WHAT IS CLAIMED IS:

1. A method of treating Rett syndrome in a subject in need thereof, the method comprising administering a therapeutically effective amount of trofinetide to the subject in a daily amount of:
a) 4-10.0 g if the subject weighs between 8-11.9 kg;
b) 10.1-14.0 g if the subject weighs between 12.0-20.0 kg;
c) 14.1-18.0 g if the subject weighs between 20.1-35.0 kg;
d) 18.1-22.0 g if the subject weighs between 35.1-50.0 kg; or
e) 22.1-26 g if the subject weighs between 50.1-150 kg.

2. The method of claim 1, wherein the subject weighs between 8-11.9 kg.

3. The method of claim 2, wherein trofinetide is administered to the subject in a daily amount of 4 g, about 5 g, about 6 g, about 7 g, about 8 g, about 9 g, or 10 g.

4. The method of claim 1, wherein the subject weighs between 12.0-20.0 kg.

5. The method of claim 4, wherein trofinetide is administered to the subject in a daily amount of 11 g, about 12 g, about 13 g, or 14 g.

6. The method of claim 1, wherein the subject weighs between 20.1-35.0 kg.

7. The method of claim 6, wherein trofinetide is administered to the subject in a daily amount of 15 g, about 16 g, about 17 g, or 18 g.

8. The method of claim 1, wherein the subject weighs between 35.1-50.0 kg.

9. The method of claim 8, wherein trofinetide is administered to the subject in a daily amount of 19 g, about 20 g, about 21 g, or 22 g.

10. The method of claim 1, wherein the subject weighs between 50.1-100 kg.

11. The method of claim 10, wherein trofinetide is administered to the subject in a daily amount of 23 g, about 24 g, about 25 g, or 26 g.

12. The method of any one of claims 1-11, wherein the administration of trofinetide results in an $AUC_{0\text{-}12,\ ss}$ of about 755 µg•h/mL to about 1300 µg•h/mL in the subject.

13. The method of any one of claims 1-11, wherein the administration of trofinetide results in an $AUC_{0\text{-}12,\ ss}$ of at least about 755 µg•h/mL, at least about 780 µg•h/mL, at least about 790 µg•h/mL, at least about 800 µg•h/mL, at least about 820 µg•h/mL, at least about 840 µg•h/mL, at least about 860 µg•h/mL, at least about 880 µg•h/mL, at least about 900 µg•h/mL, at least about 920 µg•h/mL, at least about 940 µg•h/mL, at least about 960 µg•h/mL, at least about 980 µg•h/mL, at least about 1000 µg•h/mL, at least about 1020 µg•h/mL, at least about 1040 µg•h/mL, at least about 1060 µg•h/mL, at least about 1080 µg•h/mL, at least about 1100 µg•h/mL, at least about 1120 µg•h/mL, at least about 1140 µg•h/mL, at least about 1160 µg•h/mL, at least about 1180 µg•h/mL, at least about 1200 µg•h/mL, at least about 1220 µg•h/mL, at least about 1240 µg•h/mL, at least about 1260 µg•h/mL, or at least about 1280 µg•h/mL in the subject.

14. The method of any one of claims 1-13, wherein the administration of trofinetide to the subject in a $C_{max,\ ss}$ of about 100 to about 200 µg/mL in the subject.

15. The method of any one of claims 1-13, wherein the administration of trofinetide to the subject results in a $C_{max,\ ss}$ of at least about 100 µg/mL, at least about 110 µg/mL, at least about 120 µg/mL, at least about 130 µg/mL, at least about 140 µg/mL, at least about 150 µg/mL, at least about

160 µg/mL, at least about 170 µg/mL, at least about 180 µg/mL, at least about 190 µg/mL, or at least about 200 µg/mL in the subject.

16. The method of any one of claims 1-15, wherein trofinetide is administered to the subject in a single dose per day.

17. The method of any one of claims 1-15, wherein trofinetide is administered to the subject in multiple doses per day that sum to the daily amount.

18. The method of claim 17, wherein trofinetide is administered to the subject in two doses per day that sum to the daily amount.

19. The method of any one of claims 1-18, wherein trofinetide is administered as a pharmaceutical composition comprising trofinetide and a pharmaceutically acceptable carrier.

20. The method of claim 19, wherein the pharmaceutically acceptable carrier comprises water.

21. The method of claims 19-20, wherein the pharmaceutical composition is a solution.

22. The method of claim 21, wherein the concentration of trofinetide in the solution is about 0.05 g/mL – 0.7 g/mL in the solution.

