# Supporting Information

## Simpson et al. 10.1073/pnas.1109353108

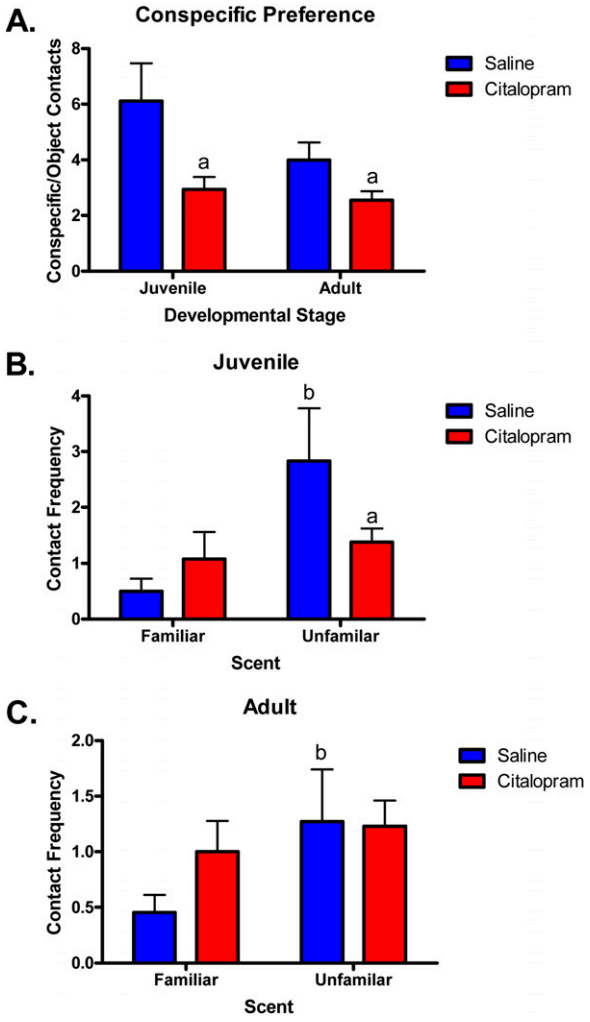


**Fig. S1.** Persistent effects of perinatal citalopram (CTM) exposure on response to novelty and social preference. Data represent the mean ± SEM of 6–12 subjects per group for juvenile [postnatal days 30–40 (P30–P40)] and adult (P60+) response to a novel conspecific rat vs. a novel object (*A*) and response to a novel scent vs. a familiar scent (*B* and *C*). ANOVA revealed significant effects of neonatal drug exposure (*A*, *B*, and *C*) and scent familiarity (*B* and *C*). $^{a}P < 0.05$ vs. saline-exposed rats; $^{b}P < 0.05$ vs. familiar scent.

