

CLAIMS

1. An antibody for use in a method for treating juvenile idiopathic arthritis (JIA) in a subject in need thereof comprising administering an effective amount of an antibody that specifically binds interleukin 6 (IL-6) receptor, wherein the antibody that specifically binds to the IL-6 receptor comprises a heavy chain variable region of sequence SEQ ID NO: 1 and a light chain variable region sequence of SEQ ID NO: 2, wherein the antibody is to be administered subcutaneously at a dose of from about 2 mg/kg to about 4mg/kg once every other week or once every week.

2.- The ~~method~~antibody for use of claim 1, wherein the JIA is systemic JIA (sJIA).

3.- The ~~method~~antibody for use of claims 1 or 2, wherein the antibody is sarilumab.

4. The ~~method~~antibody for use of any one of claims 1-3, wherein the subject is suffering from at least one symptom of sJIA selected from the group consisting of: arthritis in at least 1 joint for at least 6 weeks duration with or preceded by fever lasting at least 2 weeks; evanescent erythematous rash on the trunk; generalized lymphadenopathy; hepatomegaly and/or splenomegaly; polyserositis; weight loss; fatigue; malaise; fever; elevated peripheral white blood cell (WBC) count; increased platelet count; an elevated erythrocyte sedimentation rate (ESR) of >100 mm/h; anemia; and a high ferritin level relative to a healthy subject.

5.- The ~~method~~antibody for use of any one of claims 1-4, wherein the subject is suffering from at least one symptom of sJIA, wherein the at least one symptom is limping, stiffness when awakening, reluctance to use an arm or leg, reduced activity level, quotidian fever, joint swelling, and/or difficulty with fine motor activities.

6.-___The ~~method~~antibody for use of claims 4 or 5, wherein progression of at least one symptom of sJIA is reduced, slowed, halted, or otherwise ameliorated.

7.-___The ~~method~~antibody for use of ~~claim~~claims 5 or 6, wherein the at least one symptom of sJIA in the subject improves after administration of the antibody~~—is administered~~.

8.-___The ~~method~~antibody for use of any~~—one~~ of claims 1-7, wherein the subject has had an inadequate response to current treatment and is considered as a candidate for a biologic disease modifying antirheumatic drug (DMARD).

9.-___The ~~method~~antibody for use of any one of claims 1-~~68~~, wherein treating the subject comprises improving the subject's juvenile idiopathic arthritis ACR Score, improving a JIA ACR component in the subject, reducing of the level of corticosteroid administered to the subject compared to before the antibody was administered, and/or reducing the subject's Juvenile Arthritis Disease Activity Score.

10.-___The ~~method~~antibody for use of any one of claims 1-9, wherein the subject has (a) 5 or more active joints; or (b) 2 or more active joints and systemic juvenile idiopathic arthritis fever of greater than about 37.~~5~~°5°C for at least 3 out of any 7 consecutive days despite glucocorticoids administered at the same dose for at least 3 consecutive days.

11.-___The ~~method~~antibody for use of any one of claims 1-9, wherein the subject has arthritis in 2 or more joints with or preceded by quotidian spiking fever for at least 3 days, and accompanied by one or more of evanescent erythematous rash; generalized lymph node enlargement; hepatomegaly and/or splenomegaly; and/or serositis.

12.-___The ~~method~~antibody for use of claim 1, wherein the JIA is polyarticular-course JIA (pcJIA).

13. ___The ~~method~~antibody for use of any one of claims 1-12, wherein the dose of the antibody is to be administered once ~~per~~every week.

14.-___The ~~method~~antibody for use of any one of claims 1-12, wherein the dose of the antibody is to be administered once every two weeks._

15. ~~A~~ An antibody for use in a method for treating pcJIA in a subject in need thereof comprising administering an effective amount of an antibody that specifically binds IL-6 receptor, wherein the antibody that specifically binds to the IL-6 receptor comprises a heavy chain variable region of sequence SEQ ID NO: 1 and a light chain variable region sequence of SEQ ID NO: 2, wherein the antibody is to be administered subcutaneously at a dose of from about 2 mg/kg to about 4mg/kg ~~per~~once every week or ~~per two weeks~~once every other week, wherein the body weight of the subject is greater than or equal to 10 kg and less than or equal to 60 kg.