23. The method of claim 22, wherein the concentration of trofinetide in the solution is about 0.2 g/mL in the solution.

24. The method of any one of claims 1-23, wherein trofinetide is orally administered to the subject.

25. The method of any one of claims 1-24, wherein the subject is human.

26. The method of claim 25, wherein the subject is female.

27. The method of any one of claims 1-26, wherein the subject is about 18 months to about 20 years old.

28. The method of any one of claims 1-27, wherein the subject has a MECP2 mutation.

29. The method of any one of claims 1-28, wherein the Rett syndrome is atypical Rett syndrome.

30. The method of any one of claims 1-28, wherein the Rett syndrome is classic/typical Rett syndrome.

31. Trofinetide for use in treating Rett syndrome in a subject, wherein trofinetide is to be administered in a daily amount of:

a) 4-10.0 g if the subject weighs between 8-11.9 kg;

b) 10.1-14.0 g if the subject weighs between 12.0-20.0 kg;

c) 14.1-18.0 g if the subject weighs between 20.1-35.0 kg;

d) 18.1-22.0 g if the subject weighs between 35.1-50.0 kg; or

e) 22.1-26 g if the subject weighs between 50.1-150 kg.

32. The trofinetide for use of claim 31, wherein the subject weighs between 8-11.9 kg.

33. The trofinetide for use of claim 32, wherein trofinetide is to be administered to the subject in a daily amount of 4 g, about 5 g, about 6 g, about 7 g, about 8 g, about 9 g, or 10 g.

34. The trofinetide for use of claim 31, wherein the subject weighs between 12.0-20.0 kg.

35. The trofinetide for use of claim 34, wherein trofinetide is to be administered to the subject in a daily amount of 11 g, about 12 g, about 13 g, or 14 g.

36. The trofinetide for use of claim 31, wherein the subject weighs between 20.1-35.0 kg.

37. The trofinetide for use of claim 36, wherein trofinetide is to be administered to the subject in a daily amount of 15 g, about 16 g, about 17 g, or 18 g.

38. The trofinetide for use of claim 31, wherein the subject weighs between 35.1-50.0 kg.

39. The trofinetide for use of claim 38, wherein trofinetide is to be administered to the subject in a daily amount of 19 g, about 20 g, about 21 g, or 22 g.

40. The trofinetide for use of claim 31, wherein the subject weighs between 50.1-100 kg.

41. The trofinetide for use of claim 40, wherein trofinetide is to be administered to the subject in a daily amount of 23 g, about 24 g, about 25 g, or 26 g.

42. The trofinetide for use of any one of claims 31-41, wherein the administration of trofinetide results in an $AUC_{0-12, ss}$ of about 755 µg•h/mL to about 1300 µg•h/mL in the subject.

43. The trofinetide for use of any one of claims 31-41, wherein the administration of trofinetide results in an $AUC_{0-12, ss}$ of at least about 755 µg•h/mL, at least about 780 µg•h/mL, at least about 790 µg•h/mL, at least about 800 µg•h/mL, at least about 820 µg•h/mL, at least about 840 µg•h/mL, at least about 860 µg•h/mL, at least about 880 µg•h/mL, at least about 900 µg•h/mL, at least

about 920 μg•h/mL, at least about 940 μg•h/mL, at least about 960 μg•h/mL, at least about 980 μg•h/mL, at least about 1000 μg•h/mL, at least about 1020 μg•h/mL, at least about 1040 μg•h/mL, at least about 1060 μg•h/mL, at least about 1080 μg•h/mL, at least about 1100 μg•h/mL, at least about 1120 μg•h/mL, at least about 1140 μg•h/mL, at least about 1160 μg•h/mL, at least about 1180 μg•h/mL, at least about 1200 μg•h/mL, at least about 1220 μg•h/mL, at least about 1240 μg•h/mL, at least about 1260 μg•h/mL, or at least about 1280 μg•h/mL in the subject.

44. The trofinetide for use of any one of claims 31-43, wherein the administration of trofinetide to the subject results in a $C_{max, ss}$ of about 100 to about 200 μg/mL in the subject.

45. The trofinetide for use of any one of claims 31-43, wherein the administration of trofinetide to the subject results in a $C_{max, ss}$ of at least about 100 μg/mL, at least about 110 μg/mL, at least about 120 μg/mL, at least about 130 μg/mL, at least about 140 μg/mL, at least about 150 μg/mL, at least about 160 μg/mL, at least about 170 μg/mL, at least about 180 μg/mL, at least about 190 μg/mL, or at least about 200 μg/mL in the subject.

