CLAIMS

1. Use of a population of human cells enriched for $TNAP^+$ multipotential cells and/or culture-expanded cells thereof in the manufacture of a medicament for treating an IgE-mediated respiratory condition in a human subject.

2. Use according to Claim 1, in which the IgE-mediated respiratory condition is an acute respiratory condition or a chronic respiratory condition.

3. Use according to Claim 1 or 2, in which the IgE-mediated respiratory condition is an inflammatory respiratory condition, an obstructive respiratory condition or a restrictive respiratory condition.

4. Use according to Claim 3, in which the IgE-mediated respiratory condition is an obstructive respiratory condition or an inflammatory lung condition.

5. Use according to Claim 4, in which the IgE-mediated respiratory condition is asthma.

6. Use according to Claim 5, in which the asthma is acute asthma, chronic asthma, severe asthma and/or refractory asthma.

7. Use according to Claim 6, in which the asthma is long acting beta agonist (LABA) refractory asthma or steroid refractory asthma.

8. Use according to Claim 3, in which the IgE-mediated respiratory condition is a restrictive respiratory condition.

9. Use according to Claim 8, in which the IgE-mediated respiratory condition is idiopathic pulmonary fibrosis.

10. Use according to Claim 1, in which the IgE-mediated respiratory condition is an IgE-mediated allergic response to house dust mite allergen (HDM).

11. Use according to Claim 1 or 2, in which the respiratory condition is acute respiratory distress syndrome (ARDS).

12. Use according to any preceding claim, in which the medicament is formulated to be administered systemically.

13. Use according to Claim 12, in which the medicament is formulated to be administered intravenously or intranasally.

14. Use according to any preceding claim, in which the medicament is formulated for administration a plurality of times.

15. Use according to any preceding claim, in which the medicament is to be administered in a further dose when one or more of the following occurs:

(i) a subject begins to persistently wheeze and/or cough and/or have chest tightness and/or have difficulty breathing;

(ii) a subject shows one or more of the following when assessed by spirometer:

(a) 20% difference on at least three days in a week for at least two weeks;

(b) ≥20% improvement of peak flow following treatment with:

10 minutes of inhaled β-agonist;

six weeks of inhaled corticosteroid;

14 days of 30 mg prednisolone.

(c) ≥20% decrease in peak flow following exposure to a trigger;

(iii) bronchoscopy showing abnormal cells and/or foreign substances and/or blockages in the respiratory tract of a subject; or

(iv) chest CT scan showing abnormalities of the blood vessels in the lungs, accumulation of blood or fluid in the lungs, bronchiectasis, pleural effusion or pneumonia.

16. Use according to any preceding claim in which the population of human cells in the medicament is sufficient to achieve one or more of the following:

(i) improved bronchial hyperresponsiveness;

(ii) reduced eosinophil infiltration of the lung or bronchoalveolar lavage fluid;

(iii) reduced neutrophil infiltration of the lung or bronchoalveolar lavage fluid;

(iv) reduced late asthmatic response;

(v) reduced early asthmatic response; and/or

(vi) reduced lung remodeling/fibrosis.

17. Use according to any preceding claim in which the medicament comprises between 1 x 10^6 to 150 x 10^6 $TNAP^+$ multipotential cells and/or culture-expanded cells thereof.

18. Use according to any preceding claim in which the medicament comprises a whole body dose of $TNAP^+$ multipotential cells and/or culture-expanded cells thereof.

19. Use according to Claim 18, in which the whole body dose comprises 150 x 10^6 $TNAP^+$ multipotential cells and/or culture-expanded cells thereof in 10 mL to the subject.

20. Use according to any preceding claim, in which the population of human cells is autogeneic or allogeneic.

21. Use according to any preceding claim, in which the medicament comprises the culture-expanded cells.

22. Use according to any preceding claim, in which the medicament further comprises a carrier and/or excipient.

CLAIMS

1. Use of a population of human multipotential cells which express tissue non-specific alkaline phosphate $(TNAP)^+$ STRO-1^+ and/or culture-expanded cells thereof in the manufacture of a medicament for treating an IgE-mediated respiratory condition in a human subject.

