CLAIMS

WHAT IS CLAIMED IS:

1. A compound comprising an oligonucleotide comprising linked nucleosides with at least a 19 contiguous nucleobase sequence that is at least 90% complementary to an equal length portion of a transcript with at least 90% identity to SEQ ID NO: 944, or to a contiguous 19 to 50 nucleobase portion of SEQ ID NO: 944, wherein at least one nucleoside linkage of the linked nucleosides is a non-natural linkage.

2. An oligonucleotide comprising linked nucleosides with at least a 19 contiguous nucleobase sequence that is at least 90% complementary to an equal length portion of a transcript with at least 90% identity to SEQ ID NO: 944, or to a contiguous 19 to 50 nucleobase portion of SEQ ID NO: 944, wherein at least one nucleoside linkage of the linked nucleosides is a non-natural linkage.

3. The oligonucleotide of claim 1 or 2, wherein the nucleobase sequence comprises a portion of at least 10 contiguous nucleobases that shares at least 90% identity with an equal length portion of any one of SEQ ID NOs: 1-446, SEQ ID NOs: 894-918, SEQ ID NOs: 945-1390, or SEQ ID NOs: 1392-1432.

4. The oligonucleotide of any one of claims 1-3, wherein the nucleobase sequence comprises a portion of at least 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25 contiguous nucleobases that shares at least 90% identity with an equal length portion of any one of SEQ ID NOs: 1-446, SEQ ID NOs: 894-918, SEQ ID NOs: 945-1390, or SEQ ID NOs: 1392-1432.

5. The oligonucleotide of any one of claims 1-3, wherein the nucleobase sequence comprises a portion of at least 10 contiguous nucleobases that shares at least 90% identity with an equal length portion of any one of SEQ ID NOs: 31, 36, 41, 46, 55, 144, 146, 150, 169, 170, 171, 172, 173, 177, 181, 185, 197, 203, 209, 215, 237, 244, 249, 252, 380, 385, 390, 395, 400, 975, 980, 985, 999, 1088, 1090, 1094, 1113, 1114, 1115, 1116, 1117, 1121, 1125, 1129, 1141, 1147, 1153, 1159, 1181, 1188, 1193, 1196, 1324, 1329, 1334, 1339, or 1344,.

6. The oligonucleotide of any one of claims 1-5, wherein the nucleobase sequence comprises a portion of at least 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25 contiguous nucleobases that shares at least 90% identity with an equal length portion of any one of SEQ ID NOs: 31, 36, 41, 46, 55, 144, 146, 150, 169, 170, 171, 172, 173, 177, 181, 185, 197, 203, 209,

215, 237, 244, 249, 252, 380, 385, 390, 395, 400, 975, 980, 985, 999, 1088, 1090, 1094, 1113, 1114, 1115, 1116, 1117, 1121, 1125, 1129, 1141, 1147, 1153, 1159, 1181, 1188, 1193, 1196, 1324, 1329, 1334, 1339, or 1344.

7. A compound comprising an oligonucleotide comprising linked nucleosides with at least a 19 contiguous nucleobase sequence, wherein the nucleobase sequence comprises a portion of at least 10 contiguous nucleobases that shares at least 90% identity to an equal length portion of any one of SEQ ID NOs: 894-918 or SEQ ID NOs: 1392-1432.

8. An oligonucleotide comprising linked nucleosides with at least a 19 contiguous nucleobase sequence, wherein the nucleobase sequence comprises a portion of at least 10 contiguous nucleobases that shares at least 90% identity to an equal length portion of any one of SEQ ID NOs: 894-918 or SEQ ID NOs: 1392-1432.

9. The oligonucleotide of claim 7 or 8, wherein the nucleobase sequence comprises a portion of at least 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25 contiguous nucleobases that shares at least 90% identity to of any one of SEQ ID NOs: 894-918 or SEQ ID NOs: 1392-1432.

10. A compound comprising an oligonucleotide comprising linked nucleosides with at least a 19 contiguous nucleobase sequence, wherein the nucleobase sequence comprises a portion of at least 10 contiguous nucleobases that is at least 90% complementary to an equal length portion of nucleobases within any one of positions 121-144, 144-168, 146-170, 150-170, 150-172, 150-174, 169-193, 169-189, 169-191, 170-190, 170-192, 171-191, 171-193, 172-192, 172-194, 170-194, 171-195, 172-196, 173-197, 185-209, 197-221, 237-261, 249-273, 252-276, or 276-300 of SEQ ID NO: 944.

