CLAIMS

What is claimed is:

1. A method for treating amyotrophic lateral sclerosis, comprising administering to a subject in need of such treatment an effective amount of a myeloperoxidase inhibitor.

2. The method of Claim 1, wherein the myeloperoxidase inhibitor is 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof.

3. The method of Claim 1 or 2, wherein the treating comprises slowing progression of amyotrophic lateral sclerosis, reducing intensity of symptoms associated with amyotrophic lateral sclerosis, reducing onset of symptoms associated with amyotrophic lateral sclerosis, reducing weight loss associated with amyotrophic lateral sclerosis, reversing weight loss associated with amyotrophic lateral sclerosis, delaying mortality associated with amyotrophic lateral sclerosis, and combinations thereof.

4. The method of Claim 3, wherein the symptoms associated with amyotrophic lateral sclerosis are selected from the group consisting of fine motor function, gross motor function, balbar function, respiratory function, and a combinations thereof.

5. The method of Claim 3 or 4, wherein the symptoms associated with amyotrophic lateral sclerosis are selected from the group consisting of walking, speech, eating, swallowing, writing, climbing stairs, cutting food, turning in bed, salivation, dressing, maintaining hygiene, breathing, dyspnea, orthopnea, respiratory insufficiency, and combinations thereof.

6. The method of any one of Claims 1-5, wherein the effective amount is about 150 mg or more per day.

7. The method of any one of Claims 1-6, wherein the effective amount is about 300 mg or more per day.

8. The method of any one of Claims 1-7, wherein the effective amount is about 600 mg or more per day.

9. The method of any one of Claims 1-8, wherein the effective amount is about 1200 mg per day.

10. The method of any one of Claims 1-9, wherein administering comprises administering a dose equal to about half of the daily dose two times per day.

11. The method of any one of Claims 1-10, wherein administering comprises administering a dose equal to about half of a daily dose every 12 hours.

12. The method of any one of Claims 1-11, wherein administering comprises administering a dose equal to about one quarter of a daily dose four times per day.

13. The method of any one of Claims 1-12, wherein administering comprises administering about 600 mg two times per day.

14. The method of any one of Claims 1-13, wherein administering comprises administering about 300 mg four times per day.

15. The method of any one of Claims 1-14, wherein the method is carried out for a time period selected from the group consisting of at least about 12 weeks, at least about 24 weeks, at least about 6 months, at least about 1 year, at least about 2 years, at least about 3 years, at least about 4 years, at least about 5 years, at least about 10 years, and until the patient dies.

16. The method of any one of Claims 1-15, wherein the method is carried out at least daily for an indefinite amount of time.

17. The method of any one of Claims 1-16, further comprising administering one or more other amyotrophic lateral sclerosis treatments simultaneously or concurrently with administering 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof.

18. The method of Claim 17, wherein the one or more other amyotrophic lateral sclerosis treatment includes riluzole.

19. The method of Claim 17 or 18, wherein the one or more other amyotrophic lateral sclerosis treatment includes a sublingual formulation of riluzole.

20. The method of Claim 17, wherein the one or more other amyotrophic lateral sclerosis treatment includes a prodrug of riluzole.

21. The method of Claim 20, wherein the prodrug of riluzole is troriluzole.

22. The method of any one of Claims 1-21, wherein the patient began exhibiting symptoms of amyotrophic lateral sclerosis less than about two years before beginning administering 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof.

23. The method of any one of Claims 1-22, wherein the patient began exhibiting symptoms of amyotrophic lateral sclerosis at least greater than about two years before beginning administering 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof.

24. The method of any one of Claims 1-23, wherein the patient exhibits a greater than 20% improvement in ALS Functional Rating Scale, Revised (ALSFRS-R) score when compared to baseline.

25. The method of any one of Claims 1-24, wherein the patient exhibits a greater than 30% improvement in ALS Functional Rating Scale, Revised (ALSFRS-R) score when compared to baseline.

26. The method of Claim 24 or 25, wherein the improvement is apparent in a time period selected from the group consisting of less than about 9 months, less than about 6 months, less than about 3 months, and less than about 1 month.

