

CLAIMS

1. Use of an anti-CD19 antibody in the manufacture of a medicament for treatment of neuromyelitis optica spectrum disorder (NMOSD),

wherein the anti-CD19 antibody is to be administered to a subject in need of treatment for NMOSD,

wherein the anti-CD19 antibody comprises Complementarity-Determining Regions (CDRs) HCDR1, HCDR2, HCDR3, LCDR1, LCDR2, and LCDR3, wherein the HCDR1, HCDR2, HCDR3, LCDR1, LCDR2, and LCDR3 comprise the amino acid sequences of SEQ ID NOs: 5, 6, 7, 8, 9, and 10, respectively, and

wherein the subject was previously treated with an anti-CD20 antibody.

2. The use of claim 1, wherein the anti-CD19 antibody comprises a heavy chain variable region (VH) and a light chain variable region (VL) comprising the amino acid sequence of SEQ ID NO: 1 and SEQ ID NO: 2, respectively.

3. The use of claim 1, wherein the anti-CD19 antibody is Inebilizumab.

4. The use of claim 1, wherein the anti-CD19 antibody is to be administered intravenously at a dose of 300 mg every 6 months.

5. The use of claim 1, wherein the subject had an NMOSD attack while being treated with; or within 6 months of the last dose of the anti-CD20 antibody.

6. The use of claim 5, wherein the NMOSD attack comprises any one or more of an optic neuritis, a myelitis, or a brainstem attack.

7. The use of claim 1, wherein the anti-CD19 antibody is to be administered intravenously with a first initial dose of 300 mg, a second initial dose of 300 mg two weeks after the first initial dose, and subsequent doses of 300 mg every 6 months following the first initial dose.

8. The use of claim 7, wherein a corticosteroid is to be co-administered to the subject with the first initial dose.

9. The use of claim 1, wherein the anti-CD20 antibody is selected from the group consisting of: rituximab, ABP-300, B-001, BAT-4306F, BAT-4406F, BCD-132, BVX-20, CYT-202, epcoritamab, GB-261, GD-CO1620, glofitamab, HS-006, IGM-2323, IMM-0306, MIL-62, mosunetuzumab, MRG-001, obinutuzumab, ocrelizumab, odronextamab, ofatumumab, plamotamab, SM-09, TRS-005, Ublituximab, and YBL-031.
10. The use of claim 1, wherein the anti-CD20 antibody is rituximab.
11. The use of claim 1, wherein the anti-CD19 antibody depletes peripheral blood CD20-plasmablasts and plasma cells within 8 days following the administration.
12. The use of claim 1, wherein prior to the administration, the subject is identified as having previously been treated with the anti-CD20 antibody; the subject is determined as:
- (i) suffered at least one NMOSD attack while being treated with the anti-CD20 antibody; or
- (ii) had suffered at least one NMOSD attack within 6 months of the last dose of the anti-CD20 antibody; and
- the subject is selected for the administration of the anti-CD19 antibody as a result of the determination of (i) or (ii).
13. Use of an anti-CD19 antibody in the manufacture of a medicament for treatment of neuromyelitis optica spectrum disorder (NMOSD), wherein the anti-CD19 antibody is to be administered to a subject in need of treatment for NMOSD, wherein the anti-CD19 antibody comprises Complementarity-Determining Regions (CDRs) HCDR1, HCDR2, HCDR3, LCDR1, LCDR2, and LCDR3, wherein the HCDR1, HCDR2, HCDR3, LCDR1, LCDR2, and LCDR3 comprise the amino acid sequences of SEQ ID NOs: 5, 6, 7, 8, 9, and 10, respectively, wherein the subject was previously treated with an anti-CD20 antibody, and wherein the subject is astrocyte water channel aquaporin-4 (AQP4) Immunoglobulin (Ig)G seropositive.
14. The use of claim 13, wherein the anti-CD19 antibody comprises a heavy chain variable region (VH) and a light chain variable region (VL) comprising the amino acid sequence of SEQ ID NO: 1 and SEQ ID NO: 2, respectively.

15. The use of claim 13, wherein the anti-CD19 antibody is Inebilizumab.

16. The use of claim 13, wherein the anti-CD19 antibody is to be administered intravenously at a dose of 300 mg every 6 months.

5

17. The use of claim 13, wherein the subject had an NMOSD attack while being treated with; or within 6 months of the last dose of the anti-CD20 antibody.

18. The use of claim 13, wherein the anti-CD19 antibody is to be administered intravenously with a first initial dose of 300 mg, a second initial dose of 300 mg two weeks after the first initial dose, and subsequent doses of 300 mg every 6 months following the first initial dose.

19. The use of claim 18, wherein a corticosteroid is to be co-administered to the subject with the first initial dose.

20. The use of claim 13, wherein the anti-CD20 antibody is selected from the group consisting of: rituximab, ABP-300, B-001, BAT-4306F, BAT-4406F, BCD-132, BVX-20, CYT-202, epcoritamab, GB-261, GD-CO1620, glofitamab, HS-006, IGM-2323, IMM-0306, MIL-62, mosunetuzumab, MRG-001, obinutuzumab, ocrelizumab, odronextamab, ofatumumab, plamotamab, SM-09, TRS-005, Ublituximab, and YBL-031.

21. The use of claim 20, wherein the anti-CD20 antibody is rituximab.

22. The use of claim 13, wherein the anti-CD19 antibody depletes peripheral blood CD20- plasmablasts and plasma cells within 8 days following the administration.

23. The use of claim 13, wherein prior to the administration:
the subject is identified as having previously been treated with the anti-CD20 antibody;

the subject is determined as:

- (i) suffered at least one NMOSD attack while being treated with the anti-CD20 antibody; or
- (ii) had suffered at least one NMOSD attack within 6 months of the last dose of the anti-CD20 antibody; and

the subject is selected for the administration of the anti-CD19 antibody as a result of the determination of (i) or (ii).