.90)
			5	0.1	12.6 ± 4.1		
			5	0.3	22.4 ± 6.2		
			5	1	42.8 ± 4.6 **		
			5	3	46.6 ± 5.5 **		
			5	10	35.4 ±4.8 **		
4-HO-MET	$F(5,46)=24.59$, $p<0.0001$	30	10	0	6.4 ± 1.7	0.18 (0.12 – 0.27)	0.65 (0.44 – 0.97)
			5	0.1	18.6 ± 4.2		
			10	0.3	38.6 ± 2.5**		
			11	1	52.5 ± 2.1 **		
			11	3	42.1 ± 5.6 **		
			5	10	24.8 ± 2.2 *		
4-AcO-MET	$F(7,40)=25.89$, $p<0.0001$	30	9	0	6.6 ± 1.2	0.44 (0.31 – 0.63)	1.17 (0.82 – 1.67)
			5	0.1	21.0 ± 7.3		
			5	0.3125	30.2 ± 3.0		
			5	0.625	44.4 ± 9.3 **		
			9	1.25	52.9 ± 3.2 **		
			5	2.5	61.8 ± 10.1 **		
			5	5	49.6 ± 11.9 **		
			5	10	21 ± 5.1		
4-HO-MPT	$F(5,23)=20.06$, $p<0.0001$	30	4	0	10.8 ± 2.3	0.67 (0.46 – 0.97)	1.92 (1.33 – 2.78)
			5	0.1	15.8 ± 1.2		
			5	0.3	32.8 ± 2.8		
			5	1	48.8 ± 1.6 **		
			5	3	78.4 ± 10.5 **		
			5	10	27.2 ± 6.7		
4-AcO-MPT	$F(5,24)=18.03$, $p<0.0001$	30	5	0	5.4 ± 1.4	0.55 (0.37 – 0.81)	1.41 (0.96 – 2.08)
			5	0.1	7.0 ± 0.5		
			5	0.3	21.8 ± 5.9		
			5	1	52.8 ± 8.0 **		
			5	3	66.4 ± 7.1 **		
			5	10	40.6 ± 7.5 **		
4-HO-MIPT	$F(4,25)=66.99$, $p<0.0001$	30	7	0	8.4 ± 1.2	0.86 (0.72 – 1.21)	2.97 (2.49 – 3.54)
			5	0.3	20.2 ± 4.1		
			6	1	47.3 ± 3.2 **		
			6	3	78.0 ± 2.3 **		
			6	10	32.2 ± 5.2 **		
4-AcO-MIPT	$F(7,37)=20.16$, $p<0.0001$	30	8	0	6.5 ± 1.8	1.11 (0.87 – 1.41)	2.84 (2.22 - 3.62)
			5	0.1	11.8 ± 3.0		
			5	0.3125	17.2 ± 5.0		
			5	0.625	20.2 ± 5.0		

			7 5 5 5	1.25 2.5 5 10	50.1 ± 6.9 ** 71.6 ± 4.9 ** 80.4 ± 11.6 ** 68.4 ± 5.1 **		
4-HO-DET	$F(5,24)=6.258$, $p=0.0008$	30	5 5 5 5 5 5	0 0.25 0.5 1 2 4	7.0 ± 1.8 17.8 ± 3.4 39.4 ± 10.4 53.4 ± 8.3 ** 58.8 ± 6.5 ** 35.6 ± 11.7	0.42 (0.26 – 0.67)	1.56 (0.98 – 2.51)
4-AcO-DET	$F(5,24)=13.14$, $p<0.0001$	30	5 5 5 5 5 5	0 0.1 0.3 1 3 10	6.4 ± 1.6 12.8 ± 3.1 24.2 ± 6.4 63.6 ± 6.7 ** 97.2 ± 17.8 ** 47.6 ± 12.3	0.71 (0.47 – 1.07)	1.81 (1.20 – 2.74)
4-HO-EPT	$F(5,24)=8.712$, $p<0.0001$	30	5 5 5 5 5 5	0 0.1 0.3 1 3 10	10.6 ± 1.4 18.2 ± 2.1 30.6 ± 7.1 ** 88.0 ± 7.8 ** 67.4 ± 20.9 30.8 ± 8.6	0.42 (0.26 – 0.68)	1.01 (0.63 – 1.62)
4-AcO-EPT	$F(5,24)=14.23$, $p<0.0001$	30	5 5 5 5 5 5	0 0.1 0.3 1 3 10	11.2 ± 2.7 9.6 ± 2.4 30.0 ± 2.9 75.6 ± 6.4 ** 73.0 ± 17.5 ** 23.2 ± 2.2	0.51 (0.35 – 0.74)	1.26 (0.86 – 1.84)
4-HO-DPT	$F(5,26)=5.065$, $p=0.0023$	30	5 6 6 6 5 4	0 0.3 1 3 6 12	6.4 ± 1.4 17.5 ± 3.1 50.3 ± 8.3 79.0 ± 18.4 ** 56.0 ± 12.5 41.0 ± 19.0	0.79 (0.46 – 1.35)	2.47 (1.43 – 4.25)
4-AcO-DPT	$F(5,24)=13.19$, $p<0.0001$	30	6 5 5 5 5 4	0 0.3 1 3 6 12	7.2 ± 1.4 20.4 ± 2.8 67.0 ± 5.3 ** 82.4 ± 7.4 ** 50.8 ± 11.1 ** 50.0 ± 16.9 *	0.55 (0.35 – 0.89)	1.32 (0.82 – 2.12)
4-HO-DIPT	$F(4,23)=12.62$, $p<0.0001$	30	7 5 5 6 5	0 0.3 1 3 10	8.0 ± 0.9 17.4 ± 2.6 43.6 ± 9.0 86.0 ± 15.8 ** 46.2 ± 7.4 *	1.03 (0.67 – 1.57)	3.46 (2.27 – 5.28)
4-AcO-DIPT	$F(4,19)=31.94$, $p<0.0001$	30	4 5 5 5 5	0 0.3 1 3 10	8.0 ± 1.1 11.8 ± 1.2 26.6 ± 3.2 73.4 ± 5.9 ** 78.4 ± 10.8 **	1.41 (0.95 – 2.08)	3.88 (2.63 – 5.72)

4-HO-MALT	$F(4,20)=10.39$, $p<0.0001$	10	5 5 5 5 5	0 0.875 1.75 3.5 7	3.0 ± 0.6 25.8 ± 9.9 51.0 ± 7.1 ** 50.6 ± 5.5 ** 38.0 ± 3.7 **	0.91 (0.59 – 1.40)	2.24 (1.45 – 3.46)

*$p<0.05$ vs. vehicle, Tukey's test.

**$p<0.01$ vs. vehicle, Tukey's test.