2. Use according to Claim 1, in which the IgE-mediated respiratory condition is an acute respiratory condition or a chronic respiratory condition.

3. Use according to Claim 1 or 2, in which the IgE-mediated respiratory condition is an inflammatory respiratory condition, an obstructive respiratory condition or a restrictive respiratory condition.

4. Use according to Claim 3, in which the IgE-mediated respiratory condition is an obstructive respiratory condition or an inflammatory lung condition.

5. Use according to Claim 4, in which the IgE-mediated respiratory condition is asthma.

6. Use according to Claim 5, in which the asthma is acute asthma, chronic asthma, severe asthma and/or refractory asthma.

7. Use according to Claim 6, in which the asthma is long acting beta agonist (LABA) refractory asthma or steroid refractory asthma.

8. Use according to Claim 3, in which the IgE-mediated respiratory condition is a restrictive respiratory condition.

9. Use according to Claim 8, in which the IgE-mediated respiratory condition is idiopathic pulmonary fibrosis.

10. Use according to Claim 1, in which the IgE-mediated respiratory condition is an IgE-mediated allergic response to house dust mite allergen (HDM).

11. Use according to Claim 1 or 2, in which the respiratory condition is acute respiratory distress syndrome (ARDS).

12. Use according to any preceding claim, in which the medicament is formulated to be administered systemically.

13. Use according to Claim 12, in which the medicament is formulated to be administered intravenously or intranasally.

14. Use according to any preceding claim, in which the medicament is formulated for administration a plurality of times.

15. Use according to any preceding claim, in which the medicament is to be administered in a further dose when one or more of the following occurs:

(i) a subject begins to persistently wheeze and/or cough and/or have chest tightness and/or have difficulty breathing;

(ii) a subject shows one or more of the following when assessed by spirometer:

(a) 20% difference on at least three days in a week for at least two weeks;

(b) ≥20% improvement of peak flow following treatment with:

10 minutes of inhaled β-agonist;

six weeks of inhaled corticosteroid;

14 days of 30 mg prednisolone.

(c) ≥20% decrease in peak flow following exposure to a trigger;

(iii) bronchoscopy showing abnormal cells and/or foreign substances and/or blockages in the respiratory tract of a subject; or

(iv) chest CT scan showing abnormalities of the blood vessels in the lungs, accumulation of blood or fluid in the lungs, bronchiectasis, pleural effusion or pneumonia.

16. Use according to any preceding claim in which the population of human cells in the medicament is sufficient to achieve one or more of the following:

(i) improved bronchial hyperresponsiveness;

(ii) reduced eosinophil infiltration of the lung or bronchoalveolar lavage fluid;

(iii) reduced neutrophil infiltration of the lung or bronchoalveolar lavage fluid;

(iv) reduced late asthmatic response;

(v) reduced early asthmatic response; and/or

(vi) reduced lung remodeling/fibrosis.

17. Use according to any preceding claim in which the medicament comprises between 1 x 10^6 to 150 x 10^6 $TNAP^+$ $STRO\text{-}1^+$ multipotential cells and/or culture-expanded cells thereof.

18. Use according to any preceding claim in which the medicament comprises a whole body dose of $TNAP^+$ $STRO\text{-}1^+$ multipotential cells and/or culture-expanded cells thereof.

19. Use according to Claim 18, in which the whole body dose comprises 150 x 10^6 $TNAP^+$ multipotential cells and/or culture-expanded cells thereof in 10 mL to the subject.

20. Use according to any preceding claim, in which the population of human cells is autogeneic or allogeneic.

21. Use according to any preceding claim, in which the medicament comprises the culture-expanded cells.

22. Use according to any preceding claim, in which the medicament further comprises a carrier and/or excipient.