Supplemental Information

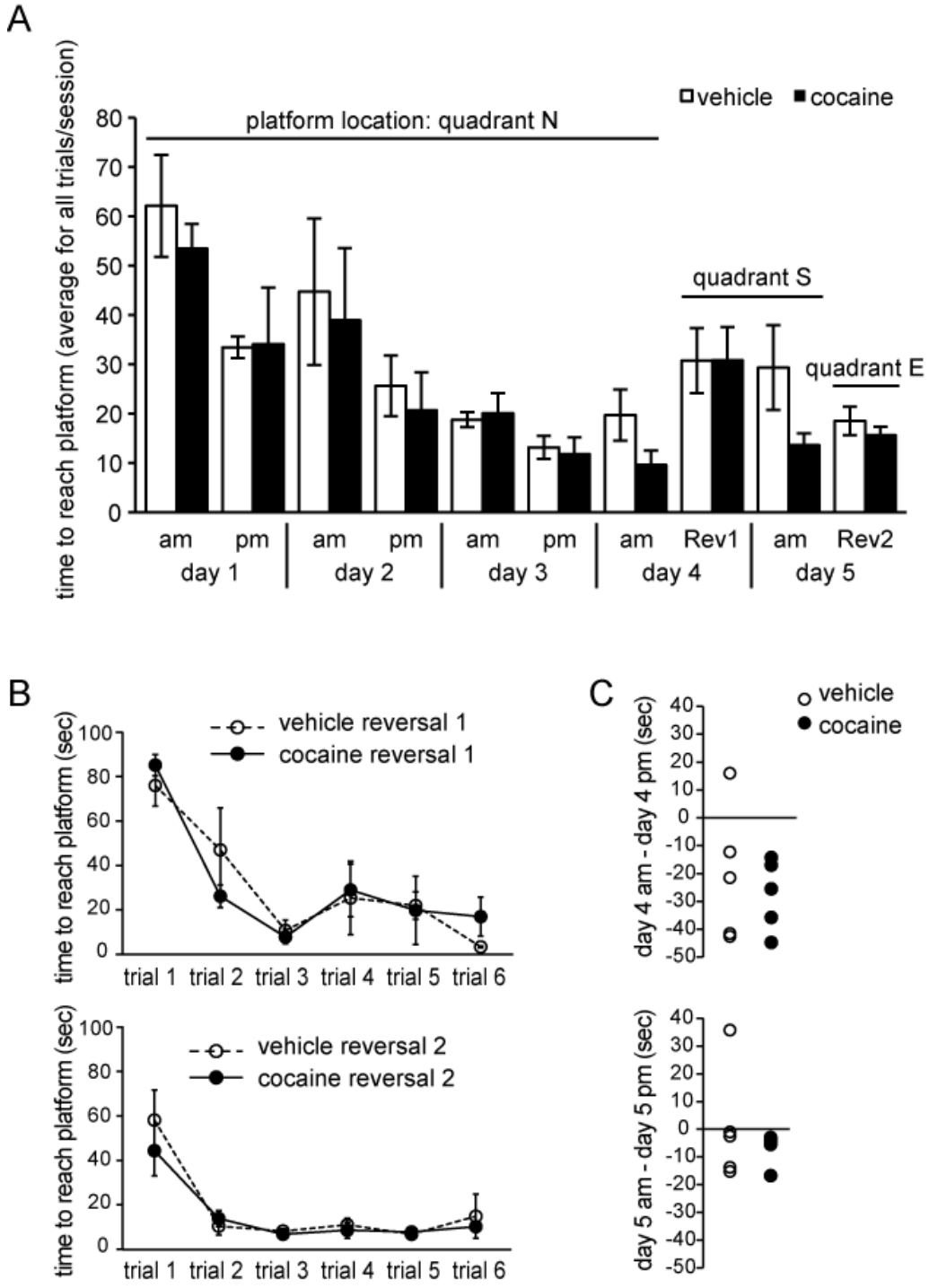

Figure S1. Spatial learning and memory are not disrupted by adolescent exposure to cocaine. The Morris water maze task was carried out in morning and afternoon sessions

on five consecutive days, with 4 trials per session. In the afternoon sessions of days 4 and 5, different reversals of the platform location were introduced. No difference in performance was observed between the groups. **(A)** Morris water maze data with all trials per session averaged. Quadrant with platform location is shown above the bar graphs. Time to reach platform is averaged for all trials per session per day. **(B)** Individual trials for reversal sessions 1 and 2. **(C)** Difference in time to reach the platform between day 4 am and day 4 pm (first reversal: $F(1,8) = 0.37$, $p = 0.560$), and between day 5 am and day 5 pm (second reversal: $F(1,8) = 0.6$, $p = 0.463$). White circles, vehicle; black circles, cocaine. Rev, reversal; N, north; S, south, E, east; data average ± SEM, vehicle $n = 5$; cocaine $n = 5$.

Supplemental Methods: Morris Water Maze

A circular Morris water maze tank (175 cm diameter X 63.5 cm high) was filled 35.5 cm high with water (22°C) and made opaque using powdered milk. The perimeter of the tank was divided into 4 equally sized quadrants, each containing a drop spot, distinguished by the letters N, S, E, or W written above the water line. Distinct high-contrast visual cues were placed on the walls above each quadrant. A 10 cm square clear Plexiglas platform placed 2.5 cm below the water surface and at least 36 cm from the wall of the tank was used for escape. Ten rats were tested starting at 24 days post-cocaine treatment (P70). No drug was administered during this task.