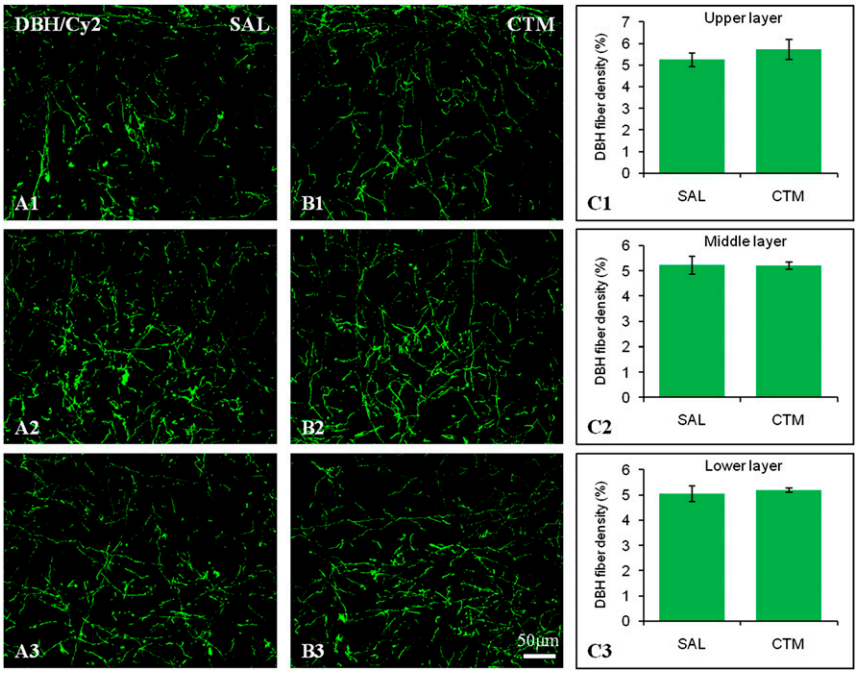


**Fig. S2.** Representative dopamine β-hydroxylase (DBH) immunoreactive (-ir) fiber density in the male rat primary somatosensory cortex after CTM (P8–P21) exposure and then assessed at adult. Note the rather similar DBH-ir fiber labeling density between saline (SAL) and CTM-exposed tissues. *A1* and *B1* are from layers 1 and 2/3; *A2* and *B2* are from layer 4 (middle layer); and *A3* and *B3* are from layer 5/6. (Scale bar: 50 μm.) The semiquantitative data (*C1*, *C2*, and *C3*; $n = 4$ from each group) revealed an almost identical DBH fiber density between saline and CTM-exposed animals.

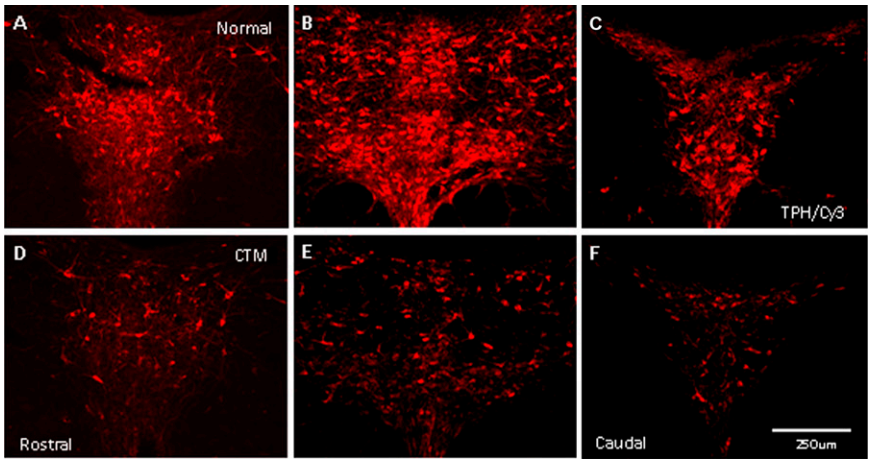


**Fig. S3.** Representative photomicrographs through the dorsal raphe nucleus show the rostral to caudal distribution of Cy3-labeled, tryptophan hydroxylase (TPH)-ir cells in untreated (*A*–*C*) and CTM-treated (20 mg/kg; P8–P21) (*D*–*F*) male rats. Note that in the drug-treated subject, TPH expression was reduced along the entire extent of the dorsal raphe nucleus neuraxis. However, this decrement was particularly evident within midline subregions. (Scale bar: 250 μm.)

