Supplementary Material

Table 1

Results of Pearson correlation (Pearson r and p-value) of lesion size (MRI P1 and histology P29) and sensorimotor deficit as determined by the number of hindlimb drops (rotating beam test), paw drags (cylinder test), and foot faults (grid walk test) at P3 and P28, respectively.

		Lesion size MRI P1 vs. histology P29	**Lesion size MRI P7 vs. histology P29**	**Brain tissue loss vs. lesion area**
***GFAP*$^{-/-}$ *Vim*$^{-/-}$**	r	0.827	0.874	0.722
	p	0.014*	0.010*	0.043*
WT	r	0.845	0.712	0.928
	p	0.002**	0.021*	0.001***
		Lesion size MRI P1 vs. paw drag P3	**Lesion size MRI P1 vs. hindlimb drop P3**	**Lesion size MRI P1 vs. foot fault P3**
	r	0.397	0.073	0.137
	p	0.378	0.852	0.706
		Paw drag P28 vs. lesion size P28	**Hindlimb drop P28 vs. lesion size P28**	**Foot fault P28 vs. lesion size P28**
	r	-0.339	-0.208	-0.339
	p	0.257	0.441	0.256

Table 2 Top 21 connections from selected regions.

L - left and R - right hemisphere based on connectivity strength (edge weight).

	SSp-ul (L - left hemisphere)				SSp-ul (R - right hemisphere)			
	GFAP-/-Vim-/-		WT		GFAP-/-Vim-/-		WT	
	Baseline	*P28*	*Baseline*	*P28*	*Baseline*	*P28*	*Baseline*	*P28*
low	L MB	R SSp-bfd	L LSX	L STRd	L OLF	L HIP	L DORpm	R SSp-ll
low	L LSX	R HIP	L SSp-m	L SSp-m	R PTLp	R SSp-n	R mfbs	L HIP
low	L SSp-tr	L VIS	R STRd	R HY	R lfbst	L SSp-n	L mfbs	R DORsm
low	L SSp-n	R ACA	R cc	R PAL	R SSs	R STRd	L HIP	R HIP
low	L HIP	L HIP	L HIP	R cst	R SSp-bfd	R ACA	R SSp-m	R SSp-bfd
low	R mfbs	R SSp-ul	R SSp-un	L mfbs	R MOs	R mfbs	R DORpm	R AUD
low	R ACA	R cc	L ACA	R ACA	L SSp-ul	R ILA	L ACA	L DORpm
middle	R LSX	L STRd	R DORpm	L DORpm	R mfbs	R SSp-bfd	L STRd	L mfbs
middle	R DORpm	L MOp	L SSp-bfd	L ACA	R SSp-m	L SSp-ul	L LSX	R SSp-n
middle	L MOs	L ACA	R SSp-ll	R mfbs	R HIP	R MOp	L MOp	R DORpm
middle	L DORsm	R DORpm	L DORpm	R DORsm	L SSp-ll	L MOp	R SSp-bfd	L LSX
middle	L DORpm	L DORpm	L mfbs	R HIP	R cc	R VIS	R SSp-ll	R mfbs
