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Supporting information

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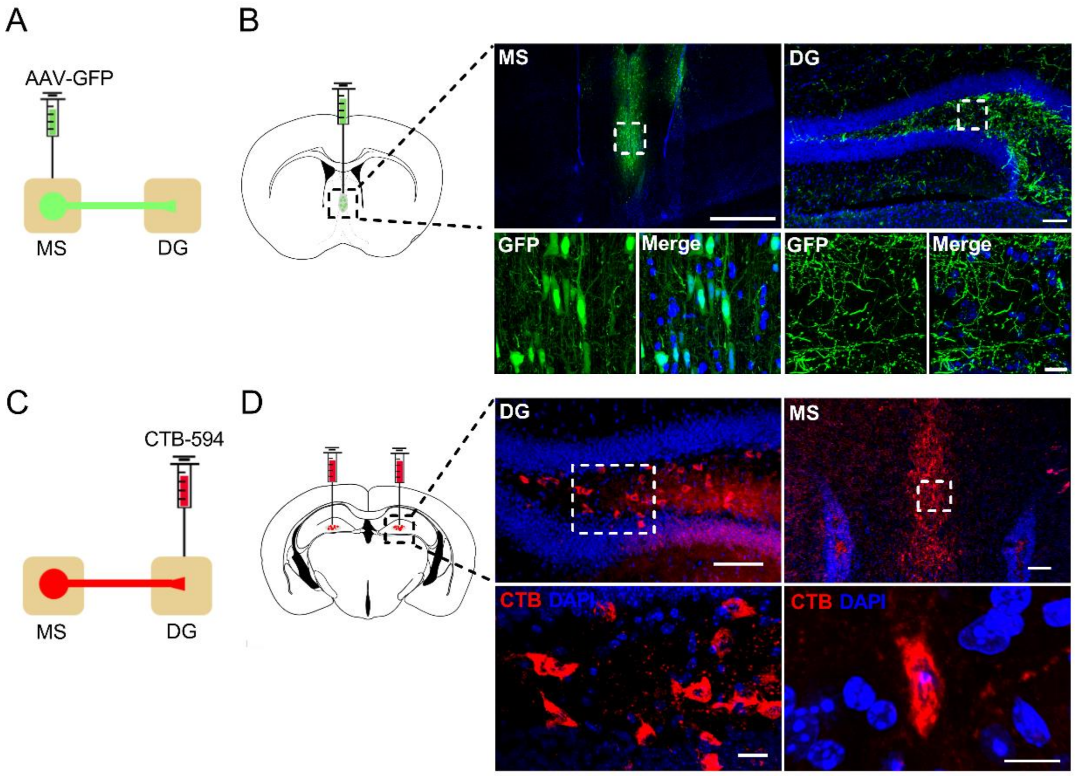
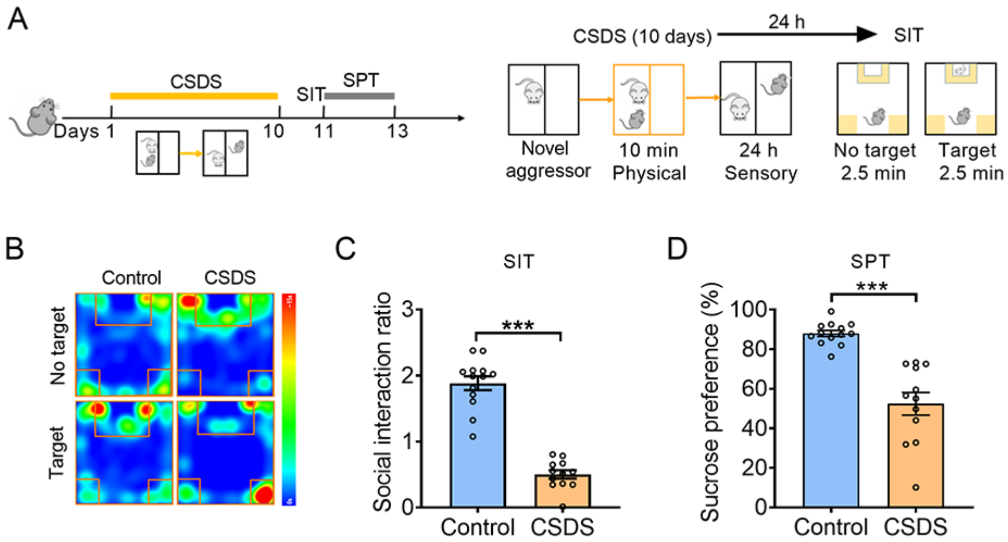
Hou-Hong Li[1], Yang Liu[1], Hong-Sheng Chen[1,2], Ji Wang[1], Yu-Ke Li[1], Yang Zhao[1], Rui Sun[1], Jin-Gang He[1,2,3,4], Fang Wang[1,2,3,4,*], Jian-Guo Chen[1,2,3,4,*]

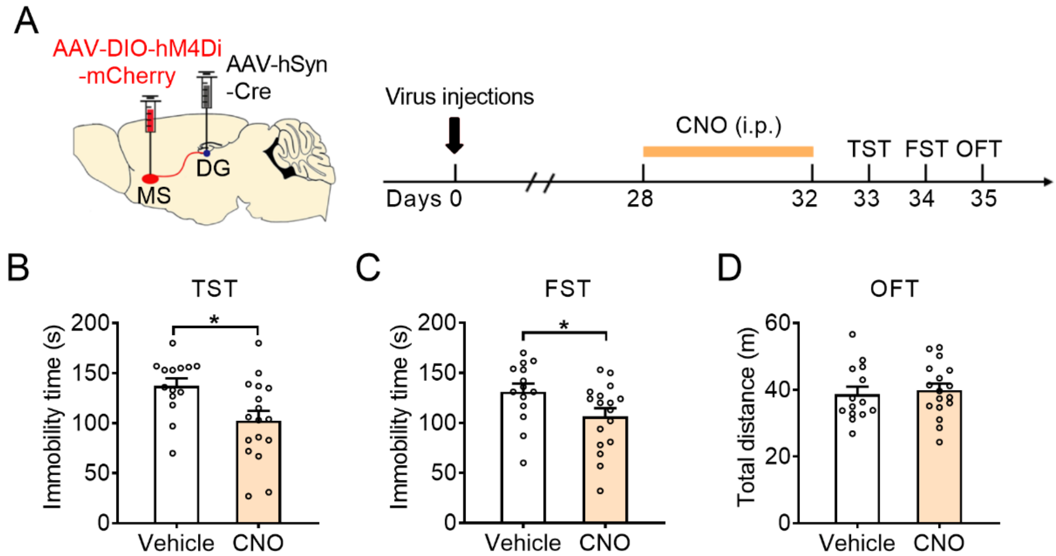
Supplementary Figures



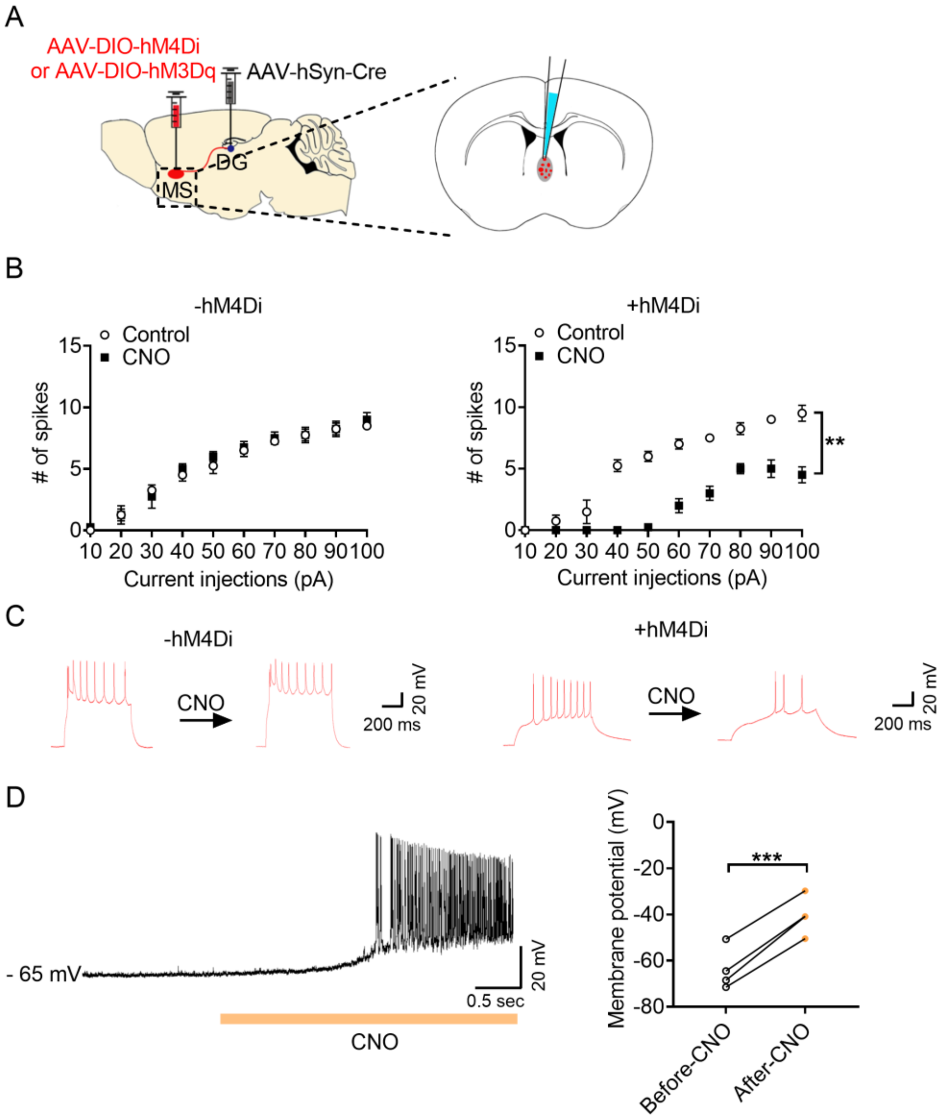
Suppl. Fig. 1 Monosynaptic connection of MS neurons to DG neurons. (A) Schematic of virus injections strategy. **(B)** Images showing GFP expression in the MS (left, green) and GFP-labeled MS axons in the DG (right, green). Top: Scale bar = 1000 μm (left), 100 μm (right). Below: Scale bar = 20 μm. **(C)** Schematic of CTB injections strategy. **(D)** Images showing CTB expression in the DG (left, red) and retrograde labeled neurons in the MS (right, red). Left: Scale bar = 1000 μm (top), 100 μm (below). Right: Scale bar = 100 μm (top), 10 μm (below).



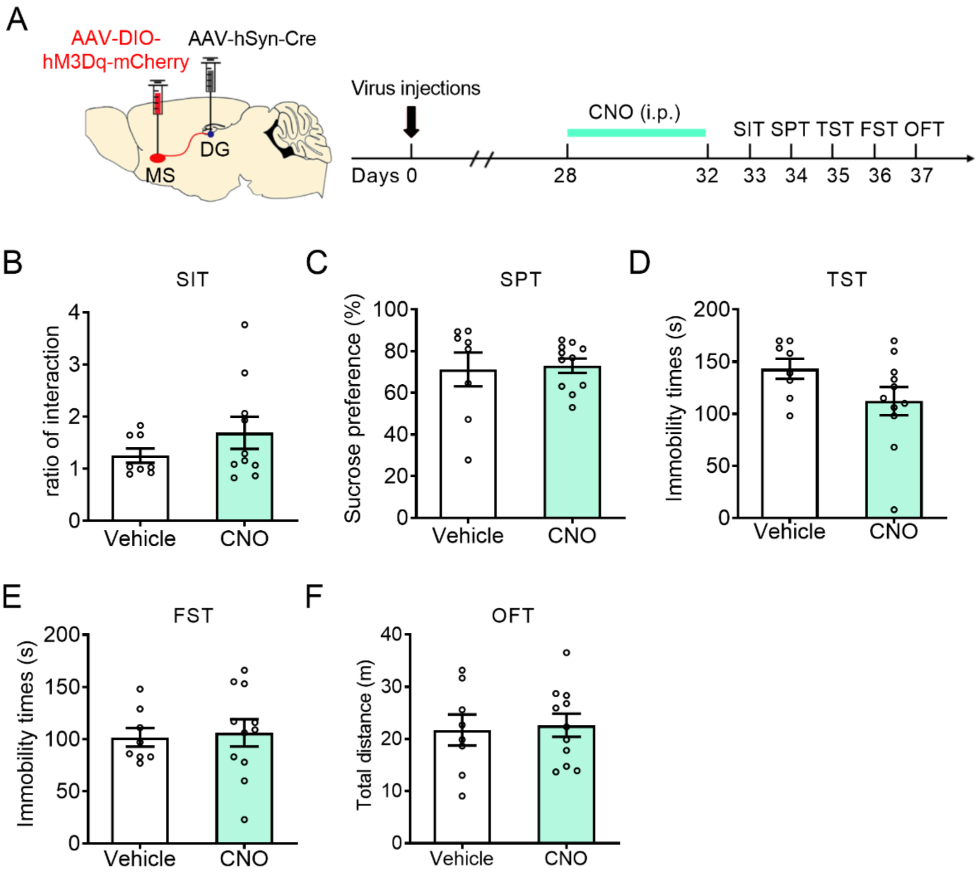
Suppl. Fig. 2 Chronic social defeat stress induces depressive-like behaviors in mice. **(A)** Experimental timeline and behavioral paradigm of CSDS experiments. **(B)** Representative heatmaps of social avoidance behavioral test. **(C)** Depressive-like behaviors in stressed mice, as measured by the social interaction ratio in SIT after CSDS. n = 12-13 per group. **(D)** Depressive-like behaviors in stressed mice, as measured by the sucrose preference in SPT after CSDS. n = 12-13 per group. Data are expressed as mean ± SEM. Student's *t* test (C, D). $^{***}P < 0.001$. The statistical details can be found in Supplementary Table S4.



