Patent Literature

[0006]

[Patent Literature 1] WO2009/034708

[Patent Literature 2] WO2017/188457

[Patent Literature 3] WO2018/034023

[Patent Literature 4] WO2014/024183 (Japanese Translation of PCT International Application Publication No. 2018-138044)

[Patent Literature 5] WO2013/082543 (Japanese Patent Laid-Open No. 2018-27954)

Non Patent Literature

[0007]

[Non Patent Literature 1] Winkler et al., 2014, Proc. Natl. Acad. Sci., Vol. 111 (11): ppE1035-E1042

[Non Patent Literature 2] Winkler et al., 2013, Acta Neuropathologica, Vol. 125 (1): pp111-120

[Non Patent Literature 3] Nicaise et al., 2009, Brain Res., Vol. 1301: pp152-162

[Non Patent Literature 4] Sasaki et al., 2015, Neuropathology, Vol.35 (6): pp518-528

[Non Patent Literature 5] Kosuge et al., 2009, Neurosci. Letters, Vol. 454 (2): pp165-169

[Non Patent Literature 6] Horita et al., 2006, J. Neurosci, Res. Vol. 84 (7): pp1495-1504

Summary

In one aspect, the present disclosure provides a use of a composition in the manufacture of a medicament for treating amyotrophic lateral sclerosis (ALS), wherein the composition comprises mesenchymal stem cells and is to be administered intravenously.

Technical Problem

[0008]

An object of the present invention is to provide a new means for treating various symptoms of amyotrophic lateral sclerosis (ALS).

Solution to Problem

[0009]

Using ALS model rats, the inventors evaluated the natural course of symptoms widely in view of motor function and histology, and found that intravenous administration of MSCs allows suppression of progression and alleviation of symptoms in both moderate and severe stages. They further studied more effective administration methods and achieved the present invention.

[0010]

More specifically, the present invention relates to the following (1) to (6).

(1) A pharmaceutical composition for treating amyotrophic lateral sclerosis (ALS), wherein the

pharmaceutical composition comprises mesenchymal stem cells and is intravenously administered.

(2) The pharmaceutical composition according to (1), which is administered twice or more.

(3) The pharmaceutical composition according to (1) or (2), wherein 10^6 or more mesenchymal stem cells are administered per dose.

Claims

[Claim 1]

Use of a composition in the manufacture of a medicament for treating amyotrophic lateral sclerosis (ALS), wherein the composition comprises mesenchymal stem cells and is to be administered intravenously.

[Claim 2]

The use according to claim 1, which is to be administered twice or more.

[Claim 3]

The use according to claim 1 or 2, wherein 10^6 or more mesenchymal stem cells are to be administered per dose.

[Claim 4]

The use according to any one of claims 1 to 3, wherein the mesenchymal stem cells are mesenchymal stem cells derived from bone marrow or blood.

[Claim 5]

The use according to any one of claims 1 to 4, wherein the mesenchymal stem cells are mesenchymal stem cells derived from bone marrow or blood of a patient.

[Claim 6]

The use according to any one of claims 1 to 5, wherein the mesenchymal stem cells are CD24-negative.