middle	L SSp-bfd	R STRd	L STRd	L SSp-bfd	R MB	R DORpm	R cc	R ACA
middle	L cc	L SSp-n	R mfbs	L cc	R RSP	R MB	R ACA	R MOp
high	L STRd	L mfbs	L SSp-ll	L MOp	R SSp-n	L STRd	R SSp-n	L cc
high	L MOp	L SSp-bfd	R ACA	R STRd	L RSP	R cc	L cc	L STRd
high	L ACA	L cc	R SSp-ul	R DORpm	R STRd	L SSp-ll	L SSp-ul	R cc
high	L mfbs	L SSp-m	L MOp	R cc	R MOp	R RSP	R MOp	R STRd
high	L SSp-ll	L SSp-un	L cc	L SSp-ll	R SSp-ll	R SSp-ll	R STRd	L ACA
high	L SSp-un	L SSp-ll	L SSp-un	L SSp-un	R SSp-un	R SSp-un	R SSp-un	R SSp-un
	SSp-ll (L - left hemisphere)				SSp-ll (R - right hemisphere)			
	GFAP-/-Vim-/-		WT		GFAP-/-Vim-/-		WT	
	Baseline	*P28*	*Baseline*	*P28*	*Baseline*	*P28*	*Baseline*	*P28*
low	R cc	R SSp-ll	R STRd	R SSp-ll	R DORsm	R PTLp	R STRd	L SSp-bfd
low	R ACA	R STRd	R cc	L STRd	R RHP	L MB	L SSp-bfd	L RSP
low	R STRd	L DORsm	R ACA	R STRd	L SSp-bfd	R STRd	R SSs	L mfbs
low	R RSP	L PTLp	L mfbs	R PAL	R MB	L VIS	L HIP	R DORsm
low	R mfbs	L ACA	R mfbs	R LSX	L DORpm	L RSP	R cc	R MB
low	L ACA	R MOp	L RSP	R DORsm	L STRv	R RHP	L SSp-un	L MB
low	L RSP	L mfbs	R MOp	R HIP	R SSs	R DORsm	R SSp-un	R SSp-un
middle	L MB	R mfbs	R SSp-ul	L ACA	R MOs	L MOs	L MOp	R mfbs
middle	L DORpm	L cc	L SSp-tr	L SSp-un	R cc	L cc	L mfbs	R HIP
middle	L cc	R ACA	L HIP	R SSp-bfd	R HIP	R cc	R ACA	R ACA
middle	L MOp	L SSp-n	L MOp	R mfbs	R DORpm	R ACA	R SSp-bfd	L SSp-ll
middle	L SSp-un	L AUD	R DORpm	L RSP	R RSP	L AUD	R mfbs	L HIP
middle	L SSp-bfd	R DORpm	R SSp-un	R ACA	R SSp-n	R mfbs	L ACA	L cc
middle	L HIP	L SSp-bfd	L cc	L SSp-bfd	R MOp	L ACA	L DORpm	L DORpm
high	R MB	L MOp	R SSp-bfd	R cc	R STRd	L SSp-ll	R MOp	L ACA
high	R SSp-ll	L STRd	L DORpm	L DORpm	R SSp-bfd	R MOp	R DORpm	R SSp-bfd
high	R DORpm	L DORpm	L SSp-bfd	L cc	L RSP	L SSp-bfd	L cc	L STRd
high	R HIP	R SSp-ul	R SSp-ll	R DORpm	L SSp-ll	L MOp	L SSp-ll	R RSP
high	L mfbs	R cc	L SSp-un	L MOp	R SSp-un	R SSp-un	L SSp-ul	R DORpm
high	L SSp-ul	L SSp-ul	L SSp-ul	L SSp-ul	R SSp-ul	R SSp-ul	R SSp-ul	R SSp-ul