~~16. A~~

16. An antibody for use in a method for treating pcJIA in a subject in need thereof comprising administering an effective amount of an antibody that specifically binds IL-6 receptor, wherein the antibody that specifically binds to the IL-6 receptor comprises a heavy chain variable region of sequence SEQ ID NO: 1 and a light chain variable region sequence of SEQ ID NO: 2, wherein the body weight of the subject is greater than or equal to 30 kg and less than 33 kg and the antibody is to be administered subcutaneously at a dose of 61.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 33 kg and less than 37.5 kg and the antibody is to be administered at a dose of 70 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 37.5 kg and less

than 42 kg and the antibody is to be administered at a dose of 78.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 42 kg and less than 46.5 kg and the antibody is to be administered at a dose of 87.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 46.5 kg and less than 50.5 kg and the antibody is to be administered at a dose of 96.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 50.5 kg and less than 55 kg and the antibody is to be administered at a dose of 105 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 55 kg and less than 59.5 kg and the antibody is to be administered at a dose of 113.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 59.5 kg and less than 64 kg and the antibody is to be administered at a dose of 122.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 64 kg and less than 68 kg and the antibody is to be administered at a dose of 131.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 68 kg and less than 72.5 kg and the antibody is to be administered at a dose of 140 mg once every other week or once every week; or wherein the body weight of the subject is greater than or equal to 72.5 kg and the antibody is to be administered at a dose of 148.75 mg once every other week or once every week.

~~17.A~~

17. An antibody for use in a method for treating pcJIA in a subject in need thereof comprising administering an effective amount of an antibody that specifically binds IL-6 receptor, wherein the antibody that specifically binds to the IL-6 receptor comprises a heavy chain variable region of sequence SEQ ID NO: 1 and a light chain variable region sequence of SEQ ID NO: 2, wherein the body weight of the subject is greater than or equal to 30 kg and less than 31 kg and the antibody is to be administered subcutaneously at a dose of 87.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 31 kg and less than 34 kg and the antibody is to be administered at a dose of 96.25 mg once every other week or once every week;

wherein the body weight of the subject is greater than or equal to 34 kg and less than 37 kg and the antibody is [to be](#) administered at a dose of 105 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 37 kg and less than 39.5 kg and the antibody is [to be](#) administered at a dose of 113.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 39.5 kg and less than 42.5 kg and the antibody is [to be](#) administered at a dose of 122.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 42.5 kg and less than 45 kg and the antibody is [to be](#) administered at a dose of 131.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 45 kg and less than 48.5 kg and the antibody is [to be](#) administered at a dose of 140 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 48.5 kg and less than 51.5 kg and the antibody is [to be](#) administered at a dose of 148.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 51.5 kg and less than 54.5 kg and the antibody is [to be](#) administered at a dose of 157.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 54.5 kg and less than 57 kg and the antibody is [to be](#) administered at a dose of 166.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 57 kg and less than 63 kg and the antibody is [to be](#) administered at a dose of 175 mg once every other week or ~~once~~ once every week; wherein the body weight of the subject is greater than or equal to 63 kg and the antibody is [to be](#) administered at a dose of 192.5 mg once every other week or once every week.

18.-A [An antibody for use in a](#) method for treating pcJIA in a subject in need thereof comprising administering an effective amount of an antibody that specifically binds IL-6 receptor, wherein the antibody that specifically binds to the IL-6 receptor comprises a heavy chain variable region of sequence SEQ ID NO: 1 and a light chain variable region sequence of SEQ ID NO: 2, wherein the body weight of the subject is greater than or equal to 10 kg and less than 12.5 kg and the antibody is [to be](#) administered

subcutaneously at a dose of 26.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 12.5 kg and less than 16 kg and the antibody is to be administered at a dose of 35 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 16 kg and less than 19.5 kg and the antibody is to be administered at a dose of 43.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 19.5 kg and less than 23 kg and the antibody is to be administered at a dose of 52.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 23 kg and less than 26.5 kg and the antibody is to be administered at a dose of 61.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 26.5 kg and less than 30 kg and the antibody is to be administered at a dose of 70 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 30 kg and less than 37.5 kg and the antibody is to be administered at a dose of 70 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 37.5 kg and less than 42 kg and the antibody is to be administered at a dose of 78.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 42 kg and less than 46.5 kg and the antibody is to be administered at a dose of 87.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 46.5 kg and less than 50.5 kg and the antibody is to be administered at a dose of 96.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 50.5 kg and less than 55 kg and the antibody is to be administered at a dose of 105 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 55 kg and less than 59.5 kg and the antibody is to be administered at a dose of 113.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 59.5 kg and less than 64 kg and the antibody is to be administered at a dose of 122.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 64 kg and less than 68 kg and the antibody is to be administered at a dose of 131.25 mg once every other week or once every week;

wherein the body weight of the subject is greater than or equal to 68 kg and less than 72.5 kg and the antibody is [to be](#) administered at a dose of 140 mg once every other week or once every week; or wherein the body weight of the subject is greater than or equal to 72.5 kg and the antibody is [to be](#) administered at a dose of 148.75 mg once every other week or once every week.

