Figure S1

A
Cerebral cortex
Corpus callosum
Striatum
NG2-Cre
DTR^NG2
B
Number of NG2-positive cells per section
80
60
40
20
0
****
****
****
NG2-Cre
DTR^NG2
NG2 Cre
DTR^NG2
NG2 Cre
DTR^NG2
Cortex
Corpus callosum
Striatum

Figure S2

A
NG2-Cre
DTRNG2
Positive CTRL
Negative CTRL
B
ng Evans blue/g brain tissue
NS
NG2-Cre
DTRNG2
C
Positive Control
NG2-Cre
DTRNG2
Lectin
IgG
D
% Area of lectin immunoreactivity
CTRL
DTRNG2
Saline
LPS
E
Rel. PDGFRβ mRNA levels (fold)
NS
NG2-Cre
DTRNG2
F
NG2-Cre+Saline
DTRNG2+Saline
NG2-Cre+LPS
DTRNG2+LPS
Rel. mRNA levels (fold)
NS
Rag1
Lck
IFNγ
CSF

Figure S3

A
Saline
LPS
CTRL
DTRNG2
CTRL
DTRNG2
NeuN
GFAP
B
Number of NeuN-positive cell per section
400
300
200
100
0
CTRL
DTRNG2
Saline
LPS
C
% Area of GFAP immunoreactivity
25
20
15
10
5
0
CTRL
DTRNG2
Saline
LPS

Figure S4

A
Cerebrocortex
Striatum
Hippocampus
Substantia Nigra
Olig1-Cre+Saline
DTR^Olig1+Saline
Olig1-Cre+LPS
DTR^Olig1+LPS
Rel. mRNA levels (fold)
Rel. mRNA level (fold)
Olig1
NG2
B
Cerebrocortex
Corpus callosum
Striatum
Olig1-Cre
DTR^Olig1
NG2
C
Number of NG2+ cells
Olig1-Cre
DTR^OLIG1
Cortex
CC
SN
D
Olig1-Cre
DTR^Olig1
Olig1
β-actin
Rel. Olig1 protein levels (fold)
CTRL
DTR^OLIG1
E
Positive Control
Olig1-Cre
DTR^Olig1
Lectin
IgG
F
CTRL
DTR^Olig1
% Area of lectin immunoreactivity
Saline
LPS
G
Olig1-Cre
DTR^Olig1
GFAP
% Area with GFAP immunoreactivity
H
CTRL-Saline
DTR^Olig1-Saline
CTRL-LPS
DTR^Olig1-LPS
NeuN
MBP
I
Number of NeuN-positive cells per section
J
% Area of MBP immunoreactivity

Figure S5

A
Cerebrocortex
Corpus Callosum
Striatum
PLP1-CreER
DTRPlp1-CreER
CC1
B
PLP1-CreER
DTRPLP1-CreER
Number of CC1+ cells
CTX
CC
C
Hippocampus
PLP1-CreER + Saline
DTRPLP1-CreER + Saline
PLP1-CreER + LPS
DTRPLP1-CreER + LPS
Rel. mRNA levels (fold)
NG2
OLIG1
MBP
CX3CR1
ALDH1L1
NeuN
D
Cerebrocortex
Striatum
Substantia Nigra
Plp1-CreER
DTRPlp1-CreER
NG2
E
PLP1-CreER
DTRPLP1-CreER
Number of NG2+ cells
NS
CTX
STR
SN

Figure S6

A

CTRL-Saline
DTR^{NG2}-Saline
Reads Count
800
600
400
200
0
Cxcl1
Cxcl10
Ccl17
Ccl2
Ccl2l1b
Ccl3
Il12rb1
Il20rb
Tlr2
Tlr7
Tnfrsf10b
Tnfrsf12a
Tnfsf8

B

CTRL-LPS
DTR^{NG2}-LPS
Reads Count
Il10ra
Il12b
Il12rb1
Il1a
Il1b
Il1rn
Il6
Ccl17
Ccl2
Ccl3
Ccl4
Ccl5
Ccl7
Ccrl2
Cxcl1
Cxcl2
Tnf
Tnfaip2
Tnfaip3
Tnfrsf10b
Tnfrsf12a
Tnfrsf1b
Nfkbia
Nfkbib
Nfkbie
Nfkbil1
Nfkbiz

Figure S7

A
CTRL
DTR^Olig1
Saline
LPS
B
CTRL
DTR^olig1
Everage IBA1-ir cell per slice
Saline
LPS
C
Process length/cell
D
Endpoint per cell

Figure S8

A
CTRL-Saline
DTR^NG2-Saline
CTRL-LPS
DTR^NG2-LPS
Rel. mRNA levels
P2ry12
Cx3cr1
Tmem119
P2ry13
Sall1
Trem2
Csf1r
Aif1
B
Control CM
NG2 glia CM
Rel. mRNA levels
P2ry12
Olfml3
P2ry13
Sall1
Trem2
Sall3
Tmem119
Ccr5
Gpr34
Fcrl2

Figure S9

A

Markers of M1-like

Markers of M2-like

B

Figure S10

A
CD11B-positive microglia
CTRL LPS
DTR^NG2 LPS
Rel. mRNA levels
IL-1β
IL-12β
IL-6
TNF-α
iNOS
CX3CR1
B
CD11B-positive microglia
CTRL LPS
DTR^Olig1 LPS
Rel. mRNA levels
C
Pre
CD11B-ir microgila
Rel. mRNA levels
NG2
OLIG1
CX3CR1
CD11B
ALDH1L1
NeuN
D
Pre
CD11B-ir microgila
Rel. mRNA levels

Figure S11

A
CTRL
LY2109761
TGF-β2
TGF-β2 +LY2109761
Rel. mRNA levels (fold)
Sall1
P2ry12
P2ry13
Csf1r
Tgfbr1
Trem2
Tgfbr2
Aif1
B
Scrambled siRNA
siTGFBR2 #1
siTGFBR2 #2
siTGFBR2 #3
Rel. mRNA levels (fold)
Tgfbr2
Cx3cr1
Tmem119
P2ry12
p2ry13
Csf1r
Tgfβr1
Sall1
Trem2
Aif1

Figure S12

A
NG2
TGF-β2
Merge
CTRL-Saline
DTROlig1-Saline
CTRL-MPTP
DTROlig1-MPTP
CC
B
CTRL
DTROlig1
Number of TGF-β2+ cells per section
***
*
Saline
MPTP

Figure S13

a
NORMAL
PATHOGENIC
NG2 glia
Neuron
TGF−β2
TGFβR1/2
CX3CR1
Resting microglia
Ageing
Insults
TGF−β2
?
TGFβR1/2
CX3CR1
?
Pro-inflammatory
mediators
Activated microglia
b
TGF-β2
TGFβR1
TGFβR2
CX3CR1
Plasma
membrane
SMAD2
P
SMAD4
?
CX3CR1
expression
pro-inflammatory
gene expression
SMAD2
P
SMAD4
CX3CR1
expression
pro-inflammatory
gene expression