Table 2 continued.

	SSp-un (L - left hemisphere)				SSp-un (R - right hemisphere)			
	GFAP-/-Vim-/-		WT		GFAP-/-Vim-/-		WT	
	Baseline	*P28*	*Baseline*	*P28*	*Baseline*	*P28*	*Baseline*	*P28*
low	R cst	L STRd	R SSp-bfd	R SSp-ul	L HIP	R HIP	L SSp-bfd	R HY
low	L HIP	R SSp-ul	L MOp	R SSs	R SSs	R MOs	R HY	R LSX
low	L PAL	L DORpm	R SSp-ll	R lfbst	L OLF	R MB	R SSp-ll	R AUD
low	R ACA	L VIS	R MOp	L ACA	L SSp-tr	L VIS	L HIP	L DORpm
low	L SSp-tr	R SSs	R STRd	L mfbs	L SSp-ul	R RHP	L STRd	L HIP
low	R DORsm	R STRd	L LSX	R PAL	R DORpm	L STRd	L DORpm	R mfbs
low	L ACA	R MB	L SSp-n	L SSp-n	R MB	R cc	R MOp	L MOp
middle	R LSX	R SSp-bfd	R SSp-ul	R DORsm	L STRv	L DORpm	R mfbs	L LSX
middle	L DORsm	L MB	R ACA	L HIP	L RSP	L SSp-tr	R SSp-n	L cc
middle	R mfbs	L SSp-ll	R SSp-un	R STRd	R RSP	R STRd	L SSp-un	R ACA
middle	R PAL	R cc	R cc	R HY	R cc	L SSp-n	R cc	R HIP
middle	L mfbs	L ACA	L STRd	L SSp-ll	R mfbs	L SSp-bfd	L SSp-ul	L mfbs
middle	L MOp	L HIP	R DORpm	R mfbs	R HIP	R RSP	L mfbs	R DORpm
middle	L STRd	L cc	L DORpm	R HIP	R RHP	R ILA	L ACA	L STRd
high	L SSp-n	L SSp-m	L mfbs	L DORpm	R SSp-n	R SSp-tr	R DORpm	R SSp-n
high	L DORpm	L SSs	R mfbs	L cc	R MOp	R ACA	L cc	R SSp-bfd
high	L cc	R mfbs	L SSp-ll	R cc	R STRd	R SSp-bfd	R ACA	R cc
high	L SSp-ll	L SSp-bfd	L SSp-bfd	R DORpm	R SSp-ll	R SSp-n	R STRd	R STRd
high	L SSp-bfd	L SSp-n	L cc	L SSp-bfd	R SSp-bfd	R SSp-ll	R SSp-bfd	L ACA
high	L SSp-ul	L SSp-ul	L SSp-ul	L SSp-ul	R SSp-ul	R SSp-ul	R SSp-ul	R SSp-ul
	DORsm (L - left hemisphere)				DORsm (R - right hemisphere)			
			WT				WT	
	Baseline	*P28*	*Baseline*	*P28*	*Baseline*	*P28*	*Baseline*	*P28*
low	L TEa	L LSX	R SSp-un	R MB	L SSp-ll	R cst	R SSp-un	R ACA
low	L mfbs	R MB	R SSp-ul	L AUD	L PTLp	L MOp	R SSp-ul	L ACA
low	R SSp-tr	L cst	L MOp	R PAL	R mfbs	L AUD	R AUD	R AUD
low	L SSp-un	L AUD	R HIP	L MB	L SSp-bfd	L SSp-bfd	R cst	R PAL
low	L PAL	L MB	L ACA	R cc	L RSP	R MB	L SSp-ul	R cst
low	L SSp-ll	L MOp	R STRd	L lfbst	L SSp-un	L TEa	R STRd	L SSp-bfd
low	L SSp-n	L SSp-bfd	R mfbs	L SSp-bfd	R cc	R mfbs	R mfbs	L STRd
middle	L PTLp	L RHP	R HY	R cst	L AUD	R LSX	L HY	R cc
middle	L SSp-bfd	L TEa	R SSp-bfd	L STRd	L SSp-ul	L mfbs	R cc	R STRd
middle	R HIP	L HY	L lfbst	R STRd	R STRd	L STRd	L mfbs	R lfbst
middle	L ACA	L cc	R cc	L cc	R RSP	L HY	R lfbst	R mfbs
middle	L STRd	L mfbs	L HY	R mfbs	L ACA	L cc	R HY	L cc
middle	L SSp-ul	L STRd	L SSp-bfd	L mfbs	L mfbs	R HY	L SSp-bfd	L mfbs
middle	L cc	L lfbst	L STRd	L HY	L cc	R lfbst	R SSp-bfd	L HY
high	L AUD	R HY	L cc	R HIP	R lfbst	L MB	L cc	R HY
high	L lfbst	R DORsm	L mfbs	R HY	L DORsm	L DORsm	R HIP	R HIP
high	L HIP	R HIP	R DORsm	R DORpm	L DORpm	R HIP	L HIP	L HIP
high	R DORsm	L HIP	L HIP	R DORsm	L HIP	L HIP	L DORsm	L DORsm
high	R DORpm	R DORpm	R DORpm	L HIP	R DORpm	L DORpm	L DORpm	L DORpm
high	L DORpm	L DORpm	L DORpm	L DORpm	R HIP	R DORpm	R DORpm	R DORpm

Table 2 continued.

