

What is claimed is:

1. A liquid pharmaceutical formulation comprising: (a) an antibody or antigen-binding fragment thereof that binds specifically to human angiopoietin-like protein 3 (ANGPTL3); (b) a buffer; (c) an organic cosolvent; and (d) at least one viscosity modifier, wherein the formulation has a pH of 6.0 ± 0.3 .
2. The liquid pharmaceutical formulation of claim 1, wherein the formulation further comprises at least one amino acid.
3. The liquid pharmaceutical formulation of claim 1 or 2, wherein the antibody or antigen-binding fragment thereof comprises three heavy chain complementarity determining regions (HCDR1, HCDR2, HCDR3) contained within a heavy chain variable region (HCVR) having an amino acid sequence SEQ ID NO:66, and three light chain complementarity determining region (LCDR1, LCDR2, LCDR3) contained within a light chain variable region (LCVR) having an amino acid sequence SEQ ID NO:74.
4. The liquid pharmaceutical formulation of any one of claims 1 - 3, wherein the antibody or antigen-binding fragment thereof comprises a heavy chain variable region (HCVR) of SEQ ID NO: 66 and a light chain variable region (LCVR) of SEQ ID NO: 74.
5. The liquid pharmaceutical formulation of any one of claims 1 - 4, wherein the antibody or antigen-binding fragment thereof comprises a HCDR1/HCDR2/HCDR3/LCDR1/LCDR2/LCDR3 sequence combination SEQ ID NO: 68/70/72/76/78/80.
6. The liquid pharmaceutical formulation of any one of claims 1 – 5, wherein the antibody concentration is from $5 \text{ mg/mL} \pm 0.75 \text{ mg/mL}$ to $250 \text{ mg/mL} \pm 37.5 \text{ mg/mL}$.
7. The liquid pharmaceutical formulation of any one of claims 1 – 6, wherein the antibody concentration is $150 \text{ mg/mL} \pm 22.5 \text{ mg/mL}$.
8. The liquid pharmaceutical formulation of any one of claims 1 – 7, wherein the antibody concentration is $175 \text{ mg/mL} \pm 26.25 \text{ mg/mL}$.
9. The liquid pharmaceutical formulation of any one of claims 1 – 8, wherein the buffer is histidine.
10. The liquid pharmaceutical formulation of claim 9, wherein the histidine concentration is from $5 \text{ mM} \pm 1 \text{ mM}$ to $20 \text{ mM} \pm 4 \text{ mM}$.
11. The liquid pharmaceutical formulation of claim 9 or 10, wherein the histidine concentration is about $10 \text{ mM} \pm 2 \text{ mM}$.

12. The liquid pharmaceutical formulation of any one of claims 1 – 11, wherein the organic cosolvent is polysorbate.

13. The liquid pharmaceutical formulation of claim 12, wherein the polysorbate concentration is from 0.01% w/v $\pm$ 0.005% to 0.5% w/v $\pm$ 0.25%.

14. The liquid pharmaceutical formulation of claim 12 or 13, wherein the polysorbate concentration is 0.1% w/v $\pm$ 0.05%.

15. The liquid pharmaceutical formulation of any one of claims 12 – 14, wherein the organic cosolvent is polysorbate 80.

16. The liquid pharmaceutical formulation of any one of claims 1 – 15, wherein the at least one viscosity modifier is selected from the group consisting of arginine-HCl, sodium chloride, histidine-HCl, sodium acetate, calcium chloride, magnesium chloride, calcium acetate, and magnesium acetate.

17. The liquid pharmaceutical formulation of claim 16, wherein the at least one viscosity modifier is arginine HCl.

18. The liquid pharmaceutical formulation of claim 17, wherein the arginine HCl concentration is concentration is from about 50 mM to about 75 mM.

