Claims:

1. A pharmaceutical composition comprising spray-dried particles, the spray-dried particles comprising:
    a. about 5% (w/w) to about 15% (w/w) leucine;
    b. about 1% (w/w) to about 5% (w/w) trileucine;
    c. about 2.5% (w/w) to about 3.5% (w/w) histidine buffer at a pH of between about pH 5 to pH 6;
    d. about 1% (w/w) to about 80% (w/w) of an antigen binding fragment of an anti-thymic stromal lymphopoietin (TSLP) antibody; and
    e. a glass stabilisation agent.
2. The pharmaceutical composition according to claim 1, wherein the antigen binding fragment comprises:

i)

    a. a HCDR1 comprising the amino acid sequence of SEQ ID NO: 1;
    b. a HCDR2 comprising the amino acid sequence of SEQ ID NO: 2;
    c. a HCDR3 comprising the amino acid sequence of SEQ ID NO: 3;
    d. a LCDR1 comprising the amino acid sequence of SEQ ID NO: 5;
    e. a LCDR2 comprising the amino acid sequence of SEQ ID NO: 6; and
    f. a LCDR3 comprising the amino acid sequence of SEQ ID NO: 7; or

ii)

    a. a HCDR1 having the amino acid sequence of SEQ ID NO: 1;
    b. a HCDR2 having the amino acid sequence of SEQ ID NO: 2;
    c. a HCDR3 having the amino acid sequence of SEQ ID NO: 3;
    d. a LCDR1 having the amino acid sequence of SEQ ID NO: 5;
    e. a LCDR2 having the amino acid sequence of SEQ ID NO: 6; and
    f. a LCDR3 having the amino acid sequence of SEQ ID NO: 7; and/or

iii) wherein the antigen binding fragment comprises a VH domain comprising the sequence of SEQ ID NO: 4, or a sequence at least 95%, 90%, 85% or 80% identical to SEQ ID NO: 4; and a VL domain comprising the sequence of SEQ ID NO: 8 or a sequence at least 95%, 90%, 85% or 80% identical to SEQ ID NO: 8.

3. The pharmaceutical composition according to claims 1 or 2, wherein the antigen binding fragment is a Fab, Fab', F(ab')2, scFv, minibody or diabody, optionally

   wherein the antigen binding fragment is a Fab, optionally

   wherein the Fab is of an IgG1 antibody, further optionally

   wherein the antigen binding fragment comprises a first sub-unit having the sequence set forth in SEQ ID NO: 28 and a second sub-unit having the sequence set forth in SEQ ID NO: 29.

4. The pharmaceutical composition according to any of claims 1 to 3, wherein:

   following reconstitution, the number of sub-visible particles between 5 μm to 200 μm is less than about $2.5x10^4$/ml, optionally less than about $0.5x10^4$/ml; and/or

   following reconstitution, the number of sub-visible particles between 10 μm to 200 μm is less than about $1x10^4$/ml, optionally less than about $0.2x10^4$/ml; and/or

   following reconstitution, the number of sub-visible particles between 25 μm to 200 μm is less than about $2x10^3$/ml, optionally less than about $0.2x10^3$/ml; and/or

   the number of sub-visible particles is determined by dynamic flow imaging microscopy, optionally by microflow imaging (MFI); and/or

   the number of sub-visible particles is determined following reconstitution in water, to an antigen-binding fragment concentration of either 2.5 mg/ml or 30 mg/ml.

5. A process for making a pharmaceutical composition for inhalation, comprising:

   a. providing an aqueous solution of about pH 5 to about pH 6 comprising leucine, trileucine, histidine, a glass stabilization agent and an antigen binding fragment of an anti-thymic stromal lymphopoietin (TSLP) antibody;

b. spray drying the aqueous solution of (a) to produce dry powder particles; and

c. collecting the dry powder particles;

wherein the aqueous solution comprises about 5% (w/w) to about 15% (w/w) leucine, about 1% (w/w) to about 5% (w/w) trileucine, about 1% (w/w) to about 10% (w/w) histidine, about 5% (w/w) to about 50% (w/w) antigen binding fragment and % (w/w) glass stabilization agent to 100% total solids content, optionally

wherein the aqueous solution has a pH of 5.5; and/or

wherein the glass stabilization agent is trehalose; and/or

wherein the aqueous solution comprises:

a. 2% (w/w) antigen binding fragment ± 20%, 2% (w/w) trileucine ± 10%, 10.5% (w/w) leucine ± 10%, 82.36% (w/w) trehalose ± 10%, and 3.14% (w/w) histidine ± 10%, at pH 5.5;

b. 10% (w/w) antigen binding fragment ± 20%, 2% (w/w) trileucine ± 10%, 10.5% (w/w) leucine ± 10%, 74.36% (w/w) trehalose ± 10%, and 3.14% (w/w) histidine ± 10%, at pH 5.5;

c. 40% (w/w) antigen binding fragment ± 20%, 2% (w/w) trileucine ± 10%, 10.5% (w/w) leucine ± 10%, 44.36% (w/w) trehalose ± 10%, and 3.14% (w/w) histidine ± 10%, at pH 5.5.

6. A dry powder formulation obtained by the process of claim 5.

7. Use of the pharmaceutical composition of any of claims 1 to 4 or the dry powder formulation of claim 6 in the manufacture of a medicament for treating a TSLP-related condition in a subject in need thereof, wherein the pharmaceutical composition or the dry powder formulation is to be administered to the subject.

8. The pharmaceutical composition according to any of claims 1 to 4 or the dry powder formulation of claim 6 for use in treating a TSLP-related condition.

9. Use of the pharmaceutical composition of any of claims 1 to 4 or the dry powder formulation of claim 6 in the manufacture of a medicament for the treatment of a TSLP-related condition.

10. The use of claim 7, composition for use according to claim 8, or use according to claim 9, wherein the TSLP-related condition is asthma, COPD, allergic rhinitis, allergic rhinosinusitis, allergic conjunctivitis, eosinophilic esophagitis, chronic spontaneous urticaria or chronic rhinosinusitis, optionally wherein the TSLP-related condition is asthma or COPD.

11. Use of the pharmaceutical composition of any of claims 1 to 4 or the dry powder formulation of claim 6 in the manufacture of a medicament for improving lung function in a subject with asthma or COPD, wherein the pharmaceutical composition or the dry powder formulation is to be administered to the subject.

12. The pharmaceutical composition according to any of claims 1 to 4 or the dry powder formulation of claim 6 for use in improving lung function in a subject with asthma or COPD.

13. Use of the pharmaceutical composition of any of claims 1 to 4 or the dry powder formulation of claim 6 in the manufacture of a medicament for improving lung function in a subject with asthma or COPD.

14. The use or composition for use according to any of claims 11 to 13, wherein improving lung function means one or more of the following parameters: improvement compared to baseline of (i) pre-bronchodilator (BD) FVC, (ii) post-BD-FVC, (iii) pre-BD-FEV_1, (iv) post-BD FEV_1, (v) mean morning PEF and/or (vi) mean evening PEF, optionally

    wherein improvement means achieving the minimum clinical important difference for each respective parameter, optionally

    wherein baseline refers to the value of the respective parameter prior to commencement of the treatment with the pharmaceutical composition or the dry powder formulation, further optionally wherein prior means within one month of the commencement of the treatment, optionally

    wherein the improvement compared to baseline of pre-BD-FEV_1 is at least 5 ml, at least 10 ml, at least 15 ml, at least 20 ml, at least 25 ml, at least 30 ml, at least 35 ml, at least 40 ml, at least 45 ml, at least 50 ml, at least 55 ml, at least 60 ml, at least 65 ml, at least 70 ml, at least 75 ml, at least 80 ml, at least 85 ml, at least 90 ml, at least 95 ml, at least 100 ml, at least 105 ml, at least 110 ml, at least 115 ml, at least 120 ml, at least 125 ml, at least 130 ml, at least 135 ml, at least 140 ml, at least 145 ml, at least 150 ml, at least 160 ml, at least 170

ml, at least 180 ml, at least 190 ml, at least 200 ml, at least 210 ml, at least 220 ml, at least 230 ml, at least 240 ml or at least 250 ml; or

the improvement compared to baseline of pre-BD-FEV_1 is at least 80 ml at day 2 after commencement of treatment, at least 45 ml or at least 100 ml at day 7 after commencement of treatment, at least 100 ml at day 14 after commencement of treatment, or at least 5 ml or at least 100 ml at day 28 after commencement of treatment.