	MOp (L - left hemisphere)				MOp (R - right hemisphere)			
	GFAP-/-Vim-/-		WT		GFAP-/-Vim-/-		WT	
	Baseline	*P28*	*Baseline*	*P28*	*Baseline*	*P28*	*Baseline*	*P28*
low	L lfbst	L SSp-ul	L HIP	R DORpm	L STRd	L SSp-bfd	L SSp-un	R SSp-bfd
low	L MB	L HIP	L DORsm	R PAL	R DORpm	L SSp-ul	L mfbs	L SSp-bfd
low	L SSp-n	R SSp-ll	R SSp-m	R mfbs	R SSp-bfd	L SSs	L DORpm	R LSX
low	L DORpm	L SSp-ll	L SSp-un	R SSp-un	L SSp-ul	R AI	R DORpm	R DORpm
low	R MB	L mfbs	L SSp-bfd	R MOs	L SSp-ll	L STRd	R SSp-un	R PL
low	R STRd	L SSp-bfd	R PL	L mfbs	L RSP	R SSp-ll	R SSp-ll	L LSX
low	L SSp-un	R PL	L DORpm	R SSp-ul	R RSP	L SSp-ll	R SSp-n	L ILA
middle	L SSp-bfd	R MOs	R SSp-ll	R LSX	R MB	L cc	R SSs	R mfbs
middle	R ACA	L STRd	R cc	L SSp-m	L HIP	R RSP	L LSX	R SSp-m
middle	L GU	L GU	R STRd	L SSp-ul	L cc	R SSp-ul	L cc	L MOs
middle	L ACA	R mfbs	L STRd	R HIP	R SSp-un	L ORB	R cc	L MOp
middle	L HIP	R STRd	L mfbs	L cc	R HIP	R cc	L MOs	L cc
middle	R LSX	L SSp-m	R MOs	L SSp-ll	R SSp-ll	L VIS	L STRd	L STRd
middle	L mfbs	R MOp	R SSp-ul	R MOp	R GU	R ORB	R STRd	R SSp-ul
high	L SSp-ll	R cc	R MOp	R STRd	R SSp-m	L PL	L MOp	R STRd
high	L cc	L PL	R ACA	L STRd	R cc	R PL	R ACA	R cc
high	L SSp-m	L cc	L ACA	R cc	R ACA	L ACA	L ACA	R ILA
high	L STRd	L ACA	L SSp-ul	R ACA	R STRd	L MOp	R SSp-ul	L ACA
high	L SSp-ul	R ACA	L cc	L ACA	R SSp-ul	R ACA	R MOs	R ACA
high	L MOs	L MOs	L MOs	L MOs	R MOs	R MOs	R SSp-m	R MOs
	MOs (L - left hemisphere)				MOp (R - right hemisphere)			
	GFAP-/-Vim-/-		WT		GFAP-/-Vim-/-		WT	
	Baseline	*P28*	*Baseline*	*P28*	*Baseline*	*P28*	*Baseline*	*P28*
low	R mfbs	L AUD	L mfbs	R PAL	R RSP	L SSp-un	L LSX	L HIP
low	R DORpm	R mfbs	L ILA	L SSp-bfd	L HIP	L AUD	R cc	L SSp-bfd
low	L PAL	L VIS	L STRd	R DORpm	L mfbs	R SSp-ul	L PTLp	L ILA
low	R HIP	R STRd	L SSp-bfd	L cc	L cc	L RSP	R SSp-ll	L LSX
low	R LSX	R GU	L SSp-ll	R SSp-m	L RSP	L SSp-m	L STRd	R SSp-ul
low	L SSp-un	L SSs	R SSp-ll	R LSX	R DORsm	L SSp-n	R mfbs	R LSX
low	L FRP	L SSp-m	L LSX	L ORB	L RHP	L cc	R SSp-un	L cc
middle	L SSp-bfd	R RSP	R PL	R ILA	L PTLp	R STRd	L ORB	R DORpm
middle	L SSp-ll	R MOp	L cc	L LSX	R SSp-ul	L SSp-ll	L cc	L STRd
middle	R MB	L LSX	R STRd	R cc	L DORpm	R SSp-un	R ORB	R STRd
middle	R MOp	R SSp-ll	L SSp-ul	R PL	R DORpm	L VIS	R SSp-ul	R cc
middle	R PAL	L STRd	R SSp-m	L STRd	R mfbs	R cc	R SSp-m	L MOp
middle	R MOs	R cc	L PL	R SSp-ul	L SSp-ll	R ORB	R STRd	L PL
middle	L cc	L cc	L ORB	R STRd	R SSp-ll	L MOs	L SSp-ul	R ILA
high	L LSX	R MOs	R SSp-ul	L PL	L MOs	L MOp	L ACA	R ORB
high	R ACA	R PL	R ACA	R MOs	R STRd	L PL	R PL	L MOs
high	L STRd	R ACA	R MOp	R ACA	L ACA	L ACA	L MOp	R PL
high	L SSp-ul	L PL	R MOs	R MOp	R cc	R PL	L MOs	L ACA
high	L ACA	L MOp	L ACA	L MOp	R ACA	R MOp	R ACA	R ACA
high	L MOp	L ACA	L MOp	L ACA	R MOp	R ACA	R MOp	R MOp

Table 2 continued.