46. The trofinetide for use of any one of claims 31-45, wherein trofinetide is to be administered to the subject in a single dose per day.

47. The trofinetide for use of any one of claims 31-45, wherein trofinetide is to be administered to the subject in multiple doses per day that sum to the daily amount.

48. The trofinetide for use of claim 47, wherein trofinetide is to be administered to the subject in two doses per day that sum to the daily amount.

49. The trofinetide for use of any one of claims 31-48, wherein trofinetide is to be administered as a pharmaceutical composition comprising trofinetide and a pharmaceutically acceptable carrier.

50. The trofinetide for use of claim 49, wherein the pharmaceutically acceptable carrier comprises water.

51. The trofinetide for use of claims 49-50, wherein the pharmaceutical composition is a solution.

52. The trofinetide for use of claim 51, wherein the concentration of trofinetide in the solution is about 0.05 g/mL – 0.7 g/mL in the solution.

53. The trofinetide for use of claim 52, wherein the concentration of trofinetide in the solution is about 0.2 g/mL in the solution.

54. The trofinetide for use of any one of claims 31-53, wherein trofinetide is to be orally administered to the subject.

55. The trofinetide for use of any one of claims 31-54, wherein the subject is human.

56. The trofinetide for use of claim 55, wherein the subject is female.

57. The trofinetide for use of any one of claims 31-56, wherein the subject is about 18 months to about 20 years old.

58. The trofinetide for use of any one of claims 31-57, wherein the subject has a MECP2 mutation.

59. The trofinetide for use of any one of claims 31-58, wherein the Rett syndrome is atypical Rett syndrome.

~~60. The trofinetide for use of any one of claims 31-58, wherein the Rett syndrome is classic/typical Rett syndrome.~~

~~61~~1. Use of trofinetide for the manufacture of a medicament for treating Rett syndrome in a subject, wherein trofinetide is to be administered in a daily amount of:

a) 4-10.0 g if the subject weighs between 8-11.9 kg;

b) 10.1-14.0 g if the subject weighs between 12.0-20.0 kg;

c) 14.1-18.0 g if the subject weighs between 20.1-35.0 kg;

d) 18.1-22.0 g if the subject weighs between 35.1-50.0 kg; or

e) 22.1-26 g if the subject weighs between 50.1-150 kg.

~~62. The use of claim 61, wherein the subject weighs between 8-11.9 kg.~~

~~63. The use of claim 62, wherein trofinetide is to be administered to the subject in a daily amount of 4 g, about 5 g, about 6 g, about 7 g, about 8 g, about 9 g, or 10 g.~~

~~64. The use of claim 61, wherein the subject weighs between 12.0-20.0 kg.~~

~~65. The use of claim 64, wherein trofinetide is to be administered to the subject in a daily amount of 11 g, about 12 g, about 13 g, or 14 g.~~

~~66. The use of claim 61, wherein the subject weighs between 20.1-35.0 kg.~~

~~67. The use of claim 66, wherein trofinetide is to be administered to the subject in a daily amount of 15 g, about 16 g, about 17 g, or 18 g.~~

~~68. The use of claim 61, wherein the subject weighs between 35.1-50.0 kg.~~

~~69. The use of claim 68, wherein trofinetide is to be administered to the subject in a daily amount of 19 g, about 20 g, about 21 g, or 22 g.~~

~~70. The use of claim 61, wherein the subject weighs between 50.1-100 kg.~~

~~71. The use of claim 70, wherein trofinetide is to be administered to the subject in a daily amount of 23, about 24, about 25, or 26 g.~~

~~72~~2. The use of ~~any one of claims 61-71~~claim 1, wherein the administration of trofinetide results in an $AUC_{0\text{-}12,\ ss}$ of about 755 µg•h/mL to about 1300 µg•h/mL in the subject.

~~73~~3. The use of ~~any one of claims 61-71~~claim 1 or claim 2, wherein the administration of trofinetide results in an $AUC_{0\text{-}12,\ ss}$ of at least about 755 µg•h/mL, at least about 780 µg•h/mL, at least about 790 µg•h/mL, at least about 800 µg•h/mL, at least about 820 µg•h/mL, at least about 840 µg•h/mL, at least about 860 µg•h/mL, at least about 880 µg•h/mL, at least about 900 µg•h/mL, at least about 920 µg•h/mL, at least about 940 µg•h/mL, at least about 960 µg•h/mL, at least about 980 µg•h/mL, at least about 1000 µg•h/mL, at least about 1020 µg•h/mL, at least about 1040 µg•h/mL, at least about 1060 µg•h/mL, at least about 1080 µg•h/mL, at least about 1100 µg•h/mL, at least about 1120 µg•h/mL, at least about 1140 µg•h/mL, at least about 1160 µg•h/mL, at least about 1180 µg•h/mL, at least about 1200 µg•h/mL, at least about 1220 µg•h/mL, at least about 1240 µg•h/mL, at least about 1260 µg•h/mL, or at least about 1280 µg•h/mL in the subject.