11. An oligonucleotide comprising linked nucleosides with a nucleobase sequence with at least a 19 contiguous nucleobase sequence, wherein the nucleobase sequence comprises a portion of at least 10 contiguous nucleobases that is at least 90% complementary to an equal length portion of nucleobases within any one of positions 121-144, 144-168, 146-170, 150-170, 150-172, 150-174, 169-193, 169-189, 169-191, 170-190, 170-192, 171-191, 171-193, 172-192, 172-194, 170-194, 171-195, 172-196, 173-197, 185-209, 197-221, 237-261, 249-273, 252-276, or 276-300 of SEQ ID NO: 944.

12. The oligonucleotide of claim 10 or 11, wherein the portion of the nucleobase sequence is 100% complementary to an equal length portion of nucleobases within any one of positions 121-

144, 144-168, 146-170, 150-170, 150-172, 150-174, 169-193, 169-189, 169-191, 170-190, 170-192, 171-191, 171-193, 172-192, 172-194, 170-194, 171-195, 172-196, 173-197, 185-209, 197-221, 237-261, 249-273, 252-276, or 276-300 of SEQ ID NO: 944.

13. The oligonucleotide of claim 12, wherein the portion of the nucleobase sequence is 100% complementary to an equal length portion of nucleobases within any one of positions 144-164, 144-166, 145-167, 146-166, 146-168, 147-165, or 148-168 of SEQ ID NO: 944.

14. The oligonucleotide of claim 12, wherein the portion of the nucleobase sequence is 100% complementary to an equal length portion of nucleobases within any one of positions 173-191, 173-193, 173-195, 173-197, 175-195, 175-197, 177-197, or 179-197 of SEQ ID NO: 944.

15. The oligonucleotide of claim 12, wherein the portion of the nucleobase sequence is 100% complementary to an equal length portion of nucleobases within any one of positions 185-205, 187-209, 189-209, 185-207, 197-217, 197-219, or 191-209 of SEQ ID NO: 944.

16. The oligonucleotide of claim 12, wherein the portion of the nucleobase sequence is 100% complementary to an equal length portion of nucleobases within any one of positions 237-255, 237-257, 237-259, 239-259, 239-261, 241-261, 237-257, 249-269, 249-271, 252-272, 252-274, or 243-261 of SEQ ID NO: 944.

17. The oligonucleotide of claim 10 or 11, wherein the nucleobase sequence comprises a portion of at least 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25 contiguous nucleobases that is complementary to an equal length portion of nucleobases within any one of positions 121-144, 144-168, 146-170, 150-170, 150-172, 150-174, 169-193, 169-189, 169-191, 170-190, 170-192, 171-191, 171-193, 172-192, 172-194, 170-194, 171-195, 172-196, 173-197, 185-209, 197-221, 237-261, 249-273, 252-276, or 276-300 of SEQ ID NO: 944.

18. The oligonucleotide of claim 10 or 11, wherein the nucleobase sequence comprises a portion of at least 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25 contiguous nucleobases that is complementary to an equal length portion of nucleobases within any one of positions 144-164, 144-166, 145-167, 146-166, 146-168, 147-165, 148-168, 173-191, 173-193, 173-195, 173-197, 175-195, 175-197, 177-197, 179-197, 185-205, 185-207, 197-217, 197-219, 187-209, 189-209, 191-209, 237-255, 237-257, 237-259, 239-259, 239-261, 241-261, 237-257, 249-269, 249-271, 252-272, 252-274, or 243-261 of SEQ ID NO: 944.

19. The oligonucleotide of any one of claims 1-18, wherein the oligonucleotide is 19 and 40 nucleosides in length.

20. The oligonucleotide of any one of the above claims, wherein the oligonucleotide comprises at least one nucleoside linkage selected from the group consisting of a phosphodiester linkage, a phosphorothioate linkage, an alkyl phosphate linkage, an alkylphosphonate linkage, a 3-methoxypropyl phosphonate linkage, a phosphorodithioate linkage, a phosphotriester linkage, a methylphosphonate linkage, an aminoalkylphosphotriester linkage, an alkylene phosphonate linkage, a phosphinate linkage, a phosphoramidate linkage, a phosphoramidothiate linkage, a phosphorodiamidate (*e.g.*, comprising a phosphorodiamidate morpholino (PMO), 3' amino ribose, or 5' amino ribose) linkage, an aminoalkylphosphoramidate linkage, a thiophosphoramidate linkage, a thionoalkylphosphonate linkage, a thionoalkylphosphotriester linkage, a thiophosphate linkage, a selenophosphate linkage, and a boranophosphate linkage, or any combination(s) thereof.