15. Use of the pharmaceutical composition of any of claims 1 to 4 or the dry powder formulation of claim 6 in the manufacture of a medicament for improving symptoms of asthma or COPD in a subject in need thereof, wherein the pharmaceutical composition or the dry powder formulation is to be administered to the subject.

16. The pharmaceutical composition according to any of claims 1 to 4 or the dry powder formulation of claim 6 for use in improving symptoms of asthma or COPD in a subject in need thereof.

17. Use of the pharmaceutical composition of any of claims 1 to 4 or the dry powder formulation of claim 6 in the manufacture of a medicament for improving symptoms of asthma or COPD in a subject in need thereof.

18. The use or composition for use according to any of claims 15 to 17, wherein improving symptoms of asthma means one or more of the following parameters: improvement compared to baseline (i) mean asthma symptom diary score, (ii) ACQ-6 score, (iii) AQLQ score, and/or (iv) SGRQ score, optionally

wherein improving symptoms of asthma means an improvement compared to baseline of ACQ-6 score; and/or

wherein improvement means achieving the minimum clinical important difference (MCID) for each respective score; or

wherein baseline refers to the value of the respective score prior to commencement of the treatment with the pharmaceutical composition of any of claims 1 to 4 or the dry powder formulation of claim 6, optionally wherein prior means within one month of the commencement of the treatment.

19. The use or composition for use according to claim 10 or any of claims 11 to 18, wherein the pharmaceutical composition is to be administered at a dose

comprising about 0.4 mg to about 8 mg of the antigen binding fragment, optionally

wherein the dose is to be administered daily, optionally wherein the dose is to be administered once daily (Q1D); and/or

wherein the pharmaceutical composition is to be administered at a dose comprising about 0.4 mg, 2 mg, or 8 mg of the antigen binding fragment.

20. A unit dose pharmaceutical composition comprising from 0.2 milligrams to 16 milligrams of an antigen binding fragment of an anti-TSLP antibody, wherein the pharmaceutical composition is according to claims 1 to 4, and the antigen binding fragment according to any preceding claim.

21. Use of a pharmaceutical composition according to claims 1 to 4 in the manufacture of a medicament for treating asthma or COPD in a subject in need thereof, wherein the pharmaceutical composition is to be administered to the subject, wherein the pharmaceutical composition comprises a dose of about 0.4 mg to about 8 mg of an antigen binding fragment of an anti-TSLP-antibody, wherein the pharmaceutical composition is to be administered once daily (Q1D) by inhalation.

22. A pharmaceutical composition for use in treating asthma or COPD in a subject in need thereof, wherein the pharmaceutical composition comprises a dose of about 0.4 mg to about 8 mg of an antigen binding fragment of an anti-TSLP-antibody that is to be administered to the subject one daily (Q1D) by inhalation.

23. Use of an antigen binding fragment of an anti-TSLP-antibody in the manufacture of a pharmaceutical composition for the treatment of asthma or COPD by inhalation, wherein the pharmaceutical composition comprises a dose of about 0.4 mg to about 8 mg of the antigen binding fragment.

24. The use or pharmaceutical composition for use according to any of claims 21 to 23, wherein:

i) the antigen binding fragment comprises a VH domain having a sequence at least 95%, 90%, 85% or 80% identical to SEQ ID NO: 4 and a VL domain having a sequence at least 95%, 90%, 85% or 80% identical to SEQ ID NO: 8; and/or

ii) the antigen binding fragment comprises a VH domain comprising the sequence of SEQ ID NO: 4; and a VL domain comprising the sequence of SEQ ID NO: 8; and/or

iii) wherein the Fab is of an IgG1 antibody, optionally wherein the antigen binding fragment comprises a first sub-unit having the sequence set forth in SEQ ID NO: 28 and a second sub-unit having the sequence set forth in SEQ ID NO: 29.

25. The use or composition for use according to any of claims 7 to 24, wherein:

the asthma is moderate to severe asthma; and/or

wherein the asthma is uncontrolled moderate to severe asthma; and/or

wherein the pharmaceutical composition is to be administered by inhalation or intranasally.