~~19. A~~

19. An antibody for use in a method for treating pcJIA in a subject in need thereof comprising administering an effective amount of an antibody that specifically binds IL-6 receptor, wherein the antibody that specifically binds to the IL-6 receptor comprises a heavy chain variable region of sequence SEQ ID NO: 1 and a light chain variable region sequence of SEQ ID NO: 2, wherein the body weight of the subject is greater than or equal to 10 kg and less than 12.5 kg and the antibody is [to be](#) administered [subcutaneously](#) at a dose of 43.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 12.5 kg and less than 14.5 kg and the antibody is [to be](#) administered at a dose of 52.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 14.5 kg and less than 16.5 kg and the antibody is [to be](#) administered at a dose of 61.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 16.5 kg and less than 19 kg and the antibody is [to be](#) administered at a dose of 70 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 19 kg and less than 21 kg and the antibody is [to be](#) administered at a dose of 78.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 21 kg and less than 23.5 kg and the antibody is [to be](#) administered at a dose of 87.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 23.5 kg and less than 25.5 kg and the antibody is [to be](#) administered at a dose of 96.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 25.5 kg and less than 27.5 kg and the antibody is [to be](#) administered at a dose of 105 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 27.5 kg and less than 30 kg and the antibody is [to be](#) administered at a dose of 113.75 mg once

every other week or once every week; wherein the body weight of the subject is greater than or equal to 30 kg and less than 39.5 kg and the antibody is to be administered at a dose of 113.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 39.5 kg and less than 42.5 kg and the antibody is to be administered at a dose of 122.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 42.5 kg and less than 45 kg and the antibody is to be administered at a dose of 131.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 45 kg and less than 48.5 kg and the antibody is to be administered at a dose of 140 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 48.5 kg and less than 51.5 kg and the antibody is to be administered at a dose of 148.75 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 51.5 kg and less than 54.5 kg and the antibody is to be administered at a dose of 157.5 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 54.5 kg and less than 57 kg and the antibody is to be administered at a dose of 166.25 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 57 kg and less than 60.5 kg and the antibody is to be administered at a dose of 175 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 60.5 kg and less than 63 kg and the antibody is to be administered at a dose of 175 mg once every other week or once every week; wherein the body weight of the subject is greater than or equal to 63 kg and the antibody is to be administered at a dose of 192.5 mg once every other week or once every week.

-20. A An antibody for use in a method for treating sJIA in a subject in need thereof comprising administering an effective amount of an antibody that specifically binds IL-6 receptor, wherein the antibody that specifically binds to the IL-6 receptor comprises a heavy chain variable region of sequence SEQ ID NO: 1 and a light chain variable region sequence of SEQ ID NO: 2, wherein the antibody is to be administered subcutaneously at a dose of from about 2 mg/kg to about 2.5 mg/kg peronce every week or from about 3

mg/kg to about 4 mg/kg ~~per two weeks~~once every other week, wherein the body weight of the subject is greater than or equal to ~~30~~10 kg and less than or equal to 210 kg.

21. The antibody for use of claim 20, wherein the body weight of the subject is greater than 30 kg and wherein the antibody is to be administered at a dose of about 3 mg/kg every other week and the dose is capped at 200 mg.

22. The antibody for use of claim 20, wherein the body weight of the subject is greater than or equal to 10 kg and less than 30 kg and wherein the antibody is to be administered at a dose of from about 3 mg/kg to about 4 mg/kg once every other week.

23. The antibody for use of claim 20, wherein the body weight of the subject is greater than or equal to 10 kg and less than 30 kg and wherein the antibody is to be administered at a dose of about 4 mg/kg every other week.

24. The antibody for use of claim 15, wherein the body weight of the subject is greater than or equal to 10 kg and less than 30 kg and wherein the antibody is to be administered at a dose of about 4 mg/kg every other week.

25. The antibody for use of claim 15, wherein the antibody is to be administered at a dose of 3 mg/kg once every other week and wherein the body weight of the subject is greater than or equal to 30 kg and the dose capped at 200 mg.

26. The antibody for use according to any one of claims 12-19 or 24-25, wherein the subject is suffering from at least one symptom of pcJIA, wherein the at least one symptom

is limping; stiffness when awakening; reluctance to use an arm or leg; reduced activity level; joint swelling; and/or difficulty with fine motor activities.

27. The antibody for use according to claim any of claims 12-19 or 24-26, wherein progression of at least one symptom of JIA is reduced, slowed, halted, or otherwise ameliorated.