21. The oligonucleotide of any one of the above claims, wherein at least two, three, or four internucleoside linkages of the oligonucleotide are phosphodiester internucleoside linkages.

22. The oligonucleotide of any one of claims 1-20, wherein the oligonucleotide comprises at least two, three, or four modified internucleoside linkages.

23. The oligonucleotide of claim 22, wherein each of the modified internucleoside linkage of the oligonucleotide is independently selected from a phosphorothioate linkage, a phosphoramidate linkage, a phosphoramidothiate linkage, a phosphorodiamidate.

24. The oligonucleotide of claim 22 or 23, wherein all internucleoside linkages of the oligonucleotide are phosphorothioate linkages.

25. The oligonucleotide of claim 23, wherein the phosphorothioate internucleoside linkage is in one of a *R*p configuration or a *S*p configuration.

26. The oligonucleotide of any one of the preceding claims, wherein the oligonucleotide comprises at least one modified nucleobase.

27. The oligonucleotide of claim 26, wherein the at least one modified nucleobase is 5-methyl cytosine, pseudouridine, or 5-methoxyuridine.

28. The oligonucleotide of any one of the preceding claims, wherein the oligonucleotide comprises at least one modified sugar moiety.

29. The modified oligonucleotide of claim 28, wherein the modified sugar moiety is one of a 2'-OMe modified sugar moiety, bicyclic sugar moiety, 2'-O-(2-methoxyethyl) (2'MOE), 2'-deoxy-2'-fluoro nucleoside, 2'-fluoro-β-D-arabinonucleoside, locked nucleic acid (LNA), constrained ethyl 2'-4'-bridged nucleic acid (cEt), *S*-cEt, hexitol nucleic acids (HNA), and tricyclic analog (*e.g.*, tcDNA).

30. The oligonucleotide of any one of claims 1-23, wherein the oligonucleotide comprises three linked nucleosides that are linked through phosphodiester internucleoside linkages at the 5' end and three linked nucleosides that are linked through phosphodiester internucleoside linkages at the 3' end.

31. The oligonucleotide of any one of claims 1-20 and 22-29, wherein the oligonucleotide comprises one or more 2'-*O*-(2-methoxyethyl) (2'-MOE) nucleosides that are linked through phosphorothioate internucleoside linkages, optionally wherein all nucleosides in the oligonucleotide comprise modified sugar moiety comprising 2'-MOE; further optionally wherein all cytosine nucleosides in the oligonucleotide comprise modified nucleobase 5-methyl cytosine; and further optionally wherein all internucleoside linkages are phosphorothioate linkages.

32. The oligonucleotide of any one of claims 1-23 and 25-29, wherein the oligonucleotide comprises three linked nucleosides that are linked through phosphorothioate internucleoside linkages at the 5' end and three linked nucleosides that are linked through phosphorothioate internucleoside linkages at the 3' end.

33. The oligonucleotide of claim 32, wherein the oligonucleotide comprises five linked nucleosides that are linked through phosphodiester internucleoside linkages.

34. The oligonucleotide of claim 33, wherein the each of the five linked nucleosides are 2'-*O*-(2-methoxyethyl) (2'-MOE) nucleosides.

35. The oligonucleotide of claim 33 or 34, wherein each of the linked nucleosides of the oligonucleotide are 2'-*O*-(2-methoxyethyl) (2'-MOE) nucleosides.

36. The oligonucleotide of any one of claims 1-35, wherein the oligonucleotide exhibits at least a 30%, 40%, 50%, 60%, 70%, 80%, or 90% increase of full length STMN2 transcript or

STMN2 protein, optionally wherein the increase is in comparison to a level prior to exposing a neuron to the oligonucleotide.

37. The oligonucleotide of any one of claims 1-36, wherein the oligonucleotide exhibits at least a 100% increase of full length STMN2 transcript or STMN2 protein, optionally wherein the increase is in comparison to a level prior to exposing a neuron to the oligonucleotide.

38. The oligonucleotide of any one of claims 1-37, wherein the oligonucleotide exhibits at least a 200% increase of full length STMN2 transcript or STMN2 protein, optionally wherein the increase is in comparison to a level prior to exposing a neuron to the oligonucleotide.

39. The oligonucleotide of any one of claims 1-38, wherein the oligonucleotide exhibits at least a 300% increase of full length STMN2 transcript or STMN2 protein, optionally wherein the increase is in comparison to a level prior to exposing a neuron to the oligonucleotide.