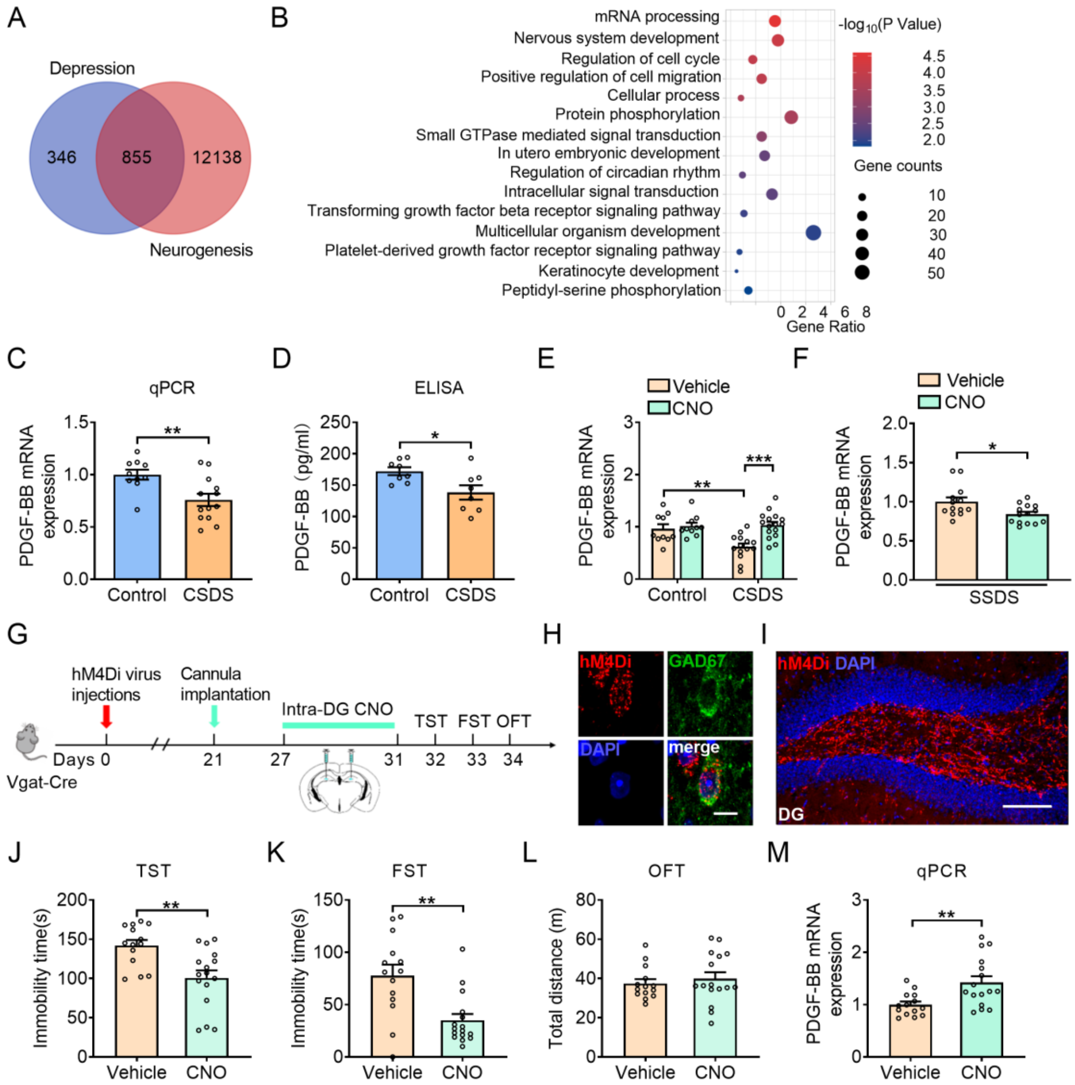
Suppl. Fig. 3 Chemogenetic inhibition of MS-DG projections produces antidepressant effect in naïve mice. (A) Schematic of the stereotaxic injections for selective expression of the hM4Di mCherry in MS-DG projection neurons. **(B)** Behavioral effects of the chemogenetic inhibition of MS-DG projection neurons in the TST. n = 14-17 per group. **(C)** Behavioral effects of the chemogenetic inhibition of MS-DG projection neurons in the FST. n = 14-17 per group. **(D)** Behavioral effects of the chemogenetic inhibition of MS-DG projection neurons in the OFT. n = 14-17 per group. Data are expressed as mean ± SEM. Student's *t* test (B-D). $*P < 0.05$. The statistical details can be found in Supplementary Table S4.



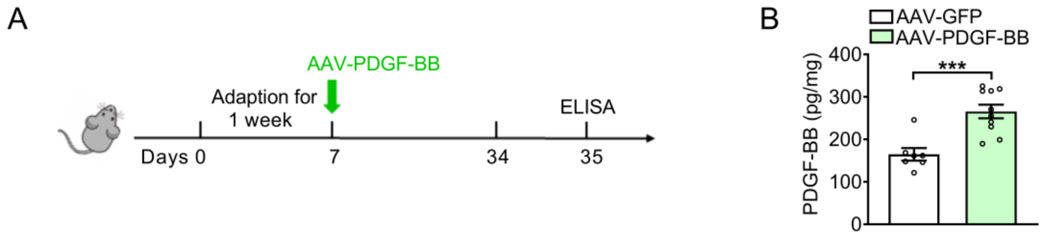
Suppl. Fig. 4 Electrophysiological recording of MS neurons after exogenous expression DREADDs with bath application of CNO. (A) Schematics showing viral vector AAV-hM4Di(hM3Dq)-mCherry infusion in MS and patch-clamp recordings from DG-projecting MS neurons. **(B)** Electrophysiological recording showed the firing of MS neurons expressing hM4Di-mCherry in the presence of 10 µM CNO. n = 4 cells from three mice per group. **(C)** Patch-clamp recording from neurons expressing hM4Di-mCherry in the MS with representative trace of CNO-induced action potential firing in neurons expressing hM4Di-mCherry. **(D)** Patch clamp recording from neurons expressing hM3Dq-mCherry in the MS with representative trace of CNO-induced firing of action potential in neurons expressing hM3Dq-mCherry. Right: Summary of change in resting membrane potential following bath application of CNO. n = 4 cells from three mice per group. Data are expressed as mean ± SEM. Student's *t* test (B, D). $^{**}P < 0.01$, $^{***}P < 0.001$. The statistical details can be found in Supplementary Table S4.



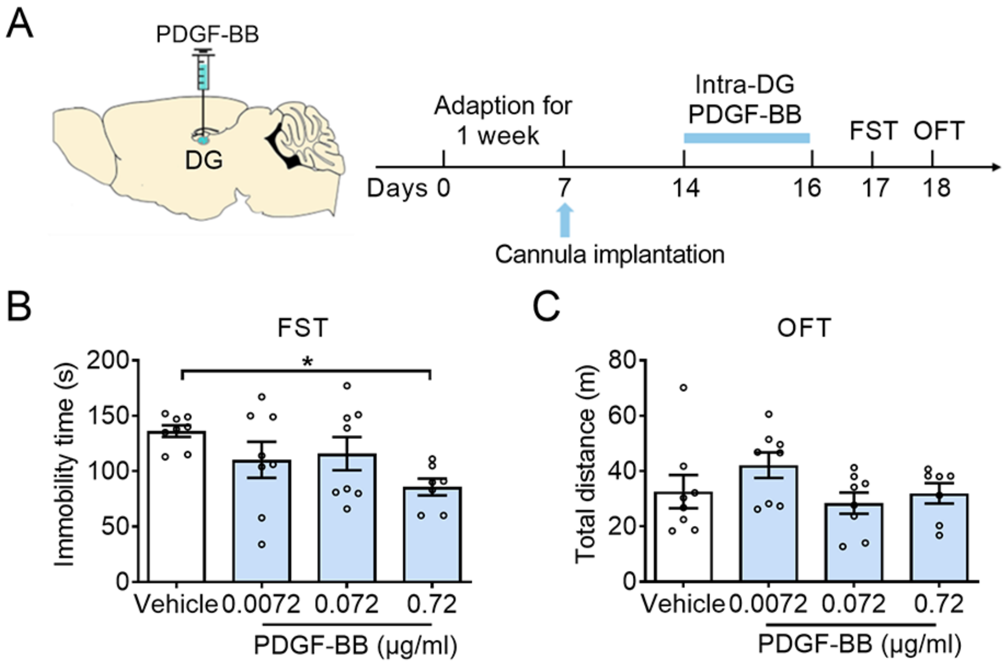
Suppl. Fig. 5 Chemogenetic activation of MS-DG projections has no effects on depressive-like behaviors in naïve mice. (**A**) Schematic of the stereotaxic injections for selective expression of the hM3Dq-mCherry in MS-DG projection neurons. (**B**) Behavioral effects of the chemogenetic activation of MS-DG projection neurons in the SIT. n = 8-10 per group. (**C**) Behavioral effects of the chemogenetic activation of MS-DG projection neurons in the SPT. n = 8-11 per group. (**D**) Behavioral effects of the chemogenetic activation of MS-DG projection neurons in the TST. n = 8-11 per group. (**E**) Behavioral effects of the chemogenetic activation of MS-DG projection neurons in the FST. n = 8-11 per group. (**F**) Behavioral effects of the chemogenetic activation of MS-DG projection neurons in the OFT. n = 8-11 per group. Data are expressed as mean ± SEM. Student's *t* test (B-F).The statistical details can be found in Supplementary Table S4.



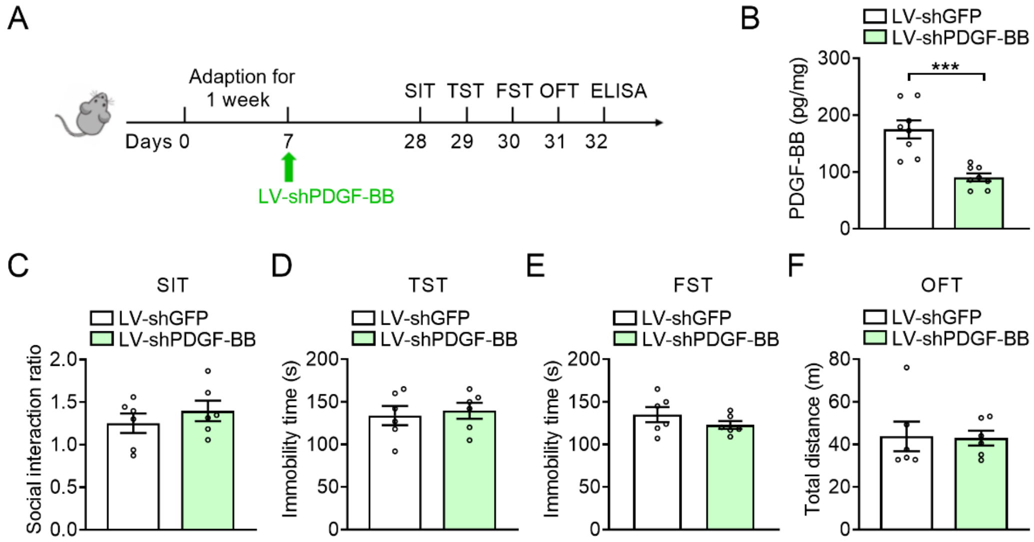
Suppl. Fig. 6. Inhibition of MS^{GABA+}-DG projection induces the expression of PDGF-BB and prevents depression-like behaviors. (**A**) Venn diagram showing the overlap of DEGs in the depression and neurogenesis samples. (**B**) KEGG analysis of the 855 genes. (**C**) PDGF-BB mRNA expression in the DG after CSDS. n = 10-13 per group. (**D**) PDGF-BB protein levels in the DG as determined by ELISA after CSDS. n = 8 per group. (**E**) PDGF-BB mRNA expression in the DG after inhibition of MS-DG projection. n = 10-16 per group. (**F**) PDGF-BB mRNA expression in the DG after activation of MS-DG projection. n = 13-14 per group. (**G**) Timeline of experimental procedure. (**H**) Representative images showed that hM4Di-mCherry labeled neurons in the MS expressing GAD67. Scale bars: 10 μm. (**I**) Confocal fluorescent image showing the distribution of GABAergic axon fibers, which expressed hM4Di-mCherry and innervated hippocampal DG regions. Scale bars: 100 μm. (**J**) Effects of chemogenetic inhibition of MS-DG GABAergic neurons on the immobility time in TST. n = 14-16 per group. (**K**) Effects of chemogenetic inhibition of MS-DG GABAergic neurons on the immobility time in FST. n = 14-16 per group. (**L**) Effects of chemogenetic inhibition of MS-DG GABAergic neurons on the locomotor activity in the OFT. n = 14-16 per group. (**M**) PDGF-BB mRNA expression in the DG after inhibition of MS^{GABA+}-DG projection in the Vgat-Cre mice. n = 14-16 per group. Data are expressed as mean ± SEM. Student's *t* test (C, D, F, J-M). Two-way ANOVA followed by the Bonferroni's post hoc test (E). *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$. The statistical details can be found in Supplementary Table S4.



