

Figure S1. Relative abundances of microbiome analysis based on Taxonomic profile

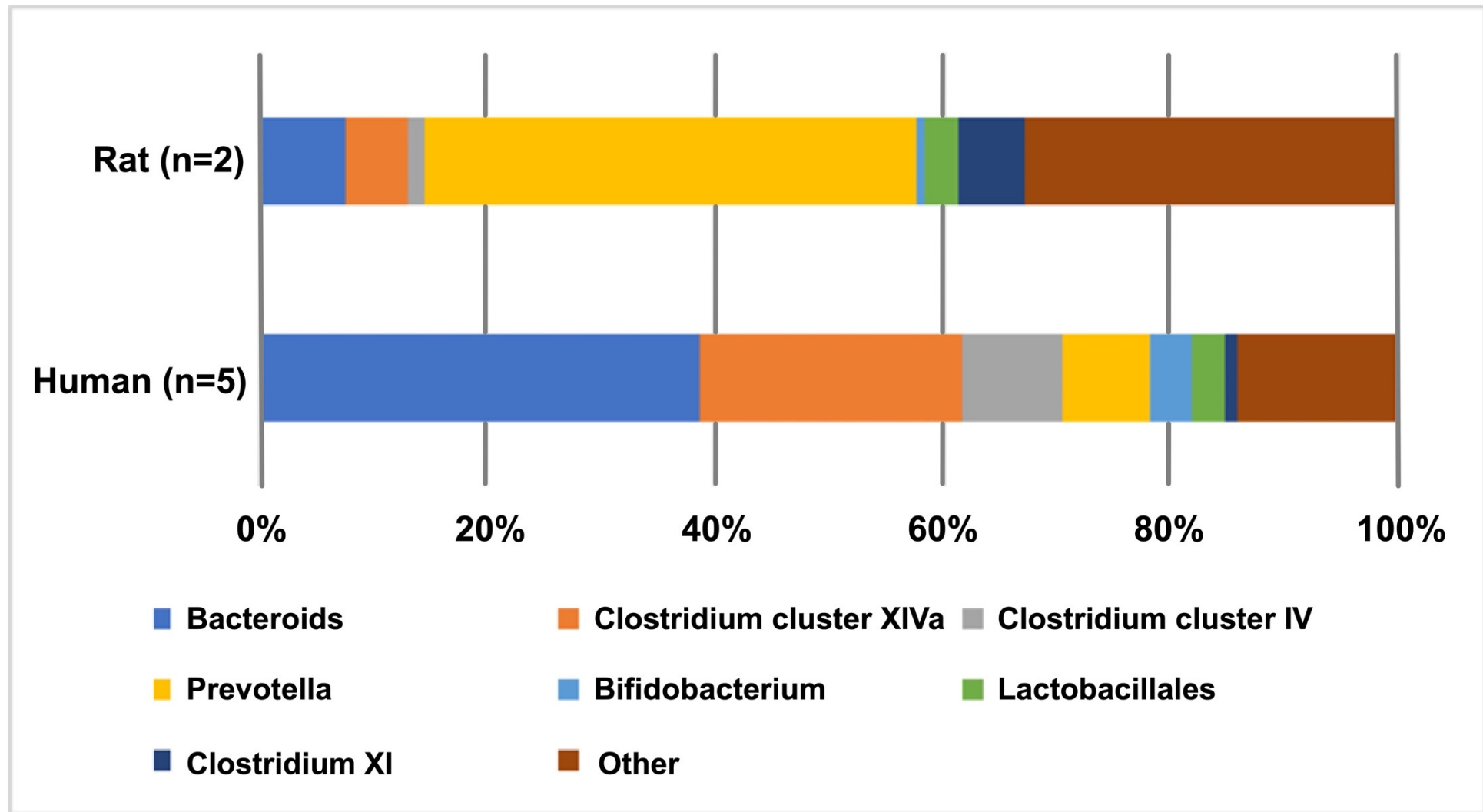


Figure S2. Procedure and protocol of experimental strategy

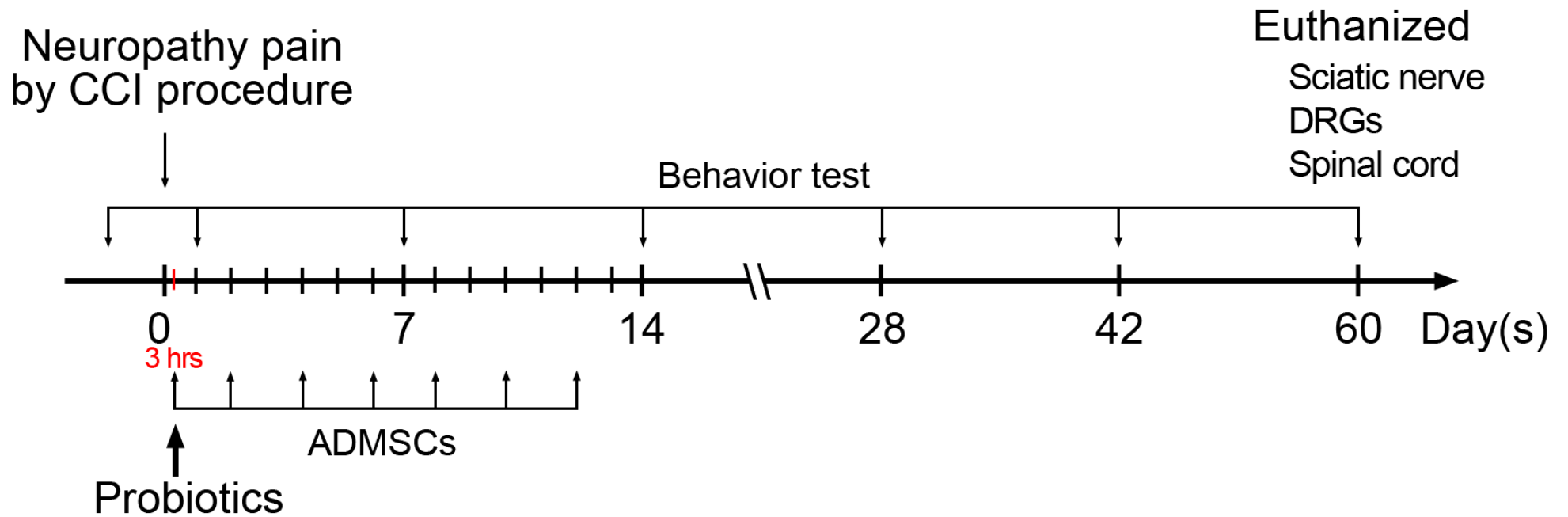


Table S1. Each percentage of microbiome analysis in healthy people and rats

	Heathy people (n=5)	Heathy rat (n=2)
Bacteroides (%)	38.75	7.48
Clostridium cluster XIVa (%)	23.16	5.44
Clostridium cluster IV (%)	8.77	1.63
Prevotella (%)	7.62	43.25
Bifidobacterium (%)	3.48	0.78
Lactobacillales (%)	3.14	2.79
Clostridium XI (%)	1.23	5.76
Others (%)	13.85	32.87
Total (%)	100	100

Table S2. Antibodies used for immunofluorescence (IF) and Western blot analyses

Product name	Concentration, catalog number code and supplier
Western blot antibodies	
phosphorylated (p) nuclear factor (p-NF)- κ B	(1:1000, Cell Signaling, #3033, Danvers, Massachusetts)
interleukin (IL)-1 β	(1:1000, Cell Signaling, #12426, Danvers, Massachusetts)
tumor necrosis factor (TNF)- α	(1:1000, Cell Signaling, , #3707, Danvers, Massachusetts)
matrix metalloproteinase (MMP)-9	(1:1000, Abcam, ab76003, Cambridge, UK)