~~74~~4. The use of any one of claims ~~61~~1-~~73~~3, wherein the administration of trofinetide to the subject results in a $C_{max,\ ss}$ of about 100 to about 200 µg/mL in the subject.

~~75~~5. The use of any one of claims ~~61~~1-~~73~~4, wherein the administration of trofinetide to the subject results in a $C_{max,\ ss}$ of at least about 100 µg/mL, at least about 110 µg/mL, at least about 120

µg/mL, at least about 130 µg/mL, at least about 140 µg/mL, at least about 150 µg/mL, at least about 160 µg/mL, at least about 170 µg/mL, at least about 180 µg/mL, at least about 190 µg/mL, or at least about 200 µg/mL in the subject.

~~76~~6. The~~ trofinetide for~~ use of any one of claims ~~61~~1-~~75~~5, wherein trofinetide is to be administered to the subject in a single dose per day or~~.~~

~~77. The use of any one of claims 61-75, wherein trofinetide is to be administered to the subject~~ in multiple doses per day that sum to the daily amount.

~~78~~7. The use of claim ~~77~~6, wherein trofinetide is to be administered to the subject in two doses per day that sum to the daily amount.

~~79~~8. The use of any one of claims ~~61~~1-~~78~~7, wherein trofinetide is to be administered as a pharmaceutical composition comprising trofinetide and a pharmaceutically acceptable carrier.

~~80~~9. The use of claim ~~79~~8, wherein the pharmaceutically acceptable carrier comprises water and~~.~~

~~81. The use of claims 79-80, wherein~~ the pharmaceutical composition is a solution.

~~82~~10. The use of claim ~~81~~8, wherein the concentration of trofinetide in the solution is about 0.05 g/mL – 0.7 g/mL in the solution~~.~~

~~83. The use of claim 82, wherein the concentration of trofinetide in the solution is~~ or about 0.2 g/mL in the solution.

~~84~~11. The use of any one of claims ~~61~~1-~~83~~10, wherein trofinetide is to be orally administered to the subject.

~~85~~12. The use of any one of claims ~~61~~1-~~84~~11, wherein the subject is human.

~~86~~13. The use of claim ~~85~~12, wherein the subject is female.

~~87~~14. The use of any one of claims ~~61~~1-~~86~~13, wherein the subject is about 18 months to about 20 years old.

~~88~~15. The use of any one of claims ~~61~~1-~~87~~14, wherein the subject has a MECP2 mutation.

~~89~~16. The use of any one of claims ~~61~~1-~~88~~15, wherein the Rett syndrome is atypical Rett syndrome~~.~~

~~90. The use of any one of claims 61-88, wherein the Rett syndrome is~~ or classic/typical Rett syndrome.

17. An orally administered pharmaceutical composition comprising trofinetide, wherein the pharmaceutical composition is an aqueous solution and further wherein (i) the trofinetide is provided in the solution in an amount of 0.05 g/ml to 0.7 g/ml; (ii) the amount of trofinetide is effective for providing an $AUC_{0\text{-}12,\ ss}$ of at least about 755 µg•h/mL in a subject; and/or (iii) the amount of trofinetide is effective for providing a $Cmax_{,\ ss}$ of at least about 100 µg/mL in a subject.

18. The orally administered pharmaceutical composition according to claim 17, wherein trofinetide is provided in the solution in an amount of 0.05 to 0.6 g/ml, 0.1 to 0.4 g/mL, or 0.15 to 0.3 g/mL.

19. The orally administered pharmaceutical composition according to claim 17 or claim 18, wherein the amount of trofinetide is effective for providing an $AUC_{0\text{-}12,\ ss}$ of about 755 µg•h/mL to about 1300 µg•h/mL in the subject and/or a $C_{max,\ ss}$ of about 100 to about 200 µg/mL in the subject.

20. The orally administered pharmaceutical composition according to any one of claims 17-19, further comprising one or more excipients selected from a preservative, sweetener, flavoring agent, and coloring agent.