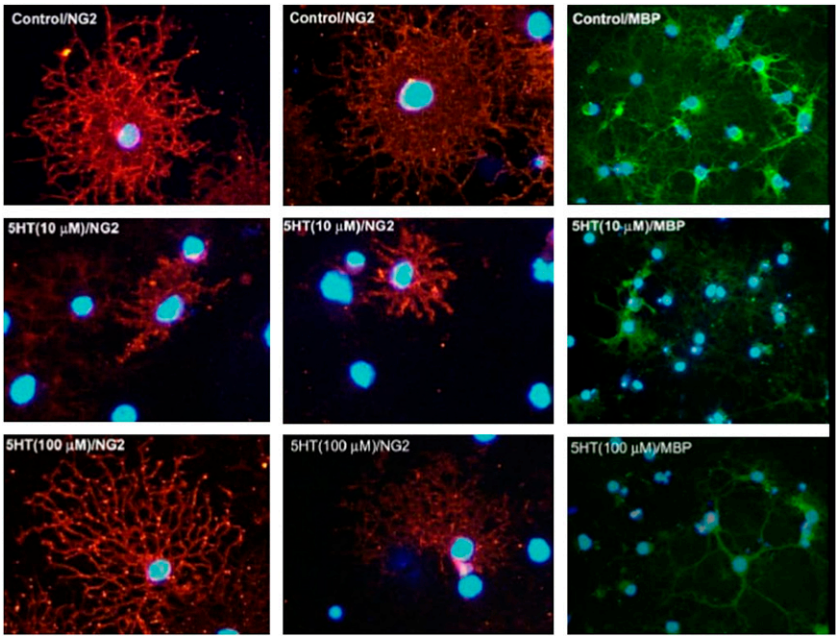


**Fig. S4.** Representative examples of morphological changes in oligodendrocyte (OL) cell cultures treated with different concentrations of serotonin (5-HT). Note the disruption (shortening, thickening, puncta, and polarization) of OL processes after treatment with 10 μM (*Middle*) and 100 μM (*Bottom*) 5-HT vs. controls (*Top*). NG2 (red; a marker for OL progenitor cells), MBP (green; a marker for mature OLs), and DAPI (blue; a marker for nuclei).

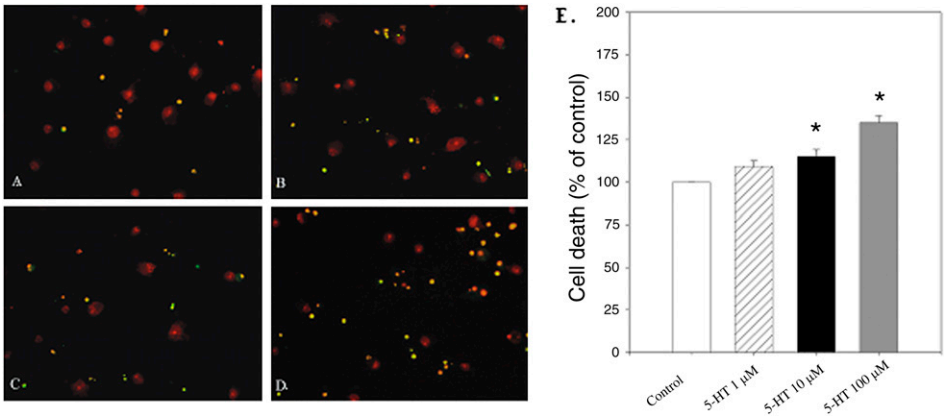


**Fig. S5.** Treatment with 5-HT induces cell death in cultures of immature OLs. Immature OLs were treated with various concentrations of 5-HT [normal/control (*A*), 1 μM (*B*), 10 μM (*C*), and 100 μM (*D*)] and then processed for TUNEL staining. (*E*) The relative proportion of cell death was semiquantitatively calculated from a baseline measure (100%), according to the number of OLs that expressed positive TUNEL staining [TUNEL+/propidium iodide+ (total)]. TUNEL-labeled profiles (green) and nuclei (propidium iodide counterstaining; red) were recorded, and averages were obtained over six randomly selected fields (100×). Data were derived from three independent experiments. $*P > 0.05$ vs. control.

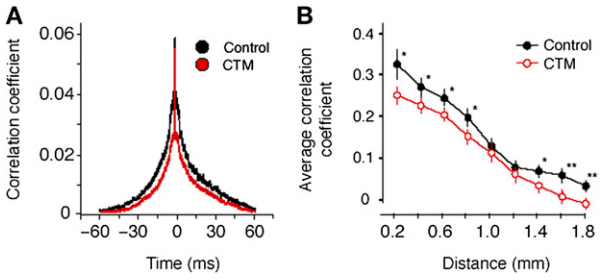


**Fig. S6.** Cortical desynchronization in rats (P22–P27) after 2 wk of 10 mg/kg CTM exposure. (*A*) Mean normalized cross-correlation functions and SEM for primary auditory cortex neurons in controls (black) and CTM-exposed (red) rats separated by 1 mm or less. (*B*) Average correlation coefficient and SEM (*Materials and Methods*) as a function of distance for neuron pairs in controls (black) vs. CTM-exposed (red) rats.