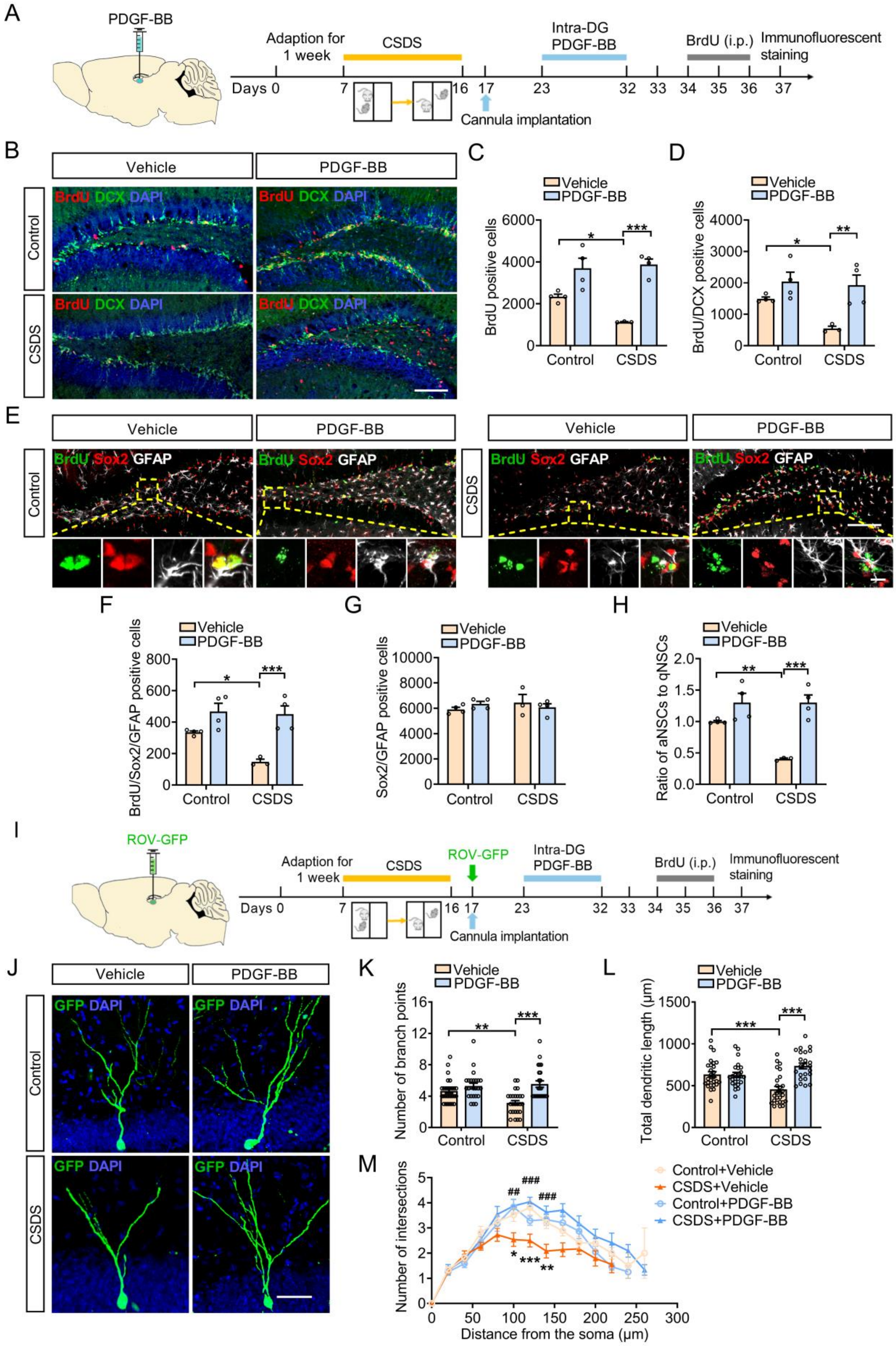
Suppl. Fig. 7 PDGF-BB overexpression in DG after virus injection in naïve mice. (**A**) Experimental timeline of PDGF-BB overexpression in the DG and behavioral test. (**B**) PDGF-BB protein levels in the DG as determined by ELISA four weeks after injection with AAV-GFP or AAV-PDGF-BB. n = 7-10 per group. Data are expressed as mean ± SEM. Student's *t* test. ***$P < 0.001$. The statistical details can be found in Supplementary Table S4.



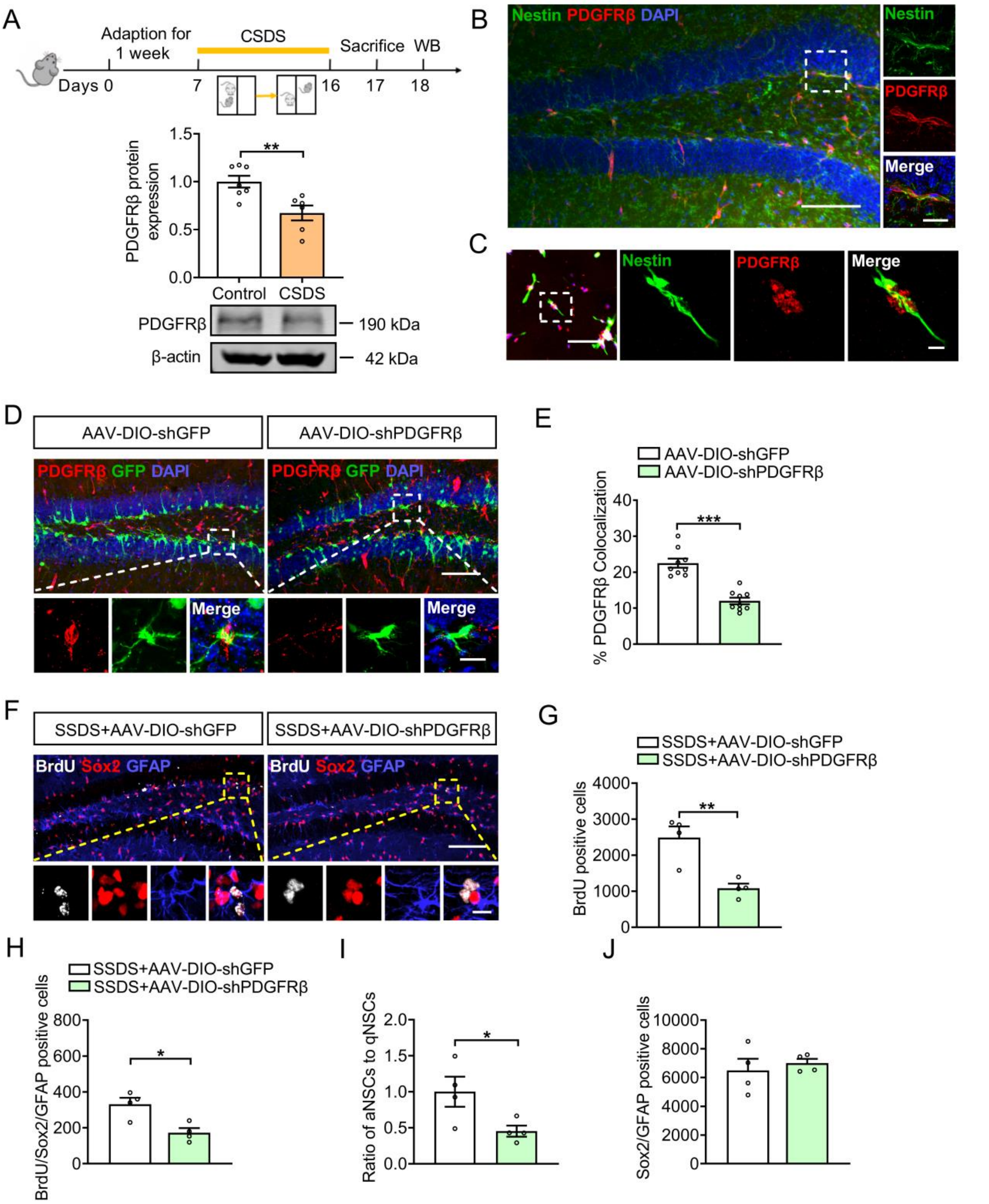
Suppl. Fig. 8 The antidepressant effects of local injection of PDGF-BB into the DG. (**A**) Experimental timeline for behavioral testing after intra-hippocampal infusion of vehicle and PDGF-BB. (**B**) Time spent immobile in the FST following vehicle or PDGF-BB treatment. n = 7-8 per group. (**C**) Locomotor activity measured by the total distance traveled by the naïve mice with vehicle or PDGF-BB treatment. n = 7-8 per group. Data are expressed as mean ± SEM. One-way ANOVA followed by Tukey's post hoc test (B, C). *$P < 0.05$. The statistical details can be found in Supplementary Table S4.



Suppl. Fig. 9 Knockdown of PDGF-BB in the DG of naïve mice does not induce depressive-like phenotypes. (**A**) Experimental timeline of PDGF-BB knockdown in the DG and behavioral test. (**B**) PDGF-BB protein levels in the DG as determined by ELISA three weeks after injection with LV-shGFP or LV-shPDGF-BB. n = 8 per group. (**C**) Behavioral effects of PDGF-BB knockdown in the SIT. n = 6 per group. (**D**) Behavioral effects of PDGF-BB knockdown in the TST. n = 6 per group. (**E**) Behavioral effects of PDGF-BB knockdown in the FST. n = 6 per group. (**F**) Behavioral effects of PDGF-BB knockdown in the OFT. n = 6 per group. Data are expressed as mean ± SEM. Student's *t* test (B-F). ***P < 0.001. The statistical details can be found in Supplementary Table S4.

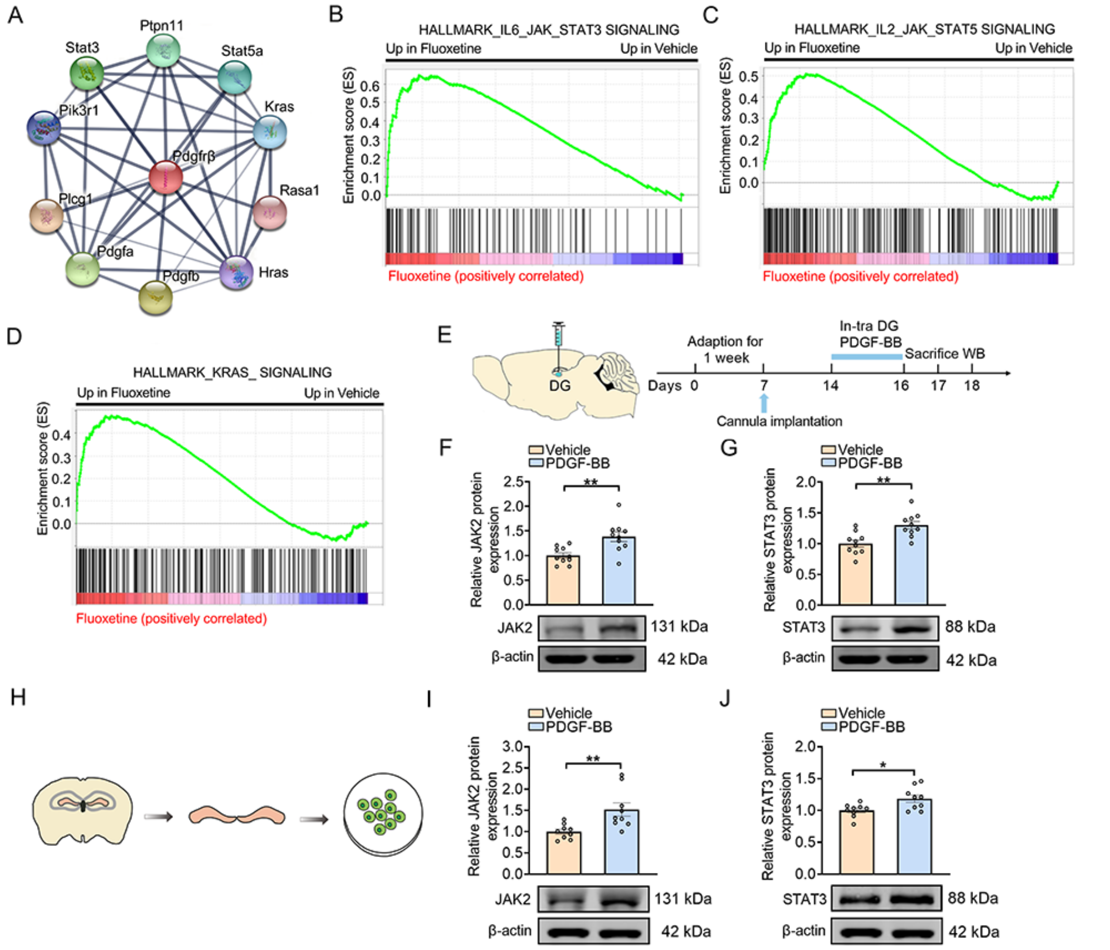


Suppl. Fig. 10 Treatment with PDGF-BB reverses CSDS-induced alteration of hippocampal neurogenesis in the DG. (**A**) Experimental timelines for CSDS protocol, PDGF-BB treatment, and the BrdU injection protocol. (**B**) Immunofluorescence images for BrdU (red), DCX (green) within the SGZ of the hippocampus in control or CSDS-exposed mice treated with vehicle or PDGF-BB. Scale bars: 100 μm. (**C**) Quantification of the number of BrdU positive cells in SGZ of the hippocampus after PDGF-BB treatment. n = 3-4 per group. (**D**) Quantification of the number of BrdU/DCX positive cells in SGZ of the hippocampus after PDGF-BB treatment. n = 3-4 per group. (**E**) Immunofluorescence images for BrdU (green), Sox2 (red), and GFAP (white) within the SGZ of the hippocampus in control or defeated mice treated with vehicle or PDGF-BB. Panels on the below are magnified images showing that the colocalization of BrdU with GFAP and Sox2. Scale bar: 100 μm (top), 10 μm (below). (**F**) Quantification of the number of BrdU/Sox2/GFAP positive NSCs in SGZ of the hippocampus after PDGF-BB treatment. n = 3-4 per group. (**G**) Quantification of the number of Sox2/GFAP positive NSCs in SGZ of the hippocampus after PDGF-BB treatment. n = 3-4 per group. (**H**) The ratio of aNSCs to qNSCs. n = 3-4 per group. (**I**) Experimental timelines for CSDS protocol, PDGF-BB treatment, and the virus injection protocol. (**J**) Representative images of ROV-GFP labeled newborn neurons in vehicle- or PDGF-BB-treated mice 4 weeks after retrovirus injection. Scale bars: 50 μm. (**K**) Quantification of branch number of ROV-GFP labeled newborn neurons in vehicle- or PDGF-BB-treated mice 4 weeks after retrovirus injection. n = 24-27 neurons per group. (**L**) Quantification of dendritic length of ROV-GFP labeled newborn neurons in vehicle- or PDGF-BB-treated mice 4 weeks after retrovirus injection. n = 24-27 neurons per group. (**M**) Sholl analysis of dendritic complexity of ROV-GFP labeled newborn neurons in vehicle- or PDGF-BB-treated mice 4 weeks after retrovirus injection. n = 24-27 neurons per group. Data are expressed as mean ± SEM. Two-way ANOVA followed by the Bonferroni's post hoc test (C, D, F-H, K-M). $^{*}P < 0.05$; $^{**}P < 0.01$; $^{***}P < 0.001$. $^{\#\#}P < 0.01$, $^{\#\#\#}P < 0.001$ vs CSDS + Vehicle.The statistical details can be found in Supplementary Table S4.