	DORpm (L - left hemisphere)				DORpm (R - right hemisphere)			
	GFAP-/-Vim-/-		WT		GFAP-/-Vim-/-		WT	
	Baseline	*P28*	*Baseline*	*P28*	*Baseline*	*P28*	*Baseline*	*P28*
low	L AUD	R cc	R ACA	R ACA	L RSP	L SSp-ll	R ACA	L ACA
low	L STRd	L RHP	L lfbst	R AUD	L SSp-tr	R SSp-ul	L SSp-ul	R ACA
low	L HY	L SSp-n	R SSp-ul	R SSp-bfd	L STRd	L SSp-ul	L STRd	R AUD
low	L PTLp	L SSp-ll	L SSp-ul	L ACA	R cst	L SSp-n	R SSp-un	R PAL
low	L SSp-un	R MB	L HY	R PAL	R SSp-ll	R SSp-bfd	L SSp-un	R SSp-bfd
low	R cc	L MB	L SSp-un	L SSp-bfd	L cc	L STRd	L SSp-bfd	R STRd
low	L SSp-tr	L cst	R STRd	R STRd	R STRd	L HY	L HY	L SSp-bfd
middle	L SSp-ll	R STRd	R cc	L STRd	L SSp-ul	L MB	R HY	L STRd
middle	L cst	R mfbs	R HY	L HY	L mfbs	L SSp-bfd	R SSp-ul	L HY
middle	R mfbs	L HY	R SSp-bfd	R cst	R lfbst	L AUD	R STRd	R cst
middle	L SSp-ul	L STRd	R HIP	R cc	L SSp-bfd	L cc	R SSp-bfd	L cc
middle	L lfbst	R HIP	R mfbs	R HY	L SSp-ll	L mfbs	L cc	R HY
middle	L cc	L cc	L STRd	L cc	R SSp-bfd	R STRd	R cc	R cc
middle	L mfbs	L AUD	L SSp-bfd	R mfbs	R cc	R mfbs	L mfbs	L mfbs
high	R DORsm	R HY	L cc	R HIP	L DORsm	R HY	R mfbs	L HIP
high	R HIP	L mfbs	L mfbs	L mfbs	R DORsm	R HIP	R HIP	R HIP
high	L SSp-bfd	R DORsm	R DORsm	L HIP	R HIP	L HIP	L HIP	L DORsm
high	L HIP	L DORsm	L HIP	R DORsm	R mfbs	L DORsm	L DORsm	R mfbs
high	L DORsm	L HIP	L DORsm	L DORsm	L HIP	R DORsm	R DORsm	R DORsm
high	R DORpm	R DORpm	R DORpm	R DORpm	L DORpm	L DORpm	L DORpm	L DORpm
	STRd (L - left hemisphere)				STRd (R - right hemisphere)			
	GFAP-/-Vim-/-		WT		GFAP-/-Vim-/-		WT	
	Baseline	*P28*	*Baseline*	*P28*	*Baseline*	*P28*	*Baseline*	*P28*
low	R DORpm	L SSp-ll	L DORsm	L SSp-bfd	R mfbs	L LSX	R SSp-m	L DORsm
low	R mfbs	R ACA	R DORpm	R SSp-ul	L STRd	L RHP	L mfbs	R HY
low	L SSp-un	R RSP	L SSp-un	R HY	R SSs	L cc	L HY	L SSp-bfd
low	R STRd	L MOp	L SSp-ul	R SSp-n	L cc	R ACA	R SSp-un	R SSp-n
low	L SSp-ll	R mfbs	L HY	L HIP	R MB	L SSp-ul	R DORpm	R SSp-ul
low	L SSp-n	L SSp-bfd	R SSp-ul	R DORsm	L ACA	R RSP	R HY	R DORsm
low	L CTXsp	L VIS	R HY	L PAL	R SSp-n	L MB	L DORpm	R SSs
middle	L CLA	L RHP	R mfbs	R HIP	R SSp-ll	L VIS	R SSp-n	R HIP
middle	L DORsm	L AUD	R MOp	R mfbs	L SSp-ll	R LSX	R MOp	L DORpm
middle	R PAL	R HIP	R cc	L DORpm	R HIP	R MB	L PAL	L mfbs
middle	L MOs	R cc	L DORpm	L mfbs	L RSP	R mfbs	R mfbs	R DORpm
middle	L HIP	L mfbs	R PAL	R DORpm	R DORpm	L AUD	R SSp-ul	R mfbs
middle	L LSX	L HIP	L mfbs	R PAL	L HIP	L MOp	R ACA	R ACA
middle	R ACA	L HY	R ACA	R LSX	R SSp-un	L HIP	L cc	L cc
high	L PAL	L MB	R LSX	L ACA	R RSP	R DORpm	L ACA	L ACA
high	R LSX	L DORpm	L ACA	R cc	R ACA	L DORpm	R cc	R cc
high	L MOp	R STRd	L PAL	R ACA	R SSp-ul	R HIP	L LSX	R PAL
high	L cc	R LSX	L LSX	L cc	R SSp-bfd	L ACA	L STRd	R LSX
high	L ACA	L LSX	L cc	L LSX	R cc	L STRd	R LSX	L LSX
high	L SSp-ul	L cc	R STRd	R STRd	R MOp	R cc	R PAL	L STRd

