List of Abbreviations

(PI(4,5)P2)	Phosphatidylinositol-4,5-bisphosphate
ACM	Astrocyte condition media
ACN	Acetonitrile
AD	Alzheimer’s disease
ADO	Astrocytes-DRGN-oligodendrocytes
ALS	Amyotrophic lateral sclerosis
ankG	Ankyrin-G
ANOVA	Analysis of Variance
APC	Antigen presenting cells
APP	Amyloid precursor protein
ATP	Adenosine triphosphate
ASD	Autism spectrum disorders
β-actin	Beta-actin
BBB	Blood brain barrier
BDNF	Brain derived neurotrophic factor
BrdU	Bromodeoxyuridine (5-bromo-2'-deoxyuridine)
BSA	Bovine serum albumin
CAM	Cell adhesion molecules
Caspr	Contactin associated protein
cDNA	Complementary DNA
ChIP	Chromatin Immunoprecipitation
CNP	2′,3′-cyclic nucleotide 3′-phospho-diesterase
CNS	Central nervous system
CNTF	Ciliary neurotophic factor
CNTN	Contactin
CoREST	Corepressor of RE1 silencing transcription factor
CREB1	Camp responsive element binding protein 1
CTD	C-terminal domain
CXCL	C-x-c motif chemokine ligand
DAPI	4',6-diamidino-2-phenylindole

DFG	DMEM-FBS-glutamine
DMEM	Dulbecco's Modified Eagle's medium
DMSO	Dimethyl sulfoxide
DNase I	Deoxyribonuclease I
DNMTs	DNA methyltransferase enzymes
DRGN	Dorsal root ganglion neuron
EAE	Experimental autoimmune encephalomyelitis
ECL	Enhanced chemiluminescence
ECM	Extracellular matrix
ELISA	Enzyme-linked immune sorbent assay
FBS	Fetal bovine serum
FGF	Fibroblast growth factor
FITC	Fluorescein isothiocyanate
GABA	Gamma-aminobutyric acid
GAPDH	Glyceraldehyde 3-phosphate dehydrogenase
GFAP	Glial fibrillary acidic protein
GFP	Green fluorescent protein
GLAST	Glutamate aspartate transporter
GPI	Glycosylphosphatidylinositol
HBSS	Hank's balance salt solution
HCCA	α-Cyano-4-hydroxycinnamic acid
HDAC	Histone deacetylase
HEPES	4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid
HGF	Hepatocyte growth factor
HRP	Horseradish peroxidase
IAEC	Institutional animal ethical committee
ICC	Immunocytochemistry
ID	Intervening domain
IGF	Insulin growth factor
IL	Interleukins
iPSC	Induced pluripotent stem cell
JXP	Juxtaparanodes
kDa	Kilo dalton

LIF	Leukaemia inhibitory factor
LSD	Lysosomal storage diseases
MAG	Myelin associated glycoprotein
MALDI-TOF	Matrix assisted laser desorption ionization-time of flight
MAPK	Mitogen-activated protein kinase
MBD	Methyl CpG binding domain
MBP	Myelin basic protein
MeCP2	Methyl CpG binding protein 2
miRNAs	microRNA
MkACM	MeCP2 knockdown ACM
MLC	Megaloencephalic leukoencephalopathy with subcortical cysts
MOBP	Myelin oligodendrocyte basic protein
MOG	Myelin oligodendrocyte glycoprotein
MS	Multiple sclerosis
MTT	3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide
NCAM	Neural cell adhesion molecule
NcoR	Nuclear receptor co-repressor
NF	Neurofilament
NF155	Neurofascin-155
NF186	Neurofascin-186
NGF	Nerve growth factor
NRG	Neuregulin
NSC	Neural stem cells
NT3	Neurotrophin-3
NTD	N-terminal domain
OD	Optical Density
OPC	Oligodendrocyte precursor cell
PBS	Phosphate buffer saline
PDGF	Platelet derived growth factor
PDGFαR	Platelet derived growth factor α receptor
PFA	Paraformaldehyde
PLL	Poly-L-lysine
PLP	Proteolipid protein

PMD	Pelizaeus-Merzbacher disease
PNJ	Paranodal junctions
PNS	Peripheral nervous system
PSA-NCAM	Polysialylated-neural cell adhesion molecule
PTEN	Phosohatase and tensin homolog
REST	RE1-silencing transcription factor
RNA	Ribonucleic acid
RT-PCR	Reverse transcription
RTT	Rett syndrome
SDS-PAGE	Sodium dodecyl sulfate polyacrylamide gel electrophoresis
SEM	Standard error mean
siRNA	Small interfering RNA
STAT3	Signal transducer and activator of transcription 3
STMN2	Stathmin-like 2
SVZ	Subventricular zone
Syn2	Synapsin 2
TBS-T	Tris-buffered saline-Tween 20
TCA	Trichloroacetic acid
TIFR	Tata Institute of Fundamental Research
TMB	3,3’,5,5’-Tetramethylbenzidine
TNF-α	Tumor necrosis factor-α
TRD	Transcription repression domain
TRITC	Tetramethylrhodamine isothiocyanate
VWM	Vanishing white matter disease
X-ALD	X-linked adrenoleukodystrophy
YY1	Yin yang 1