Suppl. Fig. 11 Deletion of PDGFRβ from NSCs impairs hippocampal neurogenesis. (**A**) Experimental timeline of CSDS experiments and the change in levels of PDGFRβ protein in the DG after CSDS. n = 6-7 per group. (**B**) Double-labeled confocal immunofluorescence images showing the colocalization of PDGFRβ (red) expression with Nestin (green). Top images: Scale bar =100 μm, Bottom images: Scale bar = 20 μm. (**C**) Immunohistochemistry for Nestin (green), PDGFRβ (red) nuclear counterstaining with DAPI (blue). Left images: Scale bar = 100 μm. Right images:

Scale bar = 10 µm. (**D**) Representative confocal micrographs of DG from control mice (left) or mice injected with AAV-DIO-shPDGFRβ (right), showing transduced cells marked by GFP (green) and PDGFRβ protein detected by immunolabeling (red). Top images: Scale bar =100 µm, Bottom images: Scale bar =20 µm. (**E**) Quantification of PDGFRβ neurons colocalized with GFP. n = 9 slices per group. (**F**) Immunohistochemistry for BrdU (white), Sox2 (red), and GFAP (blue) within the SGZ of the hippocampus in AAV-DIO-shGFP or AAV-DIO-shPDGFRβ- injected mice. Top images: Scale bar = 100 µm. Bottom images: Scale bar = 10 µm. (**G**) Quantification of the number of BrdU positive cells in DG of the hippocampus in AAV-DIO-shGFP or AAV-DIO-shPDGFRβ-injected mice. n = 4 per group. (**H**) Quantification of the number of BrdU/Sox2/GFAP positive NSCs in SGZ of the hippocampus in AAV-DIO-shGFP or AAV-DIO-shPDGFRβ-injected mice. n = 4 per group. (**I**) The ratio of aNSCs to qNSCs. n = 4 per group. (**J**) Quantification of the number of Sox2/GFAP positive NSCs in SGZ of the hippocampus in AAV-DIO-shGFP or AAV-DIO-shPDGFRβ-injected mice. n = 4 per group. Data are expressed as mean ± SEM. Student's *t* test (A, E, G-J). $^{*}P < 0.05$; $^{**}P < 0.01$; $^{***}P < 0.001$. The statistical details can be found in Supplementary Table S4.



Suppl. Fig. 12 JAK2/STAT3 is involved in the antidepressant action mediated by PDGF-BB/PDGFRβ signaling pathway. (**A**) Functional protein association network plotted by using the STRING database. (**B-D**) GSEA plot of proteins expressed in fluoxetine-treated mice for the list of STAT3, STAT5, KRAS. (**E**) Experimental timeline for behavioral testing after intra-hippocampal infusion of vehicle and PDGF-BB. (**F**) The change of protein levels of JAK2 in the DG after PDGF-BB treatment. n = 10 per group. (**G**) The change of protein levels of STAT3 in the DG after PDGF-BB treatment. n = 10 per group. (**H**) Schematics of the experiments. (**I**) The change of protein levels of JAK2 in the DG after PDGF-BB treatment. n = 9 per group. (**J**) The change of protein levels of STAT3 in the DG after PDGF-BB treatment. n = 9 per group. Data are expressed as mean ± SEM. *$P < 0.05$, **$P < 0.01$, ***$P < 0.01$. Student's *t* test (F, G, I, J). The statistical details can be found in Supplementary Table S4.

Uncropped scans of key western blots

Figure S11A

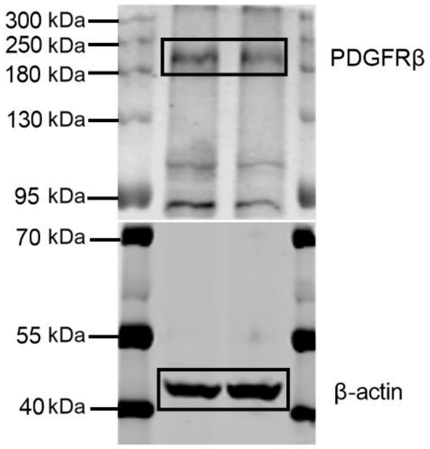


Figure S12F and Figure S12G

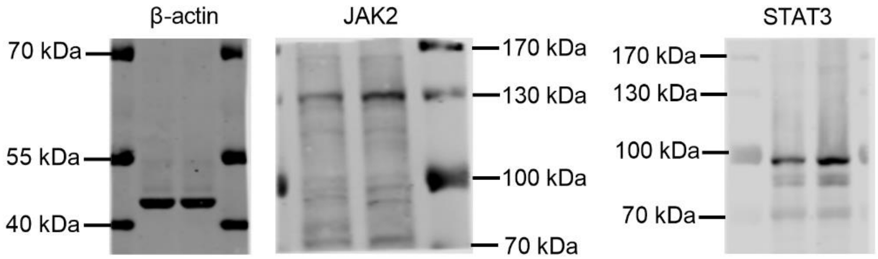
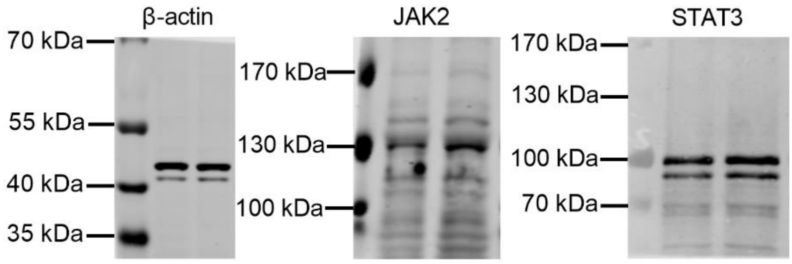


Figure S12I and Figure S12J



Supplementary Table S1. All primers used.

Names	Sequences (5' to 3')
PDGF-BB-R:	TACGGAGTCTCTGTGCAGCAGGC
PDGF-BB-F:	AGTCGGCATGAATCGCTGCTGGG
GAPDH-R:	ATGGTGAAGGTCGGTGTG
GAPDH-F:	CATTCTCGGCCTTGACTG

Supplementary Table S2. All antibodies and drugs used.

Antibodies	SOURCE	IDENTIFIER
Anti-PDGFRβ	Cell Signaling Technology	Cat# 3169
Anti-PDGFRβ	Abcam	Cat# ab32570
Anti-GFAP	Cell Signaling Technology	Cat# 3670
Anti-Sox2	Abcam	Cat# ab97959
Anti-BrdU	Abcam	Cat# ab6326
Anti-DCX	Cell Signaling Technology	Cat# 4604
Anti-Nestin	Millipore	Cat# MAB353
Anti-CTB	Abnova	Cat# PAB13910
Anti-β-actin	Cell Signaling Technology	Cat# 8480
Anti-Somatostatin-28	Synaptic Systems	Cat# 366004
Anti-Cholecystokinin 8	Abcam	Cat# ab37274
Anti-C-FOS	Abcam	Cat# ab190289
Anti-CCK	Abcam	Cat# ab37274
Anti-CaMKIIα	Cell Signaling Technology	Cat# 50049
Anti-VIP	Santa cruz biotechnology	Cat# sc-25347
Anti-GAD67	Abcam	Cat# ab26116
Anti-JAK2	Proteintech	Cat# 17670-1-AP
Anti-STAT3	Proteintech	Cat# 10253-2-AP
CTB-555	BrainVTA	Cat# 210127
Alex Fluor 488-conjugated donkey anti-mouse IgG	Invitrogen	Cat# A32766
Alex Fluor 488-conjugated donkey anti- rabbit IgG	Invitrogen	Cat# A21206
Alex Fluor 594-conjugated donkey anti-rabbit IgG	Invitrogen	Cat# A21207
Alex Fluor 647-conjugated donkey anti-rat IgG	Jackson ImmunoResearch	Cat# 712-605-153
Alex Fluor 405-conjugated donkey anti-mouse IgG	Abcam	Cat# ab175660
Alex Fluor 647-conjugated donkey anti- rabbit IgG	Invitrogen	Cat# A31573

Supplementary Table S3. All bacterial and virus Strains used.

AAV-EF1a-DIO-hM4D(Gi)-mCherry	Obio Technology Shanghai	HYMBH2481
AAV-EF1a-DIO-hM3D(Gq)-mCherry	Obio Technology Shanghai	HYMBH2482
AAV-hSyn-Cre	Obio Technology Shanghai	CN867
pROV-U6-shRNA-EF1a(S)-EGFP	Obio Technology Shanghai	CN889
qAkd-cmv-bGlobin-Flex-EGFP-MIR30shRNA (pdgfprβ)	Obio Technology Shanghai	Y10057
LV-U6-shPdgfb-Ubi-EGFP	Genechem Shanghai	81302-13
LV-U6-shPdgfb-Ubi-mcherry	Genechem Shanghai	92846-1
LV-Ubi-Pdgfb- Ubi-EGFP	Genechem Shanghai	45561-1
AAV-CMV-Pdgfb-EGFP	Genechem Shanghai	46612-1
AAV-CMV-Pdgfb-mCherry	Genechem Shanghai	61989-2

Supplementary Table S4. Statistical analysis for Figures 1-8 and Figures S1-10.

Figure and numbers of animals or cells used	**Statistical analysis**	***Post hoc tests***	**Mean ± SEM.**
1D: Behavioral test of SIT Control + Vehicle (n = 12) Control + CNO (n = 14) CSDS + Vehicle (n =15) CSDS + CNO (n = 15)	Two-way ANOVA Stress: F (1,52) = 4.8290, p = 0.0325 Treatment: F (1,52) = 1.2060, p = 0.2772 Stress × Treatment: F (1,52) = 7.5570, p = 0.0082	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0024 Control + CNO versus CSDS + CNO, p > 0.9999 Control + Vehicle versus Control + CNO, p = 0.5305 CSDS + Vehicle versus CSDS + CNO, p = 0.0133	 Control + Vehicle 1.267 ± 0.179 Control + CNO 1.040 ± 0.151 CSDS + Vehicle 0.588 ± 0.079 CSDS + CNO 1.116 ± 0.137
1E: Behavioral test of TST Control + Vehicle (n = 12) Control + CNO (n = 14) CSDS + Vehicle (n = 15) CSDS + CNO (n = 15)	Two-way ANOVA Stress: F (1,52) = 1.5620, p = 0.2170 Treatment: F (1,52) = 0.4100, p = 0.5248 Stress × Treatment: F (1,52) = 6.4500, p = 0.0141	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0226 Control + CNO versus CSDS + CNO, p = 0.7117 Control + Vehicle versus Control + CNO, p = 0.4016 CSDS + Vehicle versus CSDS + CNO, p = 0.0466	**Mean ± s.e.m.** Control + Vehicle 127.8 ± 8.0 Control + CNO 146.4 ± 8.7 CSDS + Vehicle 164.9 ± 8.6 CSDS + CNO 133.8 ± 12.2
1F: Behavioral test of FST Control + Vehicle (n = 12) Control + CNO (n = 14) CSDS + Vehicle (n = 15) CSDS + CNO (n = 15)	Two-way ANOVA Stress: F (1,52) = 0.1686, p = 0.6830 Treatment: F (1,52) = 15.0300, p = 0.0003 Stress × Treatment: F (1,52) = 9.3560, p = 0.0035	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0396 Control + CNO versus CSDS + CNO, p = 0.1227 Control + Vehicle	**Mean ± s.e.m.** Control + Vehicle 111.9 ± 7.5 Control + CNO 102.6 ± 15.4 CSDS + Vehicle 151.5 ± 9.4

		versus Control + CNO, $p > 0.9999$ CSDS + Vehicle versus CSDS + CNO, $p < 0.001$	CSDS + CNO 72.3 ± 10.8
1G: Behavioral test of OFT Control + Vehicle (n = 12) Control + CNO (n = 14) CSDS + Vehicle (n = 15) CSDS + CNO (n = 15)	Two-way ANOVA Stress: $F(1,52) = 0.6083$, $p = 0.4390$ Treatment: $F(1,52) = 2.9630$, $p = 0.0911$ Stress × Treatment: $F(1,52) = 0.01802$, $p = 0.8937$	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, $p > 0.9999$ Control + CNO versus CSDS + CNO, $p > 0.9999$ Control + Vehicle versus Control + CNO, $p = 0.4224$ CSDS + Vehicle versus CSDS + CNO, $p = 0.4975$	**Mean ± s.e.m.** Control + Vehicle 35.11 ± 3.21 Control + CNO 29.67 ± 3.37 CSDS + Vehicle 32.43 ± 3.04 CSDS + CNO 27.78 ± 1.99
1K: Behavioral test of SIT Vehicle (n = 19) CNO (n = 20)	Unpaired *t* test $t = 2.0300$, $p = 0.0496$		**Mean ± s.e.m.** Vehicle 1.408 ± 0.228 CNO 0.876 ± 0.136
1L: Behavioral test of TST Vehicle (n = 19) CNO (n = 20)	Unpaired *t* test $t = 2.7510$, $p = 0.0091$		**Mean ± s.e.m.** Vehicle 130.1 ± 5.6 CNO 150.9 ± 5.1
1M: Behavioral test of FST Vehicle (n = 19) CNO (n = 20)	Unpaired *t* test $t = 3.7140$, $p = 0.0007$		**Mean ± s.e.m.** Vehicle 97.8 ± 8.1 CNO 139.4 ± 7.8
1N: Behavioral test of OFT Vehicle (n = 19) CNO (n = 20)	Unpaired *t* test $t = 0.6909$, $p = 0.4939$		**Mean ± s.e.m.** Vehicle 22.33 ± 1.87 CNO 20.68 ± 1.50
2C: DREADD inhibition of MS-DG GABAergic projections led to an	Unpaired *t* test		**Mean ± s.e.m.**

increment of c-Fos expression in DG. Vehicle (n = 3) CNO (n = 3)	 t = 3.0440, p = 0.0383		 Vehicle 1150.0 ± 278.7 CNO 2325.0 ± 266.9
2D: DREADD inhibition of MS-DG GABAergic projections led to an increment of c-Fos expression in SOM positive neurons. Vehicle (n = 3) CNO (n = 3)	Unpaired *t* test t = 2.8910, p = 0.0445		**Mean ± s.e.m.** Vehicle 153.3 ± 21.9 CNO 527.7 ± 127.6
2F: DREADD inhibition of MS-DG GABAergic projections led to an increment of PDGF-BB expression in DG. Vehicle (n = 3) CNO (n = 3)	Unpaired *t* test t = 4.8190, p = 0.0085		**Mean ± s.e.m.** Vehicle 1450.0 ± 531.5 CNO 4040.0 ± 79.4
2G: DREADD inhibition of MS-DG GABAergic projections led to an increment of PDGF-BB expression in SOM positive neurons. Vehicle (n = 3) CNO (n = 3)	Unpaired *t* test t = 10.8000, p = 0.0004		**Mean ± s.e.m.** Vehicle 470.0 ± 189.3 CNO 2523.0 ± 18.6
3C: Behavioral test of SIT Control + AAV-GFP (n = 15) Control + AAV-PDGF-BB (n = 13)	Two-way ANOVA Stress: F (1,54) = 1.6910, p = 0.1990 Virus: F (1,54) = 13.5900, p = 0.0005	Bonferroni's *post hoc* test Control + AAV-GFP versus CSDS + AAV-GFP, p = 0.0021	**Mean ± s.e.m.** Control + AAV-GFP 1.367 ± 0.162 Control + AAV-PDGF-BB 1.382 ± 0.119