Table 2 continued.

	SSs (L - left hemisphere)				SSs (R - right hemisphere)			
	GFAP-/-Vim-/-		WT		GFAP-/-Vim-/-		WT	
	Baseline	*P28*	*Baseline*	*P28*	*Baseline*	*P28*	*Baseline*	*P28*
low	L SSp-un	R SSp-ul	R PAL	R ACA	L SSp-ll	L PTLp	R LSX	L HY
low	R LSX	R MB	L DORsm	R DORpm	L ORB	R AUD	R ILA	L cc
low	R CTXsp	L VIS	L PAL	L mfbs	R DORpm	L STRd	L mfbs	R DORsm
low	L SSp-m	L AUD	L MB	L VISC	L RSP	L AUD	R DORpm	L mfbs
low	L SSp-tr	R mfbs	R DORsm	R RHP	L eps	R MB	L LSX	R ACA
low	R HY	R HY	R SSp-ll	R cc	L STRv	L HIP	L DORpm	L SSp-bfd
low	L HIP	L SSp-tr	L VISC	R mfbs	R MOs	R SSp-bfd	L MOp	R HY
middle	L DORpm	R DORpm	R SSp-bfd	L DORpm	R PTLp	L MB	L ACA	L HIP
middle	L SSp-ul	R ACA	L DORpm	R PAL	R SSp-un	R HIP	R SSp-un	L ACA
middle	L mfbs	L HIP	L cst	L SSp-bfd	R HIP	R SSp-un	R SSp-n	R LSX
middle	L MOp	R RSP	R SSp-ul	L ACA	R mfbs	R SSp-ul	L cc	R SSp-n
middle	L MB	L SSp-un	L SSp-un	R SSp-tr	R cc	R RSP	R cc	L DORpm
middle	L ACA	L MB	L SSp-bfd	R STRd	R SSp-ul	L mfbs	L STRd	R PAL
middle	R cst	L SSp-m	L SSp-ul	L cc	R SSp-bfd	L SSp-ul	R SSp-bfd	R HIP
high	R PAL	L DORpm	L SSp-m	L AUD	R SSp-ll	R LSX	R SSp-ll	L STRd
high	L VISC	L cc	R AUD	L HY	R SSp-n	R SSp-n	R SSp-ul	R cc
high	L STRd	L STRd	L cc	R HIP	R SSp-m	L SSp-bfd	R STRd	R SSp-bfd
high	L cc	R HIP	L STRd	L SSp-n	R RSP	L SSp-un	R ACA	R mfbs
high	L SSp-bfd	L SSp-bfd	L SSp-n	L STRd	R STRd	R STRd	R SSp-m	R DORpm
high	L SSp-n	L SSp-n	L AUD	L PAL	R VISC	R cc	R MOp	R STRd