NOX-1	(1:1000, Sigma, SAB4200097, Massachusetts, USA)
NOX-2	(1:1000, Sigma, SAB4200118, Massachusetts, USA)
cleaved (c) caspase 3	(1:1000, Cell Signaling, #9665, Danvers, Massachusetts)
c-Poly (ADP-ribose) Polymerase (C-PARP)	(1:1000, Cell Signaling, #9542, Danvers, Massachusetts)
γ -H2AX	(1:1000, Cell Signaling, #7631, Danvers, Massachusetts)
phosphorylated extracellular signal-regulated protein kinase (p-ERK1/2)	(1:3000, Millipore, 442685, Burlington, MA, U.S)
phosphorylated c-Jun N-terminal kinase (p-JNK)	(1:1000, Abcam, ab4821, Cambridge, UK)
p-p38	(1:1000, Sigma, M8177, Massachusetts, USA)
Nav.1.3	(1:500, Alomone, ASC004, Jerusalem, Israel)
Nav.1.8	(1:500, Abcam, ab63331, Cambridge, UK)
Nav.1.9	(1:500, Alomone, ASC017, Jerusalem, Israel)
horseradish peroxidase-conjugated anti-rabbit immunoglobulin IgG	(1:5000, Sigma, A0545, Massachusetts, USA)
Immunofluorescent (IF) antibodies	
phosphorylated (p)-p38	(1:200, GTX50280, Gene Tex, Irvine, CA)
NF200	(1:200, NO142, Sigma-Aldrich, Massachusetts, USA)
peripherin	(1:500, ab106276, Abcam, Cambridge, UK)
53BP1	(1:1000, NB100-304, Novus, Colorado, USA)
β 3 Tubulin	(1:200, SC-51670, Santa Cruz, Texas, USA)