27. The method of any one of Claims 1-26, wherein administering 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof results in slowing of a rate of fine motor function loss in the patient.

28. The method of any one of Claims 1-27, further comprising administering a daily dose of greater than an effective amount for a period of time before administering an effective amount of 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof.

29. The method of Claim 28, wherein the greater than an effective amount is greater than 600 mg.

30. The method of Claim 28 or 29, wherein the greater than an effective amount is greater than 900 mg.

31. The method of any one of Claims 28-30, wherein the greater than an effective amount is greater than 1200 mg.

32. The method of any one of Claims 28-31, wherein the period of time before administering a greater than effective amount is from about 1 weeks to about 12 weeks.

33. The method of any one of Claims 28-32, wherein the period of time before administering a greater than effective amount is from about 2 weeks to about 6 weeks.

34. The method of any one of Claims 28-33, wherein administering a greater than effective amount of 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof is carried out indefinitely.

35. The method of any one of Claims 1-34, wherein an effective amount of 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof is administered in an initial dose and every administration thereafter.

36. The method of any one of Claims 1-35, wherein the effective amount comprises a stable daily dose.

37. The method of Claim 36, wherein the stable daily dose comprises about 1200 mg of 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof.

38. The method of Claim 36 or 37, wherein the stable daily dose comprises 1 to 5 unit doses per day.

39. The method of any one of Claims 36-38, wherein each unit dose is a solid unit dose.

40. The method of any one of Claims 36-39, wherein administering comprises administering one unit dose two times per day wherein each unit dose is equal to about half of the stable daily dose.

41. The method of any one of Claims 36 to 40, wherein administering comprises administering one unit dose once every 12 hours wherein each unit dose is equal to about half of the stable daily dose.

42. The method of any one of Claims 36-41, wherein administering comprises administering one unit dose four times per day wherein each unit dose is equal to about one quarter of the stable daily dose.

43. The method of any one of Claims 36-42, wherein administering comprises administering two unit doses wherein each unit dose is about 600 mg two times per day.

44. The method of any one of Claims 36-43, wherein administering comprises administering four unit doses wherein each unit dose is about 300 mg four times per day.

45. The method of any one of Claims 36-44, wherein administering a stable daily dose of 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof is carried out for at least about 12 weeks.

46. The method of any one of Claims 36-45, wherein administering a stable daily dose of 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof is carried out for an indefinite amount of time.

47. The method of any one of Claims 36-46, wherein the stable daily dose is consistent throughout a treatment regimen.

48. The method of any one of Claims 36-47, wherein an initial daily dose is equal to each daily dose thereafter.

49. The method of any one of Claims 36-48, wherein there is no titration before administering the stable daily dose.

50. The method of any one of Claims 1-49, further comprising monitoring the patient.

51. The method of any one of Claims 1-50, further comprising monitoring the patient for neutropenia.

52. The method of any one of Claims 1-51, further comprising monitoring ALSFRS-R score for the patient.

53. The method of any one of Claims 1-52, further comprising monitoring the patients fine motor function, gross motor function, bulbar function, respiratory function, and combinations thereof.

54. The method of any one of Claims 1-53, further comprising monitoring behaviors selected from the group consisting of swallowing, handwriting, speech, ability to walk, ability to climb stairs, ability to dress, ability to maintain hygiene, and combinations thereof.

55. The method of any one of Claims 1-54, further comprising scheduling a doctor visit every 6 months for at least 12 months.

56. The method of any one of Claims 1-55, wherein the patient is predisposed to amyotrophic lateral sclerosis and is not exhibiting symptoms of amyotrophic lateral sclerosis.

57. The method of any one of Claims 1-56, further comprising administering 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof to family members of the patient.

58. The method of any one of Claims 1-56, wherein treating comprises administering 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof to a patient not exhibiting symptoms of amyotrophic lateral sclerosis.

59. The method of any one of Claims 1-58, wherein treating comprises administering 1-(2-isopropoxyethyl)-2-thioxo-1,2,3,5-tetrahydro-pyrrolo[3,2-d]pyrimidin-4-one or a pharmaceutically acceptable salt thereof to a patient that is predisposed to amyotrophic lateral sclerosis.