~~91. A method of treating Rett syndrome in a subject in need thereof, the method comprising administering to the subject a daily amount of trofinetide that provides an $AUC_{0\text{-}12,\ ss}$ of about 755 µg•h/mL to about 1300 µg•h/mL in the subject.~~

~~92. The method of claim 91, comprising administering to the subject a daily amount of trofinetide that provides an $AUC_{0\text{-}12,\ ss}$ of about 800 µg•h/mL to about 1000 µg•h/mL in the subject.~~

~~93. A method of treating Rett syndrome in a subject in need thereof, the method comprising administering to the subject a daily amount of trofinetide that provides an $AUC_{0\text{-}12,\ ss}$ of at least about 755 µg•h/mL, at least about 780 µg•h/mL, at least about 790 µg•h/mL, at least about 800 µg•h/mL, at least about 820 µg•h/mL, at least about 840 µg•h/mL, at least about 860 µg•h/mL, at least about 880 µg•h/mL, at least about 900 µg•h/mL, at least about 920 µg•h/mL, at least about 940 µg•h/mL, at least about 960 µg•h/mL, at least about 980 µg•h/mL, at least about 1000 µg•h/mL, at least about 1020 µg•h/mL, at least about 1040 µg•h/mL, at least about 1060 µg•h/mL, at least about 1080 µg•h/mL, at least about 1100 µg•h/mL, at least about 1120 µg•h/mL, at least about 1140 µg•h/mL, at least about 1160 µg•h/mL, at least about 1180 µg•h/mL, at least about 1200 µg•h/mL, at least about 1220 µg•h/mL, at least about 1240 µg•h/mL, at least about 1260 µg•h/mL, or at least about 1280 µg•h/mL in the subject.~~

~~94. The method of any one of claims 91-93, wherein the subject weighs between about 12 kg to about 20 kg.~~

95. The method of any one of claims 91-94, wherein the daily amount of trofinetide is about 12 g.

96. The method of any one of claims 91-93, wherein the subject weighs between about 20.1 kg to about 35 kg.

97. The method of any one of claims 91-93 or 96, wherein the daily amount of trofinetide is about 16 g.

98. The method of any one of claims 91-93, wherein the subject weighs between about 35.1 kg to about 50 kg.

99. The method of any one of claims 91-93 or 88 wherein the daily amount of trofinetide is about 20 g.

100. The method of any one of claims 91-93, wherein the subject weighs between about 50.1 kg to about 100 kg.

101. The method of claims 91-93 or 100 wherein the daily amount of trofinetide is about 24 g.

102. The method of any one of claims 91-101, wherein trofinetide is administered to the subject in a single dose per day.

103. The method of any one of claims 91-101, wherein trofinetide is administered to the subject in multiple doses per day that sum to the daily amount.

104. The method of claim 103, wherein trofinetide is administered to the subject in two doses per day that sum to the daily amount.

105. The method of any one of claims 91-104, wherein trofinetide is administered as a pharmaceutical composition comprising trofinetide and a pharmaceutically acceptable carrier.

106. The method of claim 105, wherein the pharmaceutically acceptable carrier comprises water.

107. The method of claims 105-106, wherein the pharmaceutical composition is a solution.

108. The method of claim 107, wherein the concentration of trofinetide is about 0.05 g/mL – 0.7 g/mL in the solution.

109. The method of claim 108, wherein the concentration of trofinetide is about 0.2 g/mL in the solution.

110. The method of any one of claims 91-109, wherein trofinetide is orally administered to the subject.

111. The method of any one of claims 91-110, wherein the subject is human.

112. The method of claim 111, wherein the subject is female.

113. The method of any one of claims 1-112, wherein the subject is about 18 months to about about 20 years old.

114. The method of any one of claims 91-113, wherein the subject has a MECP2 mutation.

~~115. The method of any one of claims 91-114, wherein the Rett syndrome is atypical Rett syndrome.~~

~~116. The method of any one of claims 91-114, wherein the Rett syndrome is classic/typical Rett syndrome.~~

~~117. The method of any one of claims 5 or 12-30, wherein trofinetide is administered to the subject in a daily amount of about 12 g.~~

~~118. The method of any one of claims 7 or 12-30, wherein trofinetide is administered to the subject in a daily amount of about 16 g.~~

~~119. The method of any one of claims 9 or 12-30, wherein trofinetide is administered to the subject in a daily amount of about 20 g.~~

~~120. The method any one of claims 11-30, wherein trofinetide is administered to the subject in a daily amount of about 24 g.~~