40. The oligonucleotide of any one of claims 1-39, wherein the oligonucleotide exhibits at least a 400% increase of full length STMN2 transcript or STMN2 protein, optionally wherein the increase is in comparison to a level prior to exposing a neuron to the oligonucleotide.

41. The oligonucleotide of any one of claims 36-40, wherein increase of the full length STMN2 protein is measured in comparison to a reduced level of full length STMN2 protein achieved using a TDP43 antisense oligonucleotide.

42. The oligonucleotide of any one of claims 1-35, wherein the oligonucleotide exhibits at least a 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, or 100% rescue of full length STMN2 transcript or STMN2 protein, optionally wherein the increase is in comparison to a level prior to exposing a neuron to the oligonucleotide.

43. The oligonucleotide of any one of claims 1-35 and 42, wherein the oligonucleotide exhibits at least a 50%, 60%, 70%, 80%, or 90% reduction of the STMN2 transcript with the cryptic exon.

44. A pharmaceutical composition comprising one or more of the oligonucleotides of any one of claims 1-43, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.

45. A method of treating a neurological disease and/or a neuropathy in a patient in need thereof, the method comprising administering to the patient an oligonucleotide of any one of

claims 1-43 or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of claim 44.

46. The method of claim 45, wherein the neurological disease is selected from the group consisting of amyotrophic lateral sclerosis (ALS), frontotemporal dementia (FTD), Alzheimer's disease (AD), Parkinson's disease (PD), Huntington's disease, brachial plexus injuries, peripheral nerve injuries, progressive supranuclear palsy (PSP), brain trauma, spinal cord injury, and corticobasal degeneration (CBD).

47. The method of claim 45, wherein the neuropathy is chemotherapy induced neuropathy.

48. A method of restoring axonal outgrowth and/or regeneration of a motor neuron, the method comprising exposing the motor neuron to an oligonucleotide of any one of claims 1-43 or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of claim 44.

49. A method of increasing, promoting, stabilizing, or maintaining STMN2 expression and/or function in a neuron, the method comprising exposing the neuron to an oligonucleotide of any one of claims 1-43 or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of claim 44.

50. The method of claim 48 or 49, wherein the neuron is a neuron of a patient in need of treatment of a neurological disease and/or a neuropathy.

51. The method of claim 50, wherein the neurological disease is selected from the group consisting of amyotrophic lateral sclerosis (ALS), frontotemporal dementia (FTD), Alzheimer's disease (AD), Parkinson's disease (PD), Huntington's disease, brachial plexus injuries, peripheral nerve injuries, progressive supranuclear palsy (PSP), brain trauma, spinal cord injury, and corticobasal degeneration (CBD).

52. The method of claim 50, wherein the neuropathy is chemotherapy induced neuropathy.

53. The method of any one of claims 48-52, wherein the exposing is performed *in vivo* or *ex vivo*.

54. The method of any one of claims 48-52, wherein the exposing comprises administering the oligonucleotide to a patient determined to have a transcript comprising a cryptic exon sequence of SEQ ID NO: 447.

55. The method of any one of claims 45-54, wherein the oligonucleotide is administered topically, parenterally, intrathecally, intracisternally, orally, rectally, buccally, sublingually, vaginally, pulmonarily, intratracheally, intranasally, intralesionally, transdermally, or intraduodenally.

56. The method of claim 54, wherein the oligonucleotide is administered orally.

57. The method of any one of claims 45-54, wherein a therapeutically effective amount of the oligonucleotide is administered intrathecally or intracisternally.

58. The method of any one of claims 45-46 or 50-57, wherein the patient is a human.

59. The pharmaceutical composition of claim 44, wherein the pharmaceutical composition is suitable for topical, intrathecal, intracisternal, parenteral (*e.g.*, subcutaneous, intramuscular, intradermal, intraduodenal, or intravenous), intralesional, oral, pulmonary, intratracheal, intranasal, transdermal, rectal, buccal, sublingual, vaginal, or intraduodenal administration.

60. A use of an oligonucleotide of any one of claims 1-43 or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of claim 44 in the manufacture of a medicament for the treatment of neurological disease or a neuropathy.

61. The use of claim 60, wherein the neurological disease is selected from the group consisting of amyotrophic lateral sclerosis (ALS), frontotemporal dementia (FTD), Alzheimer's disease (AD), Parkinson's disease (PD), Huntington's disease, brachial plexus injuries, peripheral nerve injuries, progressive supranuclear palsy (PSP), brain trauma, spinal cord injury, and corticobasal degeneration (CBD).

