

12 SUPPLEMENTS

Supplement 1. Animal cohorts I-VI.

For practical reasons, animals (n=48) were divided into six cohorts (I-VI) by eight. Treatment assigned to specific animal was semi-random to increase within- and between group comparison.

COHORT	ANIMAL No.	COGNITIVE TRAINING, HANDLING	DRUG	ENVIRONMENT
Cohort I	1	Handling	MK-801	AA
	2	Handling	saline	AA
	3	Cognitive training	saline	CC
	4	Handling	saline	AB
	5	Cognitive training	saline	AB
	6	Handling	MK-801	CC
	7	Cognitive training	MK-801	AB
	8	Cognitive training	MK-801	CC
Cohort II	9	Cognitive training	MK-801	CC
	10	Handling	MK-801	AA
	11	Cognitive training	saline	AA
	12	Handling	saline	CC
	13	Handling	saline	AB
	14	Handling	MK-801	CC
	15	Cognitive training	saline	AB
	16	Handling	MK-801	AB
Cohort III	17	Cognitive training	MK-801	CC
	18	Handling	saline	AA
	19	Handling	saline	CC
	20	Handling	MK-801	AB
	21	Cognitive training	saline	AA
	22	Cognitive training	saline	AB
	23	Cognitive training	MK-801	AA
	24	Cognitive training	saline	CC
Cohort IV	25	Cognitive training	saline	AA
	26	Handling	MK-801	AB
	27	Cognitive training	MK-801	AA
	28	Cognitive training	MK-801	AB
	29	Handling	MK-801	CC
	30	Handling	saline	AA
	31	Handling	saline	AB
	32	Cognitive training	saline	CC
Cohort V	33	Handling	MK-801	AB
	34	Cognitive training	saline	AA
	35	Handling	saline	AB
	36	Cognitive training	MK-801	AB
	37	Cognitive training	MK-801	AA
	38	Handling	MK-801	AA
	39	Handling	saline	CC
	40	Cognitive training	MK-801	CC
Cohort VI	41	Handling	MK-801	CC
	42	Handling	saline	CC
	43	Handling	MK-801	AA
	44	Cognitive training	saline	AB
	45	Cognitive training	MK-801	AB
	46	Handling	saline	AA
	47	Cognitive training	saline	CC
	48	Cognitive training	MK-801	AA

Supplement 2. Arrangement of samples in blocks I-VI.

Four millimeter thick segments of the right hemisphere containing right dorsal hippocampus (RDH) were used to create blocks (from which slides for IEG imaging were later prepared). Each of the six blocks (corresponding to the I-VI animal cohorts) consisted of eight RDH segments (one for each animal from the group). RDH samples were semi-randomly arranged in each block to maximize within- and between-block comparison.

Numbers **01-48** refer to the specific animal. Treatment received by each animal is coded as follows: **AA, AB, CC** – environments explored during catFISH behavioural exposition; **tr** – adolescent pro-cognitive training; **h** – adolescent handling (no training); **MK** – MK-801 injection before exploratory session; **sal** – physiological saline injection before exploratory session.

Block I	05 AB tr sal	06 CC h sal	03 CC tr sal	01 AA h MK
	07 AA tr MK	02 AA h sal	08 CC tr MK	04 AB h sal
Block II	09 CC tr MK	11 AA tr sal	16 AB h MK	14 CC h MK
	12 CC h sal	15 AB tr sal	10 AA h MK	13 AB h sal
Block III	18 AA h sal	22 AB tr sal	17 CC tr MK	21 AA tr sal
	20 AB h MK	19 CC h sal	23 AA tr MK	24 CC tr sal
Block IV	32 CC tr sal	27 AA tr MK	25 AA tr sal	28 AB tr MK
	26 AB h MK	29 CC h MK	31 AB h sal	30 AA h sal
Block V	33 AB h MK	456-34 AA tr sal	456-35 AB h sal	456-37 AA tr MK
	40 CC tr MK	456-38 AA h MK	456-39 CC h sal	456-36 AB tr MK
Block VI	43 AA h MK	47 CC tr sal	41 CC h MK	44 AB tr sal
	46 AA h sal	45 AB tr MK	48 AA tr MK	42 CC h sal