Table S1: Dose dependent effect of nitrergic and  $\alpha_2$ -adrenoceptor ligands on inhibitory avoidance (IA) memory retrieval

Drug	Doses	Step through latency (s)
aCSF	0.5 µl/LC	$118.125 \pm 2.43$
SNG	1.41 pg per rat, i-LC	$128.0 \pm 1.95$
	2.82 pg per rat, i-LC	$132.4 \pm 1.90$
	5.64 pg per rat, i-LC	$205.5 \pm 7.02*$
aCSF	0.5 μl/LC	$121.25 \pm 6.14$
L-NAME	26.9 pg per rat, i-LC	$113\pm4.58$
	53.8 pg per rat, i-LC	$96.2 \pm 4$
	107.6 pg per rat, i-LC	84.8 ± 3.90*
aCSF	0.5 μl/LC	$118.0 \pm 5.22$
L-NIO	60 pg per rat, i-LC	$107.3 \pm 5.23$
	123 pg per rat, i-LC	88.5 ± 3.28
	246 pg per rat, i-LC	51.3 ± 3.10*
aCSF	0.5 μl/LC	$113.3 \pm 7.2$
L-NIL	208 pg per rat, i-LC	$114.6 \pm 3.85$
	416 pg per rat, i-LC	84.8 ± 2.13
	832 pg per rat, i-LC	$73.3 \pm 4.35*$
aCSF	0.5 μl/LC	$121.8 \pm 6.24$
7-NI	10 ng per rat, i-LC	$114.6 \pm 2.13$
	20 ng per rat, i-LC	89.1 ± 2.83
	40 ng per rat, i-LC	$76.0 \pm 4.16*$
aCSF	0.5 µl/LC	$110.5 \pm 6.59$
Yohimbine	0.5 µg per rat, i-LC	$149.7 \pm 15.0$
	1 µg per rat, i-LC	170.1± 2.30*
aCSF	0.5 µl/LC	$106.3 \pm 5.29$
Clonidine	0.5 μg per rat, i-LC	33.5 ± 1.80*
	1 μg per rat, i-LC	28.0 ± 3.18*

Table showing the dose dependant effects of the drugs, given alone, on the step-through latencies measured as described. Data shown are means  $\pm$  SEM of step through latency (n =

8/group). Data were analyzed by one-way ANOVA followed by Dunnett's test. \*P < 0.05 Vs respective aCSF treatment.

## Figure S1:



Figure S1: The schematic shows the representative site of injection in the locus coeruleus (LC; -9.8 mm to bregma). In the diagrammatic image, filled circles indicate the injection placement sites within LC. The squares represent injection sites outside the targeted area. 4V, fourth ventricle.