62. The use of claim 60, wherein the neuropathy is chemotherapy induced neuropathy.

63. A method of treating a neurological disease or a neuropathy in a patient in need thereof, the method comprising administering to a patient in need thereof a therapeutically effective amount of an oligonucleotide of any one of claims 1-43 or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of claim 44.

64. The method of claim 63, wherein the neurological disease is selected from the group consisting of amyotrophic lateral sclerosis (ALS), frontotemporal dementia (FTD), Alzheimer's disease (AD), Parkinson's disease (PD), Huntington's disease, brachial plexus injuries, peripheral

nerve injuries, progressive supranuclear palsy (PSP), brain trauma, spinal cord injury, and corticobasal degeneration (CBD).

65. The method of claim 63, wherein the neuropathy is chemotherapy induced neuropathy.

66. The method of any one of claims 63-65, wherein the oligonucleotide or the pharmaceutical composition is administered topically, parenterally (*e.g.*, subcutaneous, intramuscular, intradermal, intraduodenal, or intravenous), intralesionally, orally, pulmonarily, rectally, buccally, sublingually, vaginally, intratracheally, intranasally, intracisternally, intrathecally, transdermally, or intraduodenally.

67. The method of any one of claims 63-65, wherein the oligonucleotide or the pharmaceutical composition is administered intrathecally or intracisternally.

68. The method of any one of claims 63-67, wherein a therapeutically effective amount of the oligonucleotide or the pharmaceutical composition is administered intrathecally or intracisternally.

69. The method of any one of claims 63-68, wherein the patient is human.

70. An oligonucleotide of any one of claims 1-43, or a pharmaceutically acceptable salt thereof, for use as a medicament in the treatment of a neurological disease or a neuropathy.

71. An oligonucleotide of any one of claims 1-43, or a pharmaceutically acceptable salt thereof, for use in the treatment of a neurological disease or a neuropathy.

72. The oligonucleotide for use of claim 70 or 71, wherein said neurological disease is selected from the group consisting of amyotrophic lateral sclerosis (ALS), frontotemporal dementia (FTD), Alzheimer's disease (AD), Parkinson's disease (PD), Huntington's disease, brachial plexus injuries, peripheral nerve injuries, progressive supranuclear palsy (PSP), brain trauma, spinal cord injury, and corticobasal degeneration (CBD).

73. The oligonucleotide for use of claim 70 or 71, wherein the neuropathy is chemotherapy induced neuropathy.

74. An oligonucleotide comprising linked nucleosides with a nucleobase sequence of any one of SEQ ID NOs: 1-446, SEQ ID NOs: 894-918, SEQ ID NOs: 945-1390, or SEQ ID NOs: 1392-1432, or a pharmaceutically acceptable salt thereof;

wherein oligonucleotide comprises at least one nucleoside linkage selected from the group consisting of: a phosphodiester linkage, a phosphorothioate linkage, an alkyl phosphate linkage, an alkylphosphonate linkage, a 3-methoxypropyl phosphonate linkage, a phosphorodithioate linkage, a phosphotriester linkage, a methylphosphonate linkage, an aminoalkylphosphotriester linkage, an alkylene phosphonate linkage, a phosphinate linkage, a phosphoramidate linkage, a phosphoramidothiate linkage, a phosphorodiamidate linkage, an aminoalkylphosphoramidate linkage, a thiophosphoramidate linkage, a thionoalkylphosphonate linkage, a thionoalkylphosphotriester linkage, a thiophosphate linkage, a selenophosphate linkage, and a boranophosphate linkage; and/or

wherein at least one nucleoside of the linked nucleosides is substituted with a component selected from the group consisting of a 2'-*O*-(2-methoxyethyl) nucleoside (2′-*O*-methoxyethylribonucleosides (2′-MOE)), a 2'-O-methyl nucleoside, a 2'-deoxy-2'-fluoro nucleoside, a 2'-fluoro-β-D-arabinonucleoside, a locked nucleic acid (LNA), constrained methoxyethyl (cMOE), constrained ethyl (cET), and a peptide nucleic acid (PNA).

75. The oligonucleotide of claim 74, wherein at least one internucleoside linkage of the oligonucleotide is a phosphorothioate linkage.

76. The oligonucleotide of claim 74 or 75, wherein the oligonucleotide comprises three linked nucleosides that are linked through phosphodiester internucleoside linkages at the 5' end and three linked nucleosides that are linked through phosphodiester internucleoside linkages at the 3' end.

