

Table 1

Total number of pyramidal neurons in the left hippocampus in the P-300, P-500, P-1500 and control group rats and parameters used for estimation of total pyramidal neuron number

Groups	Animal no.	The number of sections	Q	CE	1/tsf	t	N total	CE (mean)	N (mean \pm S.E.M.)
Control group	1	20	186	0.05	2.06	61.80	172422	0.05	182,829 \pm 3468
	2	21	192	0.05	2.14	64.40	184896		
	3	20	180	0.03	2.20	66.20	178200		
	4	20	201	0.06	2.13	63.86	192658		
	5	19	187	0.04	2.21	66.40	185971		
Penicillin-300 group	1	20	174	0.03	2.09	62.80	163647	0.04	156,826 \pm 2,016*
	2	20	159	0.07	2.21	66.30	158912		
	3	20	157	0.04	2.16	64.80	152604		
	4	20	166	0.04	2.08	62.50	155376		
	5	20	161	0.04	2.12	63.60	153594		
Penicillin-500 group	1	19	145	0.05	2.09	62.80	136372	0.03	140,467 \pm 3,508*
	2	20	152	0.04	2.11	63.40	144324		
	3	20	139	0.06	2.20	66.10	137610		
	4	20	155	0.02	2.18	65.50	152055		
	5	20	141	0.05	2.08	62.50	131976		
Penicillin-1500 group	1	20	124	0.04	2.17	65.20	121086	0.04	119,264 \pm 3,339*
	2	20	121	0.03	2.13	64.00	115978		
	3	20	139	0.05	2.08	62.60	130104		
	4	20	115	0.05	2.12	63.60	109710		
	5	20	127	0.03	2.09	62.80	119443		

h (the height of the disector) (μm) = 30; a (frame) the area of unbiased counting frame (μm^2) = 400; a (x, y step) The area associated with each x, y movement (μm^2) = 90,000, the section-sampling fraction (ssf) = 1/2 for all rats. Q : the total number of neurons counted, CE: coefficient error, 1/tsf: the section thickness sampling fraction, t : the mean thickness of the section (μm), N total: the total number of pyramidal neurons, N : mean \pm S.E.M.

* $P < 0.009$, see text for details.