CSDS + AAV-GFP (n = 14) CSDS + AAV-PDGF-BB (n = 16)	Stress × Virus: $F (1,54) = 12.8700$, $p = 0.0007$	Control + AAV-PDGF-BB versus CSDS + AAV-PDGF-BB, $p = 0.2249$ Control + AAV-GFP versus Control + AAV-PDGF-BB, $p > 0.9999$ CSDS + AAV-GFP versus CSDS + AAV-PDGF-BB, $p < 0.001$	CSDS + AAV-GFP 0.626 ± 0.146 CSDS + AAV-PDGF-BB 1.729 ± 0.162
3D: Behavioral test of TST Control + AAV-GFP (n = 15) Control + AAV-PDGF-BB (n = 13) CSDS + AAV-GFP (n = 14) CSDS + AAV-PDGF-BB (n = 16)	Two-way ANOVA Stress: $F (1,54) = 5.0870$, $p = 0.0282$, Virus: $F (1,54) = 40.8600$, $p < 0.001$ Stress × Virus: $F (1,54) = 7.8840$, $p = 0.0069$	Bonferroni's *post hoc* test Control + AAV-GFP versus CSDS + AAV-GFP, $p = 0.0014$ Control + AAV-PDGF-BB versus CSDS + AAV-PDGF-BB, $p > 0.9999$ Control + AAV-GFP versus Control + AAV-PDGF-BB, $p = 0.0317$ CSDS + AAV-GFP versus CSDS + AAV-PDGF-BB, $p < 0.001$	**Mean ± s.e.m.** Control + AAV-GFP 131.6 ± 4.3 Control + AAV-PDGF-BB 104.9 ± 5.0 CSDS + AAV-GFP 169.3 ± 6.4 CSDS + AAV-PDGF-BB 100.8 ± 10.8
3E: Behavioral test of FST Control + AAV-GFP (n = 15) Control + AAV-PDGF-BB (n = 13) CSDS + AAV-GFP (n = 14) CSDS + AAV-PDGF-BB (n = 16)	Two-way ANOVA Stress: $F (1,54) = 0.1426$, $p = 0.7072$ Virus: $F (1,54) = 7.4140$, $p = 0.0087$ Stress × Virus: $F (1,54) = 23.5700$, $p < 0.001$	Bonferroni's *post hoc* test Control + AAV-GFP versus CSDS + AAV-GFP, $p = 0.0050$ Control + AAV-PDGF-BB versus CSDS + AAV-PDGF-BB, $p = 0.0010$ Control + AAV-GFP versus Control + AAV-PDGF-BB, $p = 0.2883$	**Mean ± s.e.m.** Control + AAV-GFP 74.9 ± 10.6 Control + AAV-PDGF-BB 96.5 ± 10.4 CSDS + AAV-GFP 120.1 ± 11.6 CSDS + AAV-PDGF-BB 43.6 ± 7.7

		CSDS + AAV-GFP versus CSDS + AAV-PDGF-BB, $p < 0.001$	
3F: Behavioral test of OFT Control + AAV-GFP (n = 15) Control + AAV-PDGF-BB (n = 13) CSDS + AAV-GFP (n = 14) CSDS + AAV-PDGF-BB (n = 16)	Two-way ANOVA Stress: $F(1,54) = 0.0012$, $p = 0.9728$ Virus: $F(1,54) = 1.4050$, $p = 0.2411$ Stress × Virus: $F(1,54) = 0.5903$, $p = 0.4456$	Bonferroni's *post hoc* test Control + AAV-GFP versus CSDS + AAV-GFP, $p > 0.9999$ Control + AAV-PDGF-BB versus CSDS + AAV-PDGF-BB, $p > 0.9999$ Control + AAV-GFP versus Control + AAV-PDGF-BB, $p > 0.9999$ CSDS + AAV-GFP versus CSDS + AAV-PDGF-BB, $p = 0.3309$	**Mean ± s.e.m.** Control + AAV-GFP 43.90 ± 3.28 Control + AAV-PDGF-BB 45.57 ± 5.42 CSDS + AAV-GFP 40.97 ± 4.00 CSDS + AAV-PDGF-BB 48.77 ± 3.33
3H: Behavioral test of SIT Control + Vehicle (n = 12) Control + PDGF-BB (n = 12) CSDS + Vehicle (n = 12) CSDS + PDGF-BB (n = 15)	Two-way ANOVA Stress: $F(1,47) = 25.8700$, $p < 0.001$ Treatment: $F(1,47) = 3.1380$, $p = 0.0830$ Stress × Treatment: $F(1,47) = 8.4590$, $p = 0.0055$	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, $p < 0.001$ Control + PDGF-BB versus CSDS + PDGF-BB, $p = 0.2408$ Control + Vehicle versus Control + PDGF-BB, $p = 0.8744$ CSDS + Vehicle versus CSDS + PDGF-BB, $p = 0.0028$	**Mean ± s.e.m.** Control + Vehicle 1.263 ± 0.089 Control + PDGF-BB 1.125 ± 0.111 CSDS + Vehicle 0.297 ± 0.064 CSDS + PDGF-BB 0.862 ± 0.161
3I: Behavioral test of TST Control + Vehicle (n = 12) Control + PDGF-BB (n = 12) CSDS + Vehicle (n = 12)	Two-way ANOVA Stress: $F(1,47) = 0.3129$, $p = 0.5785$ Treatment: $F(1,47) = 5.6880$, $p = 0.0212$	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, $p = 0.0218$ Control + PDGF-BB versus CSDS +	**Mean ± s.e.m.** Control + Vehicle 124.4 ± 5.5 Control + PDGF-BB 132.3 ± 8.1

CSDS + PDGF-BB (n = 15)	Stress × Virus: F (1,47) = 10.8100, p = 0.0019	PDGF-BB, p = 0.1068 Control + Vehicle versus Control + PDGF-BB, p > 0.9999 CSDS + Vehicle versus CSDS + PDGF-BB, p = 0.0003	CSDS + Vehicle 158.2 ± 9.6 CSDS + PDGF-BB 108.4 ± 10.0
3J: Behavioral test of FST Control + Vehicle (n = 12) Control + PDGF-BB (n = 12) CSDS + Vehicle (n = 12) CSDS + PDGF-BB (n = 15)	Two-way ANOVA Stress: F (1,47) = 0.1019, p = 0.7510 Treatment: F (1,47) = 12.2400, p = 0.0010 Stress × Virus: F (1,47) = 12.6700, p = 0.0009;	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0206 Control + PDGF-BB versus CSDS + PDGF-BB, p = 0.0456 Control + Vehicle versus Control + PDGF-BB, p > 0.9999 CSDS + Vehicle versus CSDS + PDGF-BB, p < 0.001	**Mean ± s.e.m.** Control + Vehicle 85.7 ± 10.8 Control + PDGF-BB 86.3 ± 8.0 CSDS + Vehicle 122.8 ± 9.0 CSDS + PDGF-BB 55.2 ± 9.8
3K: Behavioral test of OFT Control + Vehicle (n = 12) Control + PDGF-BB (n = 12) CSDS + Vehicle (n = 12) CSDS + PDGF-BB (n = 15)	Two-way ANOVA Stress: F (1,47) = 0.3096, p = 0.5806 Treatment: F (1,47) = 0.0005, p = 0.9828 Stress × Virus: F (1,47) = 4.5460, p = 0.0383	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.1404 Control + PDGF-BB versus CSDS + PDGF-BB, p = 0.5163 Control + Vehicle versus Control + PDGF-BB, p = 0.2888 CSDS + Vehicle versus CSDS + PDGF-BB, p = 0.2639	**Mean ± s.e.m.** Control + Vehicle 54.43 ± 5.93 Control + PDGF-BB 46.28 ± 3.42 CSDS + Vehicle 44.25 ± 2.00 CSDS + PDGF-BB 52.24 ± 2.92
4C: Behavioral test of SIT LV-shGFP (n = 15) LV-shPDGF-BB (n = 15)	Unpaired *t* test t = 2.8890, p = 0.0074		**Mean ± s.e.m.** LV-shGFP 1.285 ± 0.167 LV-shPDGF-BB 0.674 ± 0.130

4D: Behavioral test of TST LV-shGFP (n = 15) LV-shPDGF-BB (n = 15)	Unpaired *t* test t = 2.7370, p = 0.0106		**Mean ± s.e.m.** LV-shGFP 132.2 ± 9.2 LV-shPDGF-BB 168.5 ± 9.5
4E: Behavioral test of FST LV-shGFP (n = 15) LV-shPDGF-BB (n = 15)	Unpaired *t* test t = 3.0710, p = 0.0047		**Mean ± s.e.m.** LV-shGFP 112.0 ± 9.2 LV-shPDGF-BB 147.9 ± 7.3
4F: Behavioral test of OFT LV-shGFP (n = 15) LV-shPDGF-BB (n = 15)	Unpaired *t* test t = 0.1401, p = 0.8896		**Mean ± s.e.m.** LV-shGFP 21.24 ± 2.05 LV-shPDGF-BB 21.62 ± 1.75
4H: Behavioral test of SIT CSDS + Vehicle + Anti-IgG (n = 14) CSDS + Vehicle + Anti-PDGF-BB (n = 15) CSDS + CNO + Anti-IgG (n = 16) CSDS + CNO + Anti-PDGF-BB (n = 16)	Two-way ANOVA Treatment: F (1,57) = 0.9231, p = 0.3407 Treatment: F (1,57) = 15.6200, p = 0.0002 Treatment × Treatment: F (1,57) = 6.3810, p = 0.0143	Bonferroni's *post hoc* test CSDS + Vehicle + Anti-IgG versus CSDS + CNO + Anti-IgG, p < 0.001 CSDS + Vehicle + Anti-PDGF-BB versus CSDS + CNO + Anti-PDGF-BB, p = 0.6263 CSDS + Vehicle + Anti-IgG versus CSDS + Vehicle + Anti-PDGF-BB, p = 0.5692 CSDS + CNO + Anti-IgG versus CSDS + CNO + Anti-PDGF-BB, p = 0.0284	**Mean ± s.e.m.** CSDS + Vehicle + Anti-IgG 0.292 ± 0.080 CSDS + Vehicle + Anti-PDGF-BB 0.418 ± 0.091 CSDS + CNO + Anti-IgG 0.814 ± 0.076 CSDS + CNO + Anti-PDGF-BB 0.533 ± 0.076
4I: Behavioral test of TST	Two-way ANOVA	Bonferroni's *post hoc* test	**Mean ± s.e.m.**

CSDS + Vehicle + Anti-IgG (n = 14) CSDS + Vehicle + Anti-PDGF-BB (n = 15) CSDS + CNO + Anti-IgG (n = 17) CSDS + CNO + Anti-PDGF-BB (n = 16)	Treatment: F (1,58) = 8.8430, p = 0.0043 Treatment: F (1,58) = 8.800, p = 0.0044 Treatment × Treatment: F (1,58) = 4.3430, p = 0.0416	CSDS + Vehicle + Anti-IgG versus CSDS + CNO + Anti-IgG, p = 0.0015 CSDS + Vehicle + Anti-PDGF-BB versus CSDS + CNO + Anti-PDGF-BB, p > 0.9999 CSDS + Vehicle + Anti-IgG versus CSDS + Vehicle + Anti-PDGF-BB, p > 0.9999 CSDS + CNO + Anti-IgG versus CSDS + CNO + Anti-PDGF-BB, p = 0.0010	CSDS + Vehicle + Anti-IgG 165.5 ± 7.2 CSDS + Vehicle + Anti-PDGF-BB 173.3 ± 10.6 CSDS + CNO + Anti-IgG 121.4 ± 9.1 CSDS + CNO + Anti-PDGF-BB 165.6 ± 7.2
4J: Behavioral test of FST CSDS + Vehicle + Anti-IgG (n = 14) CSDS + Vehicle + Anti-PDGF-BB (n = 15) CSDS + CNO + Anti-IgG (n = 17) CSDS + CNO + Anti-PDGF-BB (n = 16)	Two-way ANOVA Treatment: F (1,58) = 4.2380, p = 0.0440 Treatment: F (1,58) = 1.5830, p = 0.2134 Treatment × Treatment: F (1,58) = 4.0880, p = 0.0478	Bonferroni's *post hoc* test CSDS + Vehicle + Anti-IgG versus CSDS + CNO + Anti-IgG, p = 0.0484 CSDS + Vehicle + Anti-PDGF-BB versus CSDS + CNO + Anti-PDGF-BB, p > 0.9999 CSDS + Vehicle + Anti-IgG versus CSDS + Vehicle + Anti-PDGF-BB, p > 0.9999 CSDS + CNO + Anti-IgG versus CSDS + CNO + Anti-PDGF-BB, p = 0.0083	**Mean ± s.e.m.** CSDS + Vehicle + Anti-IgG 134.0 ± 8.5 CSDS + Vehicle + Anti-PDGF-BB 134.3 ± 10.9 CSDS + CNO + Anti-IgG 104.3 ± 8.5 CSDS + CNO + Anti-PDGF-BB 141.3 ± 8.1
4K: Behavioral test of OFT CSDS + Vehicle + Anti-IgG (n = 14) CSDS + Vehicle + Anti-PDGF-BB (n = 15)	Two-way ANOVA Treatment: F (1,59) = 0.0007, p = 0.9785 Treatment: F (1,59) = 0.02334, p = 0.8791	Bonferroni's *post hoc* test CSDS + Vehicle + Anti-IgG versus CSDS + CNO + Anti-IgG, p > 0.9999	**Mean ± s.e.m.** CSDS + Vehicle + Anti-IgG 30.65 ± 3.05