77. The oligonucleotide of any one of claims 74-76, wherein the oligonucleotide comprises one or more 2'-*O*-(2-methoxyethyl) nucleosides that are linked through phosphorothioate internucleoside linkages.

78. The oligonucleotide of claim 74 or 75, wherein the oligonucleotide comprises five linked nucleosides that are linked through phosphodiester internucleoside linkages.

79. The oligonucleotide of claim 78, wherein each of the five linked nucleosides are 2'-*O*-(2-methoxyethyl) (2'-MOE) nucleosides.

80. The oligonucleotide of any one of claims 74-79, wherein each of the linked nucleosides of the oligonucleotide are 2'-*O*-(2-methoxyethyl) (2'-MOE) nucleosides.

81. The oligonucleotide of claim 74 or 75, wherein all internucleoside linkages of the oligonucleotide are phosphorothioate linkages, optionally wherein each of the linked nucleosides of the oligonucleotide are 2'-*O*-(2-methoxyethyl) (2'-MOE) nucleosides, further optionally wherein the oligonucleotide comprises at least one 5-methyl cytosine modified nucleobase.

82. A pharmaceutical composition comprising the oligonucleotide of any one of claims 73-81, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.

83. An oligonucleotide of any one of claims 1-43 or a pharmaceutically acceptable salt thereof capable of increasing, restoring, or stabilizing expression of the STMN2 mRNA capable of translation of a functional STMN2 and/or activity and/or function of STMN2 protein in a cell or a human patient suffering from a neurological disease or disorder, wherein the level of increase, restoration, or stabilization of expression and/or activity and/or function is sufficient for use of the oligonucleotide as a medicament for the treatment of neurological disease or disorder.

84. The oligonucleotide of any one of claims 1-43 comprising one or more chiral centers and/or double bonds.

85. The oligonucleotide of claim 84, wherein the oligonucleotide exist as stereoisomers selected from geometric isomers, enantiomers, and diastereomers.

86. A method of treating a neurological disease and/or a neuropathy in a patient in need thereof, the method comprising administering to a patient in need thereof a therapeutically effective amount of an oligonucleotide of any one of claims 1-43 or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of claim 44, in combination with a second therapeutic agent selected from Riluzole (Rilutek), Edaravone (Radicava), rivastigmine, donepezil, galantamine, selective serotonin reuptake inhibitor, antipsychotic agents, cholinesterase inhibitors, memantine, benzodiazepine antianxiety drugs, AMX0035 (ELYBRIO), ZILUCOPLAN (RA101495), dual AON intrathecal administration (*e.g.*, BIIB067, BIIB078), BIIB100, levodopa/carbidopa, dopaminergic agents (*e.g.*, ropinirole, pramipexole, rotigotine), medroxyprogesterone, KCNQ2/KCNQ3 openers, anticonvulsants and psychostimulant agents, and/or a therapy (*e.g.*, selected from breathing care, physical therapy, occupational therapy, speech therapy, nutritional support), for treating said neurologic disease.

87. The method of claim 86, wherein the neurological disease is selected from the group consisting of amyotrophic lateral sclerosis (ALS), frontotemporal dementia (FTD), Alzheimer's

disease (AD), Parkinson's disease (PD), Huntington's disease, brachial plexus injuries, peripheral nerve injuries, progressive supranuclear palsy (PSP), brain trauma, spinal cord injury, and corticobasal degeneration (CBD).

88. The method of claim 86, wherein the neuropathy is chemotherapy induced neuropathy.

89. The method of any one of claims 45-58, 63-69, and 86-88, wherein patient for treatment is identified by measuring the presence or level of expression of neurofilament light (NEFL), neurofilament heavy (NEFH), phosphorylated neurofilament heavy chain (pNFH), TDP-43, or $p75^{ECD}$ in the plasma, the spinal cord fluid, the cerebrospinal fluid, the extracellular vesicles (for example, CSF exosomes), the blood, the urine, the lymphatic fluid, fecal matter, or a tissue of the patient.

90. The method of claim 89, wherein the patient for treatment is identified by measuring phosphorylated neurofilament heavy chain (pNFH) in cerebrospinal fluid (CSF).

91. The method of claim 90, wherein the pNFH in the CSF of the patient is used to predict disease status and survival in *C9ORF72*-associated amyotrophic lateral sclerosis (c9ALS) patients after initial administration and/or during on-going treatment.