

What is claimed is:

1. A method for *ex vivo* identification a subject as having atopic dermatitis (AD) responsive to an anti-TSLP therapy, the method comprising detecting *ex vivo* an increase in the level of Brain  
5 Derived Neurotrophic Factor (BDNF) polynucleotide in a blood, plasma, serum or skin sample derived from the subject relative to a reference, thereby identifying the subject as having atopic dermatitis that is responsive to anti-TSLP therapy.
2. The method of claim 1, wherein the method further comprises detecting *ex vivo* an increase in  
10 Ciliary Neurotrophic Factor (CNTF) polynucleotide or Ciliary Neurotrophic Factor Receptor (CNTFR) polynucleotide in a sample derived from the subject.
3. The method of claim 1 or 2 wherein the method further comprises detecting *ex vivo* an  
15 increase in amphiregulin polynucleotide in lesional and non-lesional skin biopsies from the subject.
4. The method of any one of any preceding claim, wherein the method further comprises  
detecting *ex vivo* in a sample derived from the patient an increase in a polynucleotide biomarker  
selected from the group consisting of Neurotrophic Tyrosine Kinase Receptor Type 2 (NTRK2),  
20 Neurotrophic Tyrosine Kinase Receptor Type 3 (NTRK3), and Neurotrophin Factor 3 (NTF3).
5. The method of any one of claims 1-4, wherein the polynucleotide is detected in an  
immunological assay or wherein the polynucleotide is detected by hybridization to a microarray  
or by gene expression analysis.  
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6. An agent for use in a method of treating atopic dermatitis, wherein the agent reduces the  
expression or activity of a Thymic Stromal Lymphopoietin (TSLP) polypeptide, wherein the  
method or treatment comprises
  - a. the method of any of any preceding claim,
  - 30 b. administering the agent to the subject.

7. An agent for the use of claim 6, wherein the agent is an anti-TSLP antibody, or antigen binding portion thereof.

8. The agent for the use of claim 7, wherein the antibody, or antigen binding portion thereof, comprises:

(a) a heavy chain variable region CDR1 comprising the amino acid sequence of SEQ ID NO: 6;

(b) a heavy chain variable region CDR2 comprising the amino acid sequence of SEQ ID NO: 7;

(c) a heavy chain variable region CDR3 comprising the amino acid sequence of SEQ ID NO: 8;

(d) a light chain variable region CDR1 comprising the amino acid sequence of SEQ ID NO: 3;

(e) a light chain variable region CDR2 comprising the amino acid sequence of SEQ ID NO: 4; and

(f) a light chain variable region CDR3 comprising the amino acid sequence of SEQ ID NO: 5.

9. The agent for use in the method of claim 7, wherein the antibody, or antigen binding portion thereof, comprises the heavy chain sequence of SEQ ID NO: 10 and the light chain sequence of SEQ ID NO 12.

10. The agent for use in the method of claim 7, wherein the antibody is Tezepelumab.

11. The method of any of claims 1 to 5, or the agent for the use of any of claims 6 to 10, wherein the subject is human.

12. The method of any of claims 1 to 5, or the agent for the use of any of claims 6 to 10, wherein the reference is the level, expression, or activity of the corresponding polypeptide or nucleic acid molecule biomarker present in a control sample derived from the subject.

13. The method of any of claim 1 to 5, or the agent for the use of any of claims 7 to 10, wherein the control sample is derived from a subject having atopic dermatitis that is not responsive to anti-TSLP therapy, or wherein the control sample is derived from a healthy subject.

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14. The method of any of claims 1 to 5, the method comprising

(a) detecting a probe binding to a polynucleotide marker selected from the group consisting of Amphiregulin (AREG), Brain Derived Neurotrophin (BDNF), Ciliary Neurotrophic Factor (CNTF), Ciliary Neurotrophic Factor Receptor (CNTFR),  
10 Neurotrophin 3 (NTF3), Neurotrophin 4 (NTF4), Nerve Growth Factor (NGF), Neurotrophic Tyrosine Kinase Receptor Type 1 (NTRK1), Neurotrophic Tyrosine Kinase Receptor Type 2 (NTRK2), and Neurotrophic Tyrosine Kinase Receptor Type 3 (NTRK3) in a skin sample derived from the subject; and

(b) detecting an alteration in the level of said marker in the sample relative to a reference,  
15 thereby identifying the subject as having atopic dermatitis (AD) responsive to an anti-TSLP therapy,

optionally wherein the method further comprises detecting the level of amphiregulin polypeptide in a sera sample derived from the subject relative to the level present in a sera sample derived from the subject at an earlier point in time, wherein an increase in  
20 said level over time indicates that the anti-TSLP therapy is effective.

15. A kit for the treatment of atopic dermatitis (AD), the kit comprising an agent that reduces the expression or activity of a Thymic stromal lymphopoietin (TSLP) polypeptide, and one or more of a capture molecule or probe that specifically binds a polypeptide or polynucleotide biomarker  
25 selected from the group consisting of Amphiregulin (AREG), Ciliary Neurotrophic Factor (CNTF), Ciliary Neurotrophic Factor Receptor (CNTFR), Brain Derived Neurotrophin (BDNF), Neurotrophin 3 (NTF3), Neurotrophin 4 (NTF4), Nerve Growth Factor (NGF), Neurotrophic Tyrosine Kinase Receptor Type 1 (NTRK1), Neurotrophic Tyrosine Kinase Receptor Type 2 (NTRK2), Neurotrophic Tyrosine Kinase Receptor Type 3 (NTRK3).

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