CSDS + CNO + Anti-IgG (n = 17) CSDS + CNO + Anti-PDGF-BB (n = 17)	Treatment × Treatment: F (1,59) = 0.0274, p = 0.8691	CSDS + Vehicle + Anti-PDGF-BB versus CSDS + CNO + Anti-PDGF-BB, p > 0.9999 CSDS + Vehicle + Anti-IgG versus CSDS + Vehicle + Anti-PDGF-BB, p > 0.9999 CSDS + CNO + Anti-IgG versus CSDS + CNO + Anti-PDGF-BB, p > 0.9999	CSDS + Vehicle + Anti-PDGF-BB 31.20 ± 2.43 CSDS + CNO + Anti-IgG 30.69 ± 2.66 CSDS + CNO + Anti-PDGF-BB 30.30 ± 3.08
5C: Quantification of the number of BrdU positive cells Control + LV-GFP (n =4) Control + LV-PDGF-BB (n = 4) CSDS + LV-GFP (n = 4) CSDS + LV-PDGF-BB (n = 4)	Two-way ANOVA Stress: F (1,12) = 7.9930, p = 0.0153 Virus: F (1,12) = 61.5700, p < 0.001 Stress × Virus: F (1,12) = 10.6900, p = 0.0067	Bonferroni's *post hoc* test Control + LV-GFP versus CSDS + LV-GFP, p = 0.0020 Control + LV-PDGF-BB versus CSDS + LV-PDGF-BB, p > 0.9999 Control + LV-GFP versus Control + LV-PDGF-BB, p = 0.0143 CSDS + LV-GFP versus CSDS + LV-PDGF-BB, p < 0.001	**Mean ± s.e.m.** Control + LV-GFP 2238.0 ± 164.8 Control + LV-PDGF-BB 2833.0 ± 152.1 CSDS + LV-GFP 1445.0 ± 60.1 CSDS + LV-PDGF-BB 2890.0 ± 116.9
5D: Quantification of the number of BrdU/DCX positive cells Control + LV-GFP (n =4) Control + LV-PDGF-BB (n = 4) CSDS + LV-GFP (n = 4) CSDS + LV-PDGF-BB (n = 4)	Two-way ANOVA Stress: F (1,12) = 9.4360, p = 0.0097 Virus: F (1,12) = 25.2700, p = 0.0003 Stress × Virus: F (1,12) = 5.5250, p = 0.0367	Bonferroni's *post hoc* test Control + LV-GFP versus CSDS + LV-GFP, p = 0.0048 Control + LV-PDGF-BB versus CSDS + LV-PDGF-BB, p > 0.9999 Control + LV-GFP versus Control + LV-PDGF-BB, p = 0.1656	**Mean ± s.e.m.** Control + LV-GFP 1380.0 ± 117.3 Control + LV-PDGF-BB 1668.0 ± 95.5 CSDS + LV-GFP 797.5 ± 94.2 CSDS + LV-PDGF-BB 1590.0 ± 120.1

		CSDS + LV-GFP versus CSDS + LV-PDGF-BB, p = 0.0004	
5F: Quantification of the number of BrdU/Sox2/GFAP positive NSCs Control + LV-GFP (n =4) Control + LV-PDGF-BB (n = 4) CSDS + LV-GFP (n = 4) CSDS + LV-PDGF-BB (n = 4)	Two-way ANOVA Stress: F (1,12) = 15.9500, p = 0.0018 Virus: F (1,12) = 22.7200, p = 0.0005 Stress × Virus: F (1,12) = 3.2040, p = 0.0987	Bonferroni's *post hoc* test Control + LV-GFP versus CSDS + LV-GFP, p = 0.0030 Control + LV-PDGF-BB versus CSDS + LV-PDGF-BB, p = 0.2904 Control + LV-GFP versus Control + LV-PDGF-BB, p = 0.1141 CSDS + LV-GFP versus CSDS + LV-PDGF-BB, p = 0.0011	**Mean ± s.e.m.** Control + LV-GFP 557.5 ± 86.4 Control + LV-PDGF-BB 737.5 ± 19.3 CSDS + LV-GFP 207.8 ± 32.0 CSDS + LV-PDGF-BB 604.3 ± 76.0
5G: Quantification of the number of Sox2/GFAP positive NSCs Control + LV-GFP (n =4) Control + LV-PDGF-BB (n = 4) CSDS + LV-GFP (n = 4) CSDS + LV-PDGF-BB (n = 4)	Two-way ANOVA Stress: F (1,12) = 0.8694, p = 0.3695 Virus: F (1,12) = 5.8640, p = 0.0322 Stress × Virus: F (1,12) = 0.08552, p = 0.7749	Bonferroni's *post hoc* test Control + LV-GFP versus CSDS + LV-GFP, p > 0.9999 Control + LV-PDGF-BB versus CSDS + LV-PDGF-BB, p = 0.8068 Control + LV-GFP versus Control + LV-PDGF-BB, p = 0.3161 CSDS + LV-GFP versus CSDS + LV-PDGF-BB, p = 0.1581	**Mean ± s.e.m.** Control + LV-GFP 7825.0 ± 195.9 Control + LV-PDGF-BB 8250.0 ± 108.6 CSDS + LV-GFP 7953.0 ± 201.9 CSDS + LV-PDGF-BB 8495.0 ± 261.6
5H: The ratio of aNSCs to qNSCs Control + LV-GFP (n =4) Control + LV-PDGF-BB (n = 4)	Two-way ANOVA Stress: F (1,12) = 23.1900, p = 0.0004	Bonferroni's *post hoc* test Control + LV-GFP versus CSDS + LV-GFP, p = 0.0009	**Mean ± s.e.m.** Control + LV-GFP 1.00 ± 0.15

CSDS + LV-GFP (n = 4) CSDS + LV-PDGF-BB (n = 4)	Virus: F (1,12) = 22.7700, p = 0.0005 Stress × Virus: F (1,12) = 3.8660, p = 0.0728	Control + LV-PDGF-BB versus CSDS + LV-PDGF-BB, p = 0.1337 Control + LV-GFP versus Control + LV-PDGF-BB, p = 0.1413 CSDS + LV-GFP versus CSDS + LV-PDGF-BB, p = 0.0009	Control + LV-PDGF-BB 1.26 ± 0.02 CSDS + LV-GFP 0.37 ± 0.06 CSDS + LV-PDGF-BB 0.99 ± 0.10
5K: Quantification of branch number Control + AAV-mCherry (n =26) Control + AAV-PDGF-BB (n = 25) CSDS + AAV-mCherry (n = 27) CSDS + AAV-PDGF-BB (n = 25)	Two-way ANOVA Stress: F (1,99) = 18.0900, p < 0.001 Virus: F (1,99) = 18.9300, p < 0.001 Stress × Virus: F (1,99) = 34.2900, p < 0.001	Bonferroni's *post hoc* test Control + AAV-mCherry versus CSDS + AAV-mCherry, p < 0.001 Control + AAV-PDGF-BB versus CSDS + AAV-PDGF-BB, p = 0.5330 Control + AAV-mCherry versus Control + AAV-PDGF-BB, p = 0.5838 CSDS + AAV-mCherry versus CSDS + AAV-PDGF-BB, p < 0.001	**Mean ± s.e.m.** Control + AAV-mCherry 5.7 ± 0.3 Control + AAV-PDGF-BB 5.3 ± 0.4 CSDS + AAV-mCherry 2.7 ± 0.2 CSDS + AAV-PDGF-BB 5.8 ± 0.3
5L: Quantification of the dendritic length Control + AAV-mCherry (n =26) Control + AAV-PDGF-BB (n = 25) CSDS + AAV-mCherry (n = 27) CSDS + AAV-PDGF-BB (n = 25)	Two-way ANOVA Stress: F (1,99) = 10.4200, p = 0.0017 Virus: F (1,99) = 10.2100, p = 0.0019 Stress × Virus: F (1,99) = 32.1500, p < 0.001	Bonferroni's *post hoc* test Control + AAV-mCherry versus CSDS + AAV-mCherry, p < 0.001 Control + AAV-PDGF-BB versus CSDS + AAV-PDGF-BB, p = 0.1837 Control + AAV-mCherry versus Control + AAV-PDGF-BB, p = 0.1694 CSDS + AAV-mCherry versus CSDS + AAV-PDGF-BB, p < 0.001	**Mean ± s.e.m.** Control + AAV-mCherry 703.6 ± 32.4 Control + AAV-PDGF-BB 618.2 ± 39.1 CSDS + AAV-mCherry 396.3 ± 28.8 CSDS + AAV-PDGF-BB 702.5 ± 37.8
6C: Quantification of the	Unpaired *t* test		**Mean ± s.e.m.**

number of BrdU positive cells LV-shGFP (n = 4) LV-shPDGF-BB (n = 4)	 t = 2.5100, p = 0.0459		 LV-shGFP 2102.0 ± 197.0 LV-shPDGF-BB 1364.0 ± 218.3
6D: Quantification of the number of BrdU/DCX LV-shGFP (n = 4) LV-shPDGF-BB (n = 4)	Unpaired *t* test t = 2.7740, p = 0.0322		**Mean ± s.e.m.** LV-shGFP 1036.0 ± 127.8 LV-shPDGF-BB 580.0 ± 103.2
6F: Quantification of the number of BrdU/Sox2/GFAP positive NSCs LV-shGFP (n = 4) LV-shPDGF-BB (n = 4)	Unpaired *t* test t = 3.5650, p = 0.0119		**Mean ± s.e.m.** LV-shGFP 362.5 ± 23.9 LV-shPDGF-BB 173.0 ± 47.5
6G: Quantification of the number of Sox2/GFAP positive NSCs LV-shGFP (n = 4) LV-shPDGF-BB (n = 4)	Unpaired *t* test t = 0.2787, p = 0.7898		**Mean ± s.e.m.** LV-shGFP 6515.0 ± 120.7 LV-shPDGF-BB 6384.0 ± 454.2
6H: The ratio of aNSCs to qNSCs LV-shGFP (n = 4) LV-shPDGF-BB (n = 4)	Unpaired *t* test t = 3.5560, p = 0.0120		**Mean ± s.e.m.** LV-shGFP 1.00 ± 0.08 LV-shPDGF-BB 0.49 ± 0.12
6K: Quantification of branch number LV-shmCherry (n = 25 neurons)	Unpaired *t* test t = 6.0250, p < 0.001		**Mean ± s.e.m.** LV-shCherry 6.4 ± 0.4 LV-shPDGF-BB

LV-shPDGF-BB (n = 25 neurons)			3.3 ± 0.3
6L: Quantification of the dendritic length LV-shmCherry (n = 25 neurons) LV-shPDGF-BB (n = 25 neurons)	Unpaired *t* test t = 6.0040, p < 0.001		**Mean ± s.e.m.** LV-shCherry 813.5 ± 40.6 LV-shPDGF-BB 477.9 ± 38.5
7C: Behavioral tests of SIT AAV-DIO-shGFP (n = 15) AAV-DIO-shPDGFRβ (n =12)	Unpaired *t* test t = 2.8320, p = 0.0090		**Mean ± s.e.m.** AAV-DIO-shGFP 1.247 ± 0.139 AAV-DIO-shPDGFβ 0.517 ± 0.230
7D: Behavioral tests of TST AAV-DIO-shGFP (n = 15) AAV-DIO-shPDGFRβ (n=12)	Unpaired t test t = 2.0690, p = 0.0490		**Mean ± s.e.m.** AAV-DIO-shGFP 137.9 ± 11.5 AAV-DIO-shPDGFβ 170.2 ± 9.9
7E: Behavioral tests of FST AAV-DIO-shGFP (n = 15) AAV-DIO-shPDGFRβ (n =12)	Unpaired t test t = 2.2650, p = 0.0324		**Mean ± s.e.m.** AAV-DIO-shGFP 96.0 ± 11.3 AAV-DIO-shPDGFβ 132.2 ± 10.9
7F: Behavioral tests of OFT AAV-DIO-shGFP (n = 15) AAV-DIO-shPDGFRβ (n =12)	Unpaired t test t = 0.1951, p = 0.8469		**Mean ± s.e.m.** AAV-DIO-GFP 31.28 ± 2.98 AAV-DIO-shPDGFβ 32.11 ± 2.94
7H: Behavioral tests of FST	Two-way ANOVA Treatment: F (1,47) =	Bonferroni's *post hoc* test	**Mean ± s.e.m.**