26. The use or pharmaceutical composition for use according to any of claims 7 to 19, 21 to 25, wherein the pharmaceutical composition comprises spray-dried particles comprising:

a. about 5% (w/w) to about 15% (w/w) leucine;

b. about 1% (w/w) to about 5% (w/w) trileucine;

c. about 1% (w/w) to about 50% (w/w) of an antigen binding fragment of an anti-thymic stromal lymphopoietin (TSLP) antibody;

d. about 2.5% (w/w) to about 3.5% (w/w) histidine buffer; and

e. a glass stabilisation agent.

27. The pharmaceutical composition according to claims 1 to 4, or the use or pharmaceutical composition for use according to claim 26, comprising:

about 1% (w/w) to about 3% (w/w) trileucine, optionally about 2% (w/w) trileucine; and/or

about 8% (w/w) to about 12% (w/w) leucine, optionally about 10.5% (w/w) leucine; and/or

about 3.14% (w/w) histidine buffer; and/or

wherein the antigen binding fragment is present at a concentration of about 2% (w/w), about 10% (w/w) or about 40% (w/w).

28. The pharmaceutical composition according to any one of claims 1 to 4, or the use or pharmaceutical composition for use according to claims 23 or 24, wherein the glass stabilization agent is selected from trehalose, sucrose, raffinose, inulin, dextran, mannitol, and cyclodextrin, optionally

    wherein the glass stabilization agent is trehalose, further optionally

    wherein the trehalose is at a percent (w/w) concentration to make up to about 100%.

29. The pharmaceutical composition according to any one of claims 1 to 4, or the use or pharmaceutical composition for use according to any of claims 26 to 28, wherein the composition does not comprise a surfactant.

30. The pharmaceutical composition according to any one of claims 1 to 4, or the use or pharmaceutical composition for use according to any of claims 26 to 29, comprising:

    a. 2% (w/w) antigen binding fragment ± 20%, 2% (w/w) trileucine ± 10%, 10.5% (w/w) leucine ± 10%, 82.36% (w/w) trehalose ± 10%, and 3.14% (w/w) histidine ± 10%, at pH 5.5;

    b. 10% (w/w) antigen binding fragment ± 20%, 2% (w/w) trileucine ± 10%, 10.5% (w/w) leucine ± 10%, 74.36% (w/w) trehalose ± 10%, and 3.14% (w/w) histidine ± 10%, at pH 5.5;

    c. 40% (w/w) antigen binding fragment ± 20%, 2% (w/w) trileucine ± 10%, 10.5% (w/w) leucine ± 10%, 44.36% (w/w) trehalose ± 10%, and 3.14% (w/w) histidine ± 10%, at pH 5.5.

31. The use or pharmaceutical composition for use according to any of claims 7 to 18, or 26 to 30, wherein the pharmaceutical composition is to be delivered by dry powder inhaler.

32. The use or composition for use according to any of claims 7 to 19, 26 to 31, wherein:

    the subject has a history of ≥ 1 severe exacerbation within the last 12 months prior to the treatment, and/or wherein the subject has a history of ≥ 2 severe exacerbations within the last 12 months prior to the treatment; and/or

the subject is to be co-administered a background therapy, optionally wherein the subject is already receiving the background therapy prior to the treatment; and/or

wherein the background therapy is selected from: inhaled corticosteroids, Leukotriene modifiers, long-acting beta agonists (LABAs), long-acting muscarinic antagonists (LAMAs), combination therapies such as Fluticasone and salmeterol, budesonide and formoterol, mometasone and formoterol and fluticasone and vilanterol, theophylline, short-acting beta agonists (SABAs), ipratropium or a combination of ipratropium and albuterol or oral corticosteroids; and/or

wherein the background therapy comprises medium or high dose ICS (as per GINA 2023 report) in combination with LABA (GINA step 4 or 5 therapy).

33. The use or composition for use according to any of claims 7 to 19, or 26 to 32, wherein the subject has a baseline blood eosinophil count of ≥ 150 cells/µl or ≥ 300 cells/µl; optionally

    wherein baseline refers to the blood eosinophil count prior to commencement of the treatment, further optionally wherein prior means within one month of the commencement of the treatment.

34. The pharmaceutical composition according to any of claims 1 to 4 or the dry powder formulation of claim 6 for use in therapy.