19. The liquid pharmaceutical formulation of claim 17 or 18, wherein the arginine HCl concentration is about 70 mM.

20. The liquid pharmaceutical formulation of any one of claims 2 to 19, wherein the amino acid is proline.

21. The liquid pharmaceutical formulation of claim 20, wherein the proline concentration is from 0 to 5% w/v $\pm$ 1%.

22. The liquid pharmaceutical formulation of claim 20 or 21, wherein the proline concentration is 3% w/v $\pm$ 0.6%.

23. A liquid pharmaceutical formulation comprising: i) 150 mg/mL $\pm$ 22.25 mg/mL anti-ANGPTL3 antibody or antigen-binding fragment thereof; ii) from 5 mM $\pm$ 1 mM to 20 mM $\pm$ 4mM histidine; iii) from 0.1% w/v $\pm$ 0.05% to 0.5% w/v $\pm$ 0.25% polysorbate 80; iv) from 50 mM to 75 mM arginine-HCL; and v) from 1% w/v $\pm$ 0.2% to 5% w/v $\pm$ 1% proline, wherein the liquid pharmaceutical formulation is at pH 6.0 $\pm$ 0.3.

24. The liquid pharmaceutical formulation of claim 23, wherein the histidine concentration is 10mM $\pm$ 2mM, wherein polysorbate concentration is 0.1% w/v $\pm$ 0.05%, wherein the arginine-HCl concentration is about 70 mM, and wherein the proline concentration is 3% w/v $\pm$ 0.6%.

25. The liquid pharmaceutical formulation of any one of claims 1 – 24, wherein the liquid pharmaceutical formulation has viscosity less than about 20 cP.

26. The liquid pharmaceutical formulation of any one of claims 1 – 25, wherein at least about 95% of the antibody or antigen-binding fragment thereof has native conformation after 21 days at 45°C.

27. The liquid pharmaceutical formulation of any one of claims 1 – 26, wherein at least about 45% of the antibody or antigen-binding fragment thereof is the main charge variant of the antibody or antigen-binding fragment thereof after 21 days at 45°C.

28. The liquid pharmaceutical formulation of any one of claims 1 – 27, wherein at least about 98% of the antibody or antigen-binding fragment thereof has native conformation after 36 months at 5°C.

29. The liquid pharmaceutical formulation of any one of claims 1 – 28, wherein at least about 55% of the antibody or antigen-binding fragment thereof is the main charge variant of the antibody or antigen-binding fragment thereof after 36 months at 5°C.

30. The liquid pharmaceutical formulation of any one of claims 1 – 29, wherein at least about 98% of the antibody or antigen-binding fragment thereof has native conformation after 36 months at -30°C.

31. The liquid pharmaceutical formulation of any one of claims 1 – 30, wherein at least about 57% of the antibody or antigen-binding fragment thereof is the main charge variant of the antibody or antigen-binding fragment thereof after 36 months at -30°C.

32. The liquid pharmaceutical formulation of any one of claims 23 - 31, wherein the antibody or antigen-binding fragment thereof comprises three heavy chain complementarity determining regions (HCDR1, HCDR2, HCDR3) contained within a heavy chain variable region (HCVR) having an amino acid sequence of SEQ ID NO:66, and three light chain complementarity determining region (LCDR1, LCDR2, LCDR3) contained within a light chain variable region (LCVR) having an amino acid sequence of SEQ ID NO:74.

33. The liquid pharmaceutical formulation of any one of claims 23 - 32, wherein the antibody or antigen-binding fragment thereof comprises a heavy chain variable region (HCVR) having an amino acid sequence of SEQ ID NO: 66 and a light chain variable region (LCVR) having an amino acid sequence of SEQ ID NO: 74.

34. The liquid pharmaceutical formulation of any one of claims 23 - 33, wherein the antibody or antigen-binding fragment thereof comprises a

HCDR1/HCDR2/HCDR3/LCDR1/LCDR2/LCDR3 sequence combination SEQ ID NO: 68/70/72/76/78/80.

35. The liquid pharmaceutical formulation of any one of claims 1-34, wherein the liquid pharmaceutical formulation is in a pre-filled syringe or autoinjector.

36. The liquid pharmaceutical formulation of any one of claims 1-34, wherein the liquid pharmaceutical formulation is in a glass vial.

37. A kit comprising a liquid pharmaceutical formulation of any one of claims 1 – 34, a container, and instructions.

38. The kit of claim 37, wherein the container is a prefilled syringe or autoinjector.

39. The liquid pharmaceutical formulation of any one of claims 1-36 for use in the manufacture of a medicament for treating, preventing, or ameliorating any disease or disorder associated with ANGPTL3 activity or mediated by ANGPTL3 in a subject.

40. The use of claim 39, wherein the liquid pharmaceutical formulation is administered subcutaneously to the subject.