AAV-DIO-shGFP + Vehicle (n = 13) AAV-DIO-shGFP + PDGF-BB (n = 14) AAV-DIO-shPDGFRβ + Vehicle (n = 12) AAV-DIO-shPDGFRβ + PDGF-BB (n = 12)	0.4228, $p = 0.5187$ Virus: $F_{(1,47)} = 14.8400$, $p = 0.0004$ Treatment × Virus: $F_{(1,47)} = 7.9790$, $p = 0.0069$	AAV-DIO-shGFP + Vehicle versus AAV-DIO-shPDGFRβ + Vehicle, $p = 0.9496$ AAV-DIO-shGFP + PDGF-BB versus AAV-DIO-shPDGFRβ + PDGF-BB, $p < 0.001$ AAV-DIO-shGFP + Vehicle versus AAV-DIO-shGFP + PDGF-BB, $p = 0.0295$ AAV-DIO-shPDGFRβ + Vehicle versus AAV-DIO-shPDGFRβ + PDGF-BB, $p = 0.2833$	AAV-DIO-shGFP + Vehicle 120.7 ± 4.8 AAV-DIO-shGFP + PDGF-BB 94.9 ± 8.7 AAV-DIO-shPDGFRβ + Vehicle 128.3 ± 5.9 AAV-DIO-shPDGFRβ + PDGF-BB 144.5 ± 9.2
7I: Behavioral tests of OFT AAV-DIO-shGFP + Vehicle (n = 13) AAV-DIO-shGFP + PDGF-BB (n = 14) AAV-DIO-shPDGFRβ + Vehicle (n = 12) AAV-DIO-shPDGFRβ + PDGF-BB (n = 12)	Two-way ANOVA Treatment: $F_{(1,47)} = 0.4061$, $p = 0.5271$ Virus: $F_{(1,47)} = 2.8470$, $p = 0.0982$ Treatment × Virus: $F_{(1,47)} = 0.04302$, $p = 0.8366$	Bonferroni's *post hoc* test AAV-DIO-shGFP + Vehicle versus AAV-DIO-shPDGFRβ + Vehicle, $p = 0.3810$ AAV-DIO-shGFP + PDGF-BB versus AAV-DIO-shPDGFRβ + PDGF-BB, $p = 0.5929$ AAV-DIO-shGFP + Vehicle versus AAV-DIO-shGFP + PDGF-BB, $p > 0.9999$ AAV-DIO-shPDGFRβ + Vehicle versus AAV-DIO-shPDGFRβ + PDGF-BB, $p > 0.9999$	**Mean ± s.e.m.** AAV-DIO-shGFP + Vehicle 42.34 ± 2.50 AAV-DIO-shGFP + PDGF-BB 40.02 ± 3.30 AAV-DIO-shPDGFRβ + Vehicle 37.14 ± 2.53 AAV-DIO-shPDGFRβ + PDGF-BB 35.96 ± 2.31
7K: Quantification of the number of BrdU positive cells	Two-way ANOVA	Bonferroni's *post hoc* test	**Mean ± s.e.m.**

AAV-DIO-shGFP + Vehicle (n = 3) AAV-DIO-shGFP + PDGF-BB (n = 4) AAV-DIO-shPDGFRβ + Vehicle (n = 3) AAV-DIO-shPDGFRβ + PDGF-BB (n =4)	Treatment: $F\ (1,10) = 0.3994$, $p = 0.5416$ Virus: $F\ (1,10) = 5.8770$, $p = 0.0358$ Treatment × Virus: $F\ (1,10) = 15.8800$, $p = 0.0026$	AAV-DIO-shGFP + Vehicle versus AAV-DIO-shPDGFRβ + Vehicle, $p = 0.6523$ AAV-DIO-shGFP + PDGF-BB versus AAV-DIO-shPDGFRβ + PDGF-BB, $p = 0.0013$ AAV-DIO-shGFP + Vehicle versus AAV-DIO-shGFP + PDGF-BB, $p = 0.0170$ AAV-DIO-shPDGFRβ + Vehicle versus AAV-DIO-shPDGFRβ + PDGF-BB, $p = 0.0784$	AAV-DIO-shGFP + Vehicle 1827.0 ± 68.9 AAV-DIO-shGFP + PDGF-BB 3448.0 ± 541.0 AAV-DIO-shPDGFRβ + Vehicle 2375.0 ± 101.8 AAV-DIO-shPDGFRβ + PDGF-BB 1198.0 ± 227.7
7L: Quantification of the number of BrdU/Sox2/GFAP positive NSCs AAV-DIO-shGFP + Vehicle (n = 3) AAV-DIO-shGFP + PDGF-BB (n = 4) AAV-DIO-shPDGFRβ + Vehicle (n = 3) AAV-DIO-shPDGFRβ + PDGF-BB (n = 4)	Two-way ANOVA Treatment: $F\ (1,10) = 1.0040$, $p = 0.3400$ Virus: $F\ (1,10) = 4.9730$, $p = 0.0498$ Treatment × Virus: $F\ (1,10) = 7.8620$, $p = 0.0187$	Bonferroni's *post hoc* test AAV-DIO-shGFP + Vehicle versus AAV-DIO-shPDGFRβ + Vehicle, $p > 0.9999$ AAV-DIO-shGFP + PDGF-BB versus AAV-DIO-shPDGFRβ + PDGF-BB, $p = 0.0065$ AAV-DIO-shGFP + Vehicle versus AAV-DIO-shGFP + PDGF-BB, $p = 0.0453$ AAV-DIO-shPDGFRβ + Vehicle versus AAV-DIO-shPDGFRβ + PDGF-BB, $p = 0.4629$	**Mean ± s.e.m.** AAV-DIO-shGFP + Vehicle 256.7 ± 32.83 AAV-DIO-shGFP + PDGF-BB 533.0 ± 92.3 AAV-DIO-shPDGFRβ + Vehicle 298.3 ± 83.7 AAV-DIO-shPDGFRβ + PDGF-BB 167.5 ± 50.1
7M: Quantification of the number of Sox2/GFAP positive NSCs	Two-way ANOVA	Bonferroni's *post hoc* test	**Mean ± s.e.m.**

AAV-DIO-shGFP + Vehicle (n = 3) AAV-DIO-shGFP + PDGF-BB (n = 4) AAV-DIO-shPDGFRβ + Vehicle (n = 3) AAV-DIO-shPDGFRβ + PDGF-BB (n = 4)	Treatment: F (1,10) = 1.5410, p = 0.2428 Virus: F (1,10) = 1.2820, p = 0.2839 Treatment × Virus: F (1,10) = 1.5900, p = 0.2359	AAV-DIO-shGFP + Vehicle versus AAV-DIO-shPDGFRβ + Vehicle, p = 0.2145 AAV-DIO-shGFP + PDGF-BB versus AAV-DIO-shPDGFRβ + PDGF-BB, p > 0.9999 AAV-DIO-shGFP + Vehicle versus AAV-DIO-shGFP + PDGF-BB, p = 0.2890 AAV-DIO-shPDGFRβ + Vehicle versus AAV-DIO-shPDGFRβ + PDGF-BB, p > 0.9999	AAV-DIO-shGFP + Vehicle 8067.0 ± 34.8 AAV-DIO-shGFP + PDGF-BB 6115.0 ± 539.2 AAV-DIO-shPDGFRβ + Vehicle 6200.0 ± 595.3 AAV-DIO-shPDGFRβ + PDGF-BB 6215.0 ± 1127.0
7N: The ratio of aNSCs to qNSCs AAV-DIO-shGFP + Vehicle (n = 3) AAV-DIO-shGFP + PDGF-BB (n = 4) AAV-DIO-shPDGFRβ + Vehicle (n = 3) AAV-DIO-shPDGFRβ + PDGF-BB (n = 4)	Two-way ANOVA Treatment: F (1,10) = 1.8670, p = 0.2017 Virus: F (1,10) = 3.5670, p = 0.0883 Treatment × Virus: F (1,10) = 8.7410, p = 0.0144	Bonferroni's *post hoc* test AAV-DIO-shGFP + Vehicle versus AAV-DIO-shPDGFRβ + Vehicle, p = 0.9921 AAV-DIO-shGFP + PDGF-BB versus AAV-DIO-shPDGFRβ + PDGF-BB, p = 0.0082 AAV-DIO-shGFP + Vehicle versus AAV-DIO-shGFP + PDGF-BB, p = 0.0242 AAV-DIO-shPDGFRβ + Vehicle versus AAV-DIO-shPDGFRβ + PDGF-BB, p = 0.5742	**Mean ± s.e.m.** AAV-DIO-shGFP + Vehicle 1.00 ± 0.12 AAV-DIO-shGFP + PDGF-BB 2.91 ± 0.69 AAV-DIO-shPDGFRβ + Vehicle 1.47 ± 0.31 AAV-DIO-shPDGFRβ + PDGF-BB 0.77 ± 0.16
S2C: Behavioral tests of SIT Control (n = 13)	Unpaired *t* test t = 11.0700,		**Mean ± s.e.m.**

CSDS (n =12)	$p < 0.001$		Control 1.884 ± 0.104 CSDS 0.502 ± 0.064
S2D: Behavioral tests of SPT Control (n = 13) CSDS (n =12)	Unpaired *t* test t = 6.2040, $p < 0.001$		**Mean ± s.e.m.** Control 87.97 ± 1.58 CSDS 52.40 ± 5.73
S3B: Behavioral effects of the chemogenetic inhibition of MS-DG neurons in the TST Vehicle (n = 14) CNO (n = 17)	Unpaired *t* test t = 2.7080, p=0.0112		**Mean ± s.e.m.** Vehicle 137.4 ± 7.6 CNO 102.5 ± 9.9
S3C: Behavioral effects of the chemogenetic inhibition of MS-DG neurons in the FST Vehicle (n = 14) CNO (n = 17)	Unpaired *t* test t = 2.0960, p = 0.0449		**Mean ± s.e.m.** Vehicle 131.1 ± 8.2 CNO 106.6 ± 8.2
S3D: Behavioral effects of the chemogenetic inhibition of MS-DG neurons in the OFT Vehicle (n = 14) CNO (n = 17)	Unpaired *t* test t = 0.4048, p = 0.6886		**Mean ± s.e.m.** Vehicle 38.69 ± 2.23 CNO 39.89 ± 1.96
S4B: Patch clamp recording from neurons expressing hM4Di-mCherry in the MS Control (n = 4 cells) CNO (n = 4 cells)	Unpaired *t* test t = 4.8000, p = 0.0030		**Mean ± s.e.m.** Control 9.5 ± 0.6 CNO 4.8 ± 0.8
S4D: Patch clamp recording from neurons expressing hM3Dq-mCherry in the MS	Two-tailed paired *t* test		**Mean ± s.e.m.**

CNO (n = 4 cells)	t = 14.8100, P = 0.0007		Before-CNO -63.80 ± 4.60 After-CNO -40.50 ± 4.23
S5B: Behavioral effects of the chemogenetic activation of MS-DG neurons in the SIT Vehicle (n = 8) CNO (n = 10)	Unpaired *t* test t = 1.1970, p = 0.2486		**Mean ± s.e.m.** Vehicle 1.251 ± 0.136 CNO 1.688 ± 0.306
S5C: Behavioral effects of the chemogenetic activation of MS-DG neurons in the SPT Vehicle (n = 8) CNO (n = 11)	Unpaired *t* test t = 0.2279, p = 0.8225		**Mean ± s.e.m.** Vehicle 71.24 ± 8.09 CNO 73.04 ± 3.40
S5D: Behavioral effects of the chemogenetic activation of MS-DG neurons in the TST Vehicle (n = 8) CNO (n = 11)	Unpaired *t* test t = 1.7330, p = 0.1013		**Mean ± s.e.m.** Vehicle 143.1 ± 9.5 CNO 112.2 ± 13.5
S5E: Behavioral effects of the chemogenetic activation of MS-DG neurons in the FST Vehicle (n = 8) CNO (n = 11)	Unpaired *t* test t = 0.2470, p = 0.8079		**Mean ± s.e.m.** Vehicle 101.8 ± 9.0 CNO 106.0 ± 13.1
S5F: Behavioral effects of the chemogenetic activation of MS-DG neurons in the OFT Vehicle (n = 8) CNO (n = 11)	Unpaired *t* test t = 0.2452, p = 0.8093		**Mean ± s.e.m.** Vehicle 21.71 ± 2.97 CNO 22.60 ± 2.22

S6C: PDGF-BB mRNA expression in the DG after CSDS Control (n = 10) CSDS (n = 13)	Unpaired *t* test t = 3.0480, p = 0.0061		**Mean ± s.e.m.** Control 1.000 ± 0.048 CSDS 0.759 ± 0.059
S6D: PDGF-BB protein levels in the DG as determined by ELISA after CSDS Control (n = 8) CSDS (n = 8)	Unpaired *t* test t = 2.6160, p = 0.0203		**Mean ± s.e.m.** Control 172.2 ± 6.2 CSDS 138.3 ± 11.4
S6E: PDGF-BB mRNA expression in the DG after inhibition of MS-DG projection neurons Control + Vehicle (n = 10) Control + CNO (n = 10) CSDS + Vehicle (n = 14) CSDS + CNO (n = 16)	Two-way ANOVA Stress: F (1,46) = 5.3210, p = 0.0256 Treatment: F (1,46) = 11.1600, p = 0.0017 Stress × Treatment: F (1,46) = 6.5860, p = 0.0136	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0028 Control + CNO versus CSDS + CNO, p > 0.9999 Control + Vehicle versus Control + CNO, p > 0.9999 CSDS + Vehicle versus CSDS + CNO, p < 0.001	**Mean ± s.e.m.** Control + Vehicle 0.961 ± 0.088 Control + CNO 1.016 ± 0.064 CSDS + Vehicle 0.620 ± 0.063 CSDS + CNO 1.034 ± 0.062
S6F: PDGF-BB mRNA expression in the DG after stimulation MS-DG projection neurons Vehicle (n = 13) CNO (n = 14)	Unpaired *t* test t = 2.5680, p = 0.0166		**Mean ± s.e.m.** Vehicle 1.000 ± 0.055 CNO 0.839 ± 0.032
S6J: Behavioral test of TST	Unpaired *t* test		**Mean ± s.e.m.**