Training. On days 1-3, rats completed 2 training sessions per day, each composed of 4 trials in the morning (~10:00 am) and 4 trials in the afternoon (~3:00 pm). The inter-trial interval was approximately 15 minutes. The escape platform was in the same quadrant for all training sessions (e.g. in N). For each trial, rats were removed from their homecage, placed into the water facing the tank wall, and allowed to swim freely for a maximum of 60 sec. Once a rat located the escape platform (e.g. located in the N quadrant), it was removed from the water and latency to escape was recorded. If a rat

failed to locate the platform in the allotted time, it was guided to the platform and left there for 10 sec, before being removed and returned to its homecage. In this case, latency was recorded as 90 sec. Drop spots were pseudo-randomized so that each rat started a trial at each drop spot only once per session, and drop spots were matched between cocaine and vehicle treatment groups.

Reversal 1. On day 4 in the afternoon session, the platform was moved to a new quadrant (e.g. S) and latency to escape was recorded for 60 sec. The reversal consisted of 6 trials. The morning session on day 5 consisted of 4 trials with the platform located in the new quadrant (e.g. S).

Reversal 2. The second reversal was carried out during the afternoon session on day 5. The platform was moved to a new quadrant not previously used (e.g. E).

Table S1. Primer sequences for qPCR reactions

Name	Direction	Sequence
Adra1d	Forward	5' - TGGCCATCGTCGTGGGTGTC - 3'
	Reverse	5' - GCGCTTGAACTCGCGACTGG - 3'
Alpha Tubulin	Forward	5' - GCTTCTTGGTTTTCCACAGC - 3'
	Reverse	5' - CCATGAAGGCACAATCAGAG - 3'
Beta Actin	Forward	5' - CTATGAGCTGCCTGACGGT - 3'
	Reverse	5' - TGGCATAGAGGTCTTTACGGA - 3'
Bmpr2	Forward	5' - CCCGTCCTAGGCGAATGAAGCC - 3'
	Reverse	5' - CGGGTGAGAAATCCGGCCAGGA - 3'
Ccnd2	Forward	5' - TTCTTGGCTGGAGTCCCGACT - 3'
	Reverse	5' - TTCCCACTCCAGCAGCTCCTG - 3'
Cdh13	Forward	5' - TTGACAGGCACGGCCACAGC - 3'
	Reverse	5' - GTGTATGCCGCCCTCCATGC - 3'
Chrm3	Forward	5' - TGGGAATTTCTCCTCAAACG - 3'
	Reverse	5' - AGGCCAGGCTTAAGAGGAAG - 3'
Csnk1a1	Forward	5' -GCCAGGCATCCCCAGTTGCT - 3'
	Reverse	5' - GTCTTCGAGGCTGGGTCCCA - 3'
Ctbp2	Forward	5' - CAGGTCCTGCGCAGCTTGTTGT - 3'
	Reverse	5' - CGCGGAGATGTCTACACCAGCA - 3'
Daam1	Forward	5' - ATGCCCCCTGTGGAGGAGCT - 3'
	Reverse	5' -CGGGCCAACTTGTTGCTCCCT - 3'
Gsk3B	Forward	5' - ATCAAGGCACATCCTTGGAC - 3'
	Reverse	5' - AGTTGAAGAGGGCAGGTGTG - 3'

GtfIIB	Forward	5' - TGCGATAGCTTCTGCTTGTC - 3'
	Reverse	5' - TCAGATCCACGCTCGTCTC - 3'
Itgb6	Forward	5' - CCCAACGATGGGCTCTGTCAC - 3'
	Reverse	5' - CGCTCCAGGGATGAGTTTCGC - 3'
Nfatc4	Forward	5' - CCAGAGCTCACCACCGAGCT - 3'
	Reverse	5' - AGTGATCCGGTGCACCTGGT - 3'
Nrp1	Forward	5' - CCAATCAGAGTTCCCGACAT - 3'
	Reverse	5' - AATAGACCACAGGGCTCACC - 3'
Pcdh17	Forward	5'- GTTCGGGCA ACTTGAGCGGAAT - 3'
	Reverse	5'- GGGGCCCACAAAAGAAAGCAGC - 3'
Slit2	Forward	5' - TGCCTGGCTGTGAACCATGCC - 3'
	Reverse	5' - AGGCGTTGATGGGCAAGCAG - 3'
Stxbp1	Forward	5' - CCCGCTCTTCCGCATCCTTC - 3'
	Reverse	5' - CGTTGGCCTGCGTCACTTCG - 3'
Syn3	Forward	5' - ACCCCAAAAGACAGCATCAC - 3'
	Reverse	5' - AGGCTAGTCGGAGAAGAGGC - 3'
Syt7	Forward	5' - AGGTGGACCTGACCCAGATGC - 3'
	Reverse	5' - GTCTGATGTGCCCCCGATGTC - 3'
Tak1	Forward	5' - AGATGATCGAAGCGCCATCGCA - 3'
	Reverse	5' - GCCGGAGCTCCACGATGAAAGC - 3'
Tgfb3	Forward	5' - TGCCCAACCCCAGCTCCAAG - 3'
	Reverse	5' - CAACAGCCACTCGCGCACAG - 3'
Wnt11	Forward	5' -GCAGGTCTGCGAGGCTCTTC - 3'
	Reverse	5' - ACACCAGGCCCTCCAGCTGT - 3'
18s RNA	Forward	5' - TGGCTCAGCGTGTGCCTACC - 3'
	Reverse	5' - TAGTAGCGACGGGCGGTGTG - 3'