Vehicle (n = 14) CNO (n = 16)	t = 3.3810, p = 0.0021		Vehicle 141.9 ± 7.0 CNO 100.6 ± 9.6
S6K: Behavioral test of FST Vehicle (n = 14) CNO (n = 16)	Unpaired *t* test t = 3.6550, p = 0.0011		**Mean ± s.e.m.** Vehicle 77.8 ± 10.4 CNO 34.9 ± 6.1
S6L: Behavioral test of OFT Vehicle (n = 14) CNO (n = 16)	Unpaired *t* test t = 0.6239, p = 0.5377		**Mean ± s.e.m.** Vehicle 37.41 ± 2.25 CNO 39.94 ± 3.23
S6M: PDGF-BB mRNA expression in the DG after MS to DG inhibition in the Vgat-Cre mice Vehicle (n = 14) CNO (n = 16)	Unpaired *t* test t = 3.1000, p = 0.0044		**Mean ± s.e.m.** Vehicle 1.000 ± 0.059 CNO 1.425 ± 0.117
S7B: PDGF-BB protein levels in the DG as determined by ELISA AAV-GFP (n = 7) AAV-PDGF-BB (n = 10)	Unpaired *t* test t =4.4140, p = 0.0005		**Mean ± s.e.m.** AAV-GFP 164.60 ± 14.73 AAV-PDGF-BB 265.60 ± 16.07
S8B: Time spent immobile in the FST Vehicle (n = 8) 0.0072 μg/mL (n = 8) 0.072 μg/mL (n = 8) 0.72 μg/mL (n = 7)	One-way ANOVA Treatment: F (3, 27) = 2.7560, p = 0.0618	Tukey's *post hoc* test Vehicle versus 0.0072 μg/mL, p = 0.4412 Vehicle versus 0.072 μg/mL, p = 0.6350 Vehicle versus 0.72 μg/mL, p = 0.0383 0.0072 μg/mL versus 0.072 μg/mL, p = 0.9881 0.0072 μg/mL versus 0.72 μg/mL, p = 0.5159	**Mean ± s.e.m.** Vehicle 136.1 ± 5.2 0.0072 μg/mL 110.3 ± 16.3 0.072 μg/mL 115.8 ± 15.0 0.72 μg/mL 85.7 ± 7.5

		0.072 μg/mL versus 0.72 μg/mL, p = 0.3422	
S8C: Locomotor activity measured by the total distance traveled by the WT mice with vehicle or PDGF-BB treatment Vehicle (n = 8) 0.0072 μg/mL (n = 8) 0.072 μg/mL (n = 8) 0.72 μg/mL (n = 7)	One-way ANOVA Treatment: F (3, 27) = 1.6110, p = 0.2099	Tukey's *post hoc* test Vehicle versus 0.0072 μg/mL, p = 0.4757 Vehicle versus 0.072 μg/mL, p = 0.9162 Vehicle versus 0.72 μg/mL, p = 0.9996 0.0072 μg/mL versus 0.072 μg/mL, p = 0.1775 0.0072 μg/mL versus 0.72 μg/mL, p = 0.4470 0.072 μg/mL versus 0.72 μg/ML, p = 0.9524	**Mean ± s.e.m.** Vehicle 32.60 ± 6.02 0.0072 μg/mL 42.10 ± 4.61 0.072 μg/mL 28.39 ± 3.81 0.72 μg/mL 31.93 ± 3.65
S9B: PDGF-BB protein levels in the DG as determined by ELISA LV-shGFP (n = 8) LV-shPDGF-BB (n = 8)	Unpaired *t* test t = 4.9140, p = 0.0002		**Mean ± s.e.m.** LV-shGFP 175.0 ± 15.8 LV-shPDGF-BB 90.5 ± 6.7
S9C: Behavioral effects of PDGF-BB knockdown in the SIT LV-shGFP (n = 6) LV-shPDGF-BB (n = 6)	Unpaired *t* test t = 0.8668, p = 0.4064		**Mean ± s.e.m.** LV-shGFP 1.252 ± 0.115 LV-shPDGF-BB 1.396 ± 0.120
S9D: Behavioral effects of PDGF-BB knockdown in the TST LV-shGFP (n = 6) LV-shPDGF-BB (n = 6)	Unpaired *t* test t = 0.3781, p = 0.7132		**Mean ± s.e.m.** LV-shGFP 134.0 ± 11.2

			LV-shPDGF-BB 139.5 ± 9.3
S9E: Behavioral effects of PDGF-BB knockdown in the FST LV-shGFP (n = 6) LV-shPDGF-BB (n = 6)	Unpaired *t* test t = 1.2080, p = 0.2547		**Mean ± s.e.m.** LV-shGFP 135.0 ± 8.9 LV-shPDGF-BB 122.8 ± 4.7
S9F: Behavioral effects of PDGF-BB knockdown in the OFT LV-shGFP (n = 6) LV-shPDGF-BB (n = 6)	Unpaired *t* test t = 0.09797, p = 0.9239		**Mean ± s.e.m.** LV-shGFP 43.76 ± 6.96 LV-shPDGF-BB 43.00 ± 3.51
S10C: Quantification of the number of BrdU positive cells Control + Vehicle (n = 4) Control + PDGF-BB (n = 4) CSDS + Vehicle (n = 3) CSDS + PDGF-BB (n = 4)	Two-way ANOVA Stress: F (1,11) = 2.7820, p = 0.1235 Treatment: F (1,11) = 45.0200, p < 0.001 stress × treatment interaction: F (1,11) = 5.1380, p = 0.0446	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0427 Control + PDGF-BB versus CSDS + PDGF-BB, p > 0.9999 Control + Vehicle versus Control + PDGF-BB, p = 0.0149 CSDS + Vehicle versus CSDS + PDGF-BB, p = 0.0002	**Mean ± s.e.m.** Control + Vehicle 2334.0 ± 124.7 Control + PDGF-BB 3693.0 ± 484.9 CSDS + Vehicle 1130.0 ± 15.28 CSDS + PDGF-BB 3876.0 ± 256.9
S10D: Quantification of the number of BrdU/DCX positive cells Control + Vehicle (n = 4) Control + PDGF-BB (n = 4) CSDS + Vehicle (n = 3)	Two-way ANOVA Stress: F (1,11) = 4.6700, p = 0.0536 Treatment: F (1,11) = 15.4500, p = 0.0024	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0474	**Mean ± s.e.m.** Control + Vehicle 1489.0 ± 58.5 Control + PDGF-BB 2038.0 ± 300.2

CSDS + PDGF-BB (n = 4)	Stress × Treatment: F (1,11) = 2.8500, p = 0.1195	Control + PDGF-BB versus CSDS + PDGF-BB, p > 0.9999 Control + Vehicle versus Control + PDGF-BB, p = 0.2543 CSDS + Vehicle versus CSDS + PDGF-BB, p = 0.0056	CSDS + Vehicle 546.7 ± 73.1 CSDS + PDGF-BB 1923.0 ± 326.7
S10F: Quantification of the number of BrdU/Sox2/GFAP positive NSCs Control + Vehicle (n = 4) Control + PDGF-BB (n = 4) CSDS + Vehicle (n = 3) CSDS + PDGF-BB (n = 4)	Two-way ANOVA, Stress: F (1,11) = 6.1920, p = 0.0301, Treatment: F (1,11) = 27.9000, p =0.0003 Stress × Treatment: F (1,11) = 4.2560, p = 0.0635	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0202 Control + PDGF-BB versus CSDS + PDGF-BB, p > 0.9999 Control + Vehicle versus Control + PDGF-BB, p = 0.0744 CSDS + Vehicle versus CSDS + PDGF-BB, p = 0.0008	**Mean ± s.e.m.** Control + Vehicle 335.0 ± 8.7 Control + PDGF-BB 467.5.0 ± 52.0 CSDS + Vehicle 147.7 ± 16.2 CSDS + PDGF-BB 450.0 ± 53.1
S10G: Quantification of the number of Sox2/GFAP positive NSCs Control + Vehicle (n = 4) Control + PDGF-BB (n = 4) CSDS + Vehicle (n = 3) CSDS + PDGF-BB (n = 4)	Two-way ANOVA Stress: F (1,11) = 0.1566, p = 0.6998 Treatment: F (1,11) = 0.009234, p = 0.9252 Stress × Treatment: F (1,11) = 1.5270, p = 0.2423	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.5800 Control + PDGF-BB versus CSDS + PDGF-BB, p > 0.9999 Control + Vehicle versus Control + PDGF-BB, p = 0.6962 CSDS + Vehicle versus CSDS + PDGF-BB, p = 0.9077	**Mean ± s.e.m.** Control + Vehicle 5913.0 ± 168.6 Control + PDGF-BB 6345.0 ± 202.1 CSDS + Vehicle 6442.0 ± 644.1 CSDS + PDGF-BB 6072.0 ± 283.3

S10H: The ratio of aNSCs to qNSCs Control + Vehicle (n = 4) Control + PDGF-BB (n = 4) CSDS + Vehicle (n = 3) CSDS + PDGF-BB (n = 4)	Two-way ANOVA Stress: F (1,11) = 8.1240, p = 0.0158 Treatment: F (1,11) = 32.9000, p = 0.0001 Stress × Treatment: F (1,11) = 8.1270, p = 0.0158	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0051 Control + PDGF-BB versus CSDS + PDGF-BB, p > 0.9999 Control + Vehicle versus Control + PDGF-BB, p = 0.1145 CSDS + Vehicle versus CSDS + PDGF-BB, p = 0.0002	**Mean ± s.e.m.** Control + Vehicle 1.00 ± 0.02 Control + PDGF-BB 1.30 ± 0.15 CSDS + Vehicle 0.40 ± 0.01 CSDS + PDGF-BB 1.30 ± 0.12
S10K: Quantification of the branch number Control + Vehicle (n = 27) Control + PDGF-BB (n = 24) CSDS + Vehicle (n = 26) CSDS + PDGF-BB (n = 24)	Two-way ANOVA Stress: F (1,97) = 3.4990, p = 0.0644 Treatment: F (1,97) = 19.9200, p < 0.001 Stress × Treatment: F (1,97) = 6.8190, p = 0.0105	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0032 Control + PDGF-BB versus CSDS + PDGF-BB, p > 0.9999 Control + Vehicle versus Control + PDGF-BB, p = 0.3830 CSDS + Vehicle versus CSDS + PDGF-BB, p < 0.001	**Mean ± s.e.m.** Control + Vehicle 4.7 ± 0.3 Control + PDGF-BB 5.3 ± 0.4 CSDS + Vehicle 3.2 ± 0.3 CSDS + PDGF-BB 5.5 ± 0.4
S10L: Quantification of the dendritic length Control + Vehicle (n = 27) Control + PDGF-BB (n = 24) CSDS + Vehicle (n = 26) CSDS + PDGF-BB (n = 24)	Two-way ANOVA Stress: F (1, 97) = 1.1470, p = 0.2869 Treatment: F (1,97) = 16.8100, p < 0.001 Stress × Treatment: F (1,97) = 18.4500, p < 0.001	Bonferroni's *post hoc* test Control + Vehicle versus CSDS + Vehicle, p = 0.0004 Control + PDGF-BB versus CSDS + PDGF-BB, p = 0.0567 Control + Vehicle versus Control + PDGF-BB, p > 0.9999	**Mean ± s.e.m.** Control + Vehicle 635.4 ± 32.4 Control + PDGF-BB 628.9 ± 30.1 CSDS + Vehicle 455.8 ± 35.9 CSDS + PDGF-BB 736.8 ± 34.5

		CSDS + Vehicle versus CSDS + PDGF-BB, $p < 0.001$	
S11A: The protein levels of PDGFRβ in the DG after CSDS Control (n = 7) CSDS (n = 6)	Unpaired *t* test $t = 3.3470$, $p = 0.0065$		**Mean ± s.e.m.** CSDS 1.00 ± 0.06 CSDS 0.67 ± 0.08
S11E: Quantification of PDGFRβ neurons colocalized with GFP AAV-DIO-shGFP (n = 9) AAV-DIO-shPDGFRβ (n = 9)	Unpaired *t* test $t = 6.7530$, $p < 0.001$		**Mean ± s.e.m.** AAV-DIO-shGFP 22.510 ± 1.263 AAV-DIO shPDGFRβ 12.000 ± 0.910
S11G: Quantification of the number of BrdU positive cells AAV-DIO-shGFP (n = 4) AAV-DIO-shPDGFRβ (n =4)	Unpaired *t* test $t = 4.2070$, $p = 0.0056$		**Mean ± s.e.m.** AAV-DIO-shGFP 2489.0 ± 309.1 AAV-DIO-shPDGFβ 1081.0 ± 127.9
S11H: Quantification of the number of BrdU/Sox2/GFAP positive NSCs AAV-DIO-shGFP (n = 4) AAV-DIO-shPDGFRβ (n =4)	Unpaired *t* test $t = 3.6070$, $p = 0.0113$		**Mean ± s.e.m.** AAV-DIO-shGFP 331.5 ± 35.8 AAV-DIO-shPDGFβ 173.3 ± 25.4
S11I: The ratio of aNSCs to qNSCs AAV-DIO-shGFP (n = 4) AAV-DIO-shPDGFRβ (n =4)	Unpaired *t* test $t = 2.4610$, $p = 0.0491$		**Mean ± s.e.m.** AAV-DIO-shGFP 1.00 ± 0.21

			AAV-DIO-shPDGFβ 0.45 ± 0.08
S11J: Quantification of the number of Sox2/GFAP positive NSCs AAV-DIO-shGFP (n = 4) AAV-DIO-shPDGFRβ (n =4)	Unpaired *t* test t = 0.5874, p = 0.5783		**Mean ± s.e.m.** AAV-DIO-shGFP 6490.0 ± 819.9 AAV-DIO-shPDGFβ 7003.0 ± 300.8
S12F: The protein levels of JAK2 in the DG after PDGF-BB treatment Vehicle (n = 10) PDGF-BB (n = 10)	Unpaired *t* test t = 3.4140, p = 0.0031		**Mean ± s.e.m.** Vehicle 1.00 ± 0.05 PDGF-BB 1.38 ± 0.10
S12G: The protein levels of STAT3 in the DG after PDGF-BB treatment Vehicle (n = 10) PDGF-BB (n = 10)	Unpaired *t* test t = 3.6090, p = 0.0020		**Mean ± s.e.m.** Vehicle 1.00 ± 0.06 PDGF-BB 1.30 ± 0.06
S12I: The protein levels of JAK2 in the DG after PDGF-BB treatment Vehicle (n = 9) PDGF-BB (n = 9)	Unpaired *t* test t = 3.1210, p = 0.0066		**Mean ± s.e.m.** Vehicle 1.00 ± 0.06 PDGF-BB 1.52 ± 0.16
S12J: The protein levels of STAT3 in the DG after PDGF-BB treatment Vehicle (n = 9) PDGF-BB (n = 9)	Unpaired *t* test t = 2.6550, p = 0.0173		**Mean ± s.e.m.** Vehicle 1.00 ± 0.03 PDGF-BB 1.18 ± 0.06