

What is claimed is:

1. A method of treating, preventing, or ameliorating at least one symptom of eosinophilic esophagitis (EoE) in a subject ≥ 12 years of age, the method comprising administering to the subject one or more doses of an interleukin-4 receptor (IL-4R) inhibitor, wherein prior to the onset of treatment the subject has a Dysphagia Symptom Questionnaire (DSQ) score ≥ 10 , and wherein the IL-4R inhibitor is an antibody or antigen-binding fragment thereof that binds IL-4R α and comprises a heavy chain complementarity determining region (HCDR)1 comprising the amino acid sequence of SEQ ID NO:3, an HCDR2 comprising the amino acid sequence of SEQ ID NO:4, an HCDR3 comprising the amino acid sequence of SEQ ID NO:5, a light chain complementarity determining region (LCDR)1 comprising the amino acid sequence of SEQ ID NO:6, an LCDR2 comprising the amino acid sequence of SEQ ID NO:7, and an LCDR3 comprising the amino acid sequence of SEQ ID NO:8.
2. The method of claim 1, wherein the subject is an adult.
3. The method of claim 1, wherein the subject is an adolescent ≥ 12 and < 18 years of age.
4. The method of any one of claims 1 to 3, wherein prior to the onset of treatment the subject has an intraepithelial eosinophilic infiltration peak cell count ≥ 15 eos/hpf as measured by endoscopic biopsy in at least two of the proximal esophageal region, mid esophageal region, and distal esophageal region.
5. The method of any one of claims 1 to 4, wherein the subject has a concomitant atopic disease.
6. The method of claim 5, wherein the concomitant atopic disease is a food allergy, atopic dermatitis, asthma, chronic rhinosinusitis, allergic rhinitis, or allergic conjunctivitis.
7. The method of any one of claims 1 to 6, wherein the subject has eosinophilic gastroenteritis.
8. The method of any one of claims 1 to 7, wherein the subject has a history of an average of at least two episodes of dysphagia per week for at least 4 weeks.
9. The method of any one of claims 1 to 8, wherein the subject is unresponsive or inadequately responsive to treatment with a swallowed topical corticosteroid and/or a proton pump inhibitor (PPI).
10. The method of any one of claims 1 to 9, wherein the IL-4R inhibitor comprises a heavy chain variable region (HCVR) comprising the amino acid sequence of

SEQ ID NO:1 and a light chain variable region (LCVR) comprising the amino acid sequence of SEQ ID NO:2.

11. The method of any one of claims 1 to 10, wherein the IL-4R inhibitor comprises a heavy chain comprising the amino acid sequence of SEQ ID NO:9 and a light chain comprising the amino acid sequence of SEQ ID NO:10.

12. The method of any one of claims 1 to 11, wherein the IL-4R inhibitor is dupilumab or a bioequivalent thereof.

13. The method of any one of claims 1 to 12, wherein the IL-4R inhibitor is administered at a dose of about 50 mg to about 600 mg.

14. The method of claim 13, wherein the IL-4R inhibitor is administered at a dose of about 300 mg.

15. The method of claim 13 or 14, wherein the IL-4R inhibitor is administered once a week or once every two weeks.

16. The method of any one of claims 1 to 15, wherein the IL-4R inhibitor is administered in combination with a second therapeutic agent or therapy.

17. The method of claim 16, wherein the second therapeutic agent or therapy is an IL-1 β inhibitor, an IL-5 inhibitor, an IL-9 inhibitor, an IL-13 inhibitor, an IL-17 inhibitor, an IL-25 inhibitor, a TNF α inhibitor, an eotaxin-3 inhibitor, an IgE inhibitor, a prostaglandin D2 inhibitor, an immunosuppressant, a topical corticosteroid, an oral corticosteroid, a systemic corticosteroid, an inhaled corticosteroid, a glucocorticoid, a PPI, a decongestant, an antihistamine, a non-steroidal anti-inflammatory drug (NSAID), esophagus dilation, allergen removal, or diet management.

18. The method of claim 17, wherein the IL-4R inhibitor is administered in combination with a PPI.

19. The method of claim 18, wherein the PPI is administered as a high-dose regimen selected from the group consisting of: omeprazole at a dose of 40 mg QD or 20 mg BID, esomeprazole at a dose of 40 mg QD or 20 mg BID, lansoprazole at a dose of 60 mg QD or 30 mg BID, dexlansoprazole at a dose of 60 mg QD, rabeprazole at a dose of 40 mg QD or 20 mg BID, and pantoprazole at a dose of 80 mg QD or 40 mg BID.

20. The method of any one of claims 1 to 19, wherein treatment with the IL-4R inhibitor normalizes the expression of one or more EoE-associated and/or Type 2 inflammation-associated genes.

21. The method of any one of claims 1 to 20, wherein treatment with the IL-4R inhibitor reduces dysphagia in the subject.

22. The method of claim 21, wherein treatment with the IL-4R inhibitor:
decreases the subject's DSQ score by at least 30%, relative to baseline, after 24 weeks of treatment; and/or
decreases the subject's DSQ score by at least 10 points, relative to baseline, after 24 weeks of treatment.
23. The method of any one of claims 1 to 20, wherein treatment with the IL-4R inhibitor reduces esophageal intraepithelial eosinophils in the subject.
24. The method of claim 23, wherein treatment with the IL-4R inhibitor:
reduces the subject's peak esophageal intraepithelial eosinophil count by at least 50%, relative to baseline, after 24 weeks of treatment; and/or
reduces the subject's peak esophageal intraepithelial eosinophil count to ≤ 6 eos/hpf after 24 weeks of treatment.
25. The method of any one of claims 1 to 24, wherein treatment with the IL-4R inhibitor reduces the subject's EoE-EREFS score by at least 25%, relative to baseline, after 24 weeks of treatment.
26. The method of any one of claims 1 to 25, wherein treatment with the IL-4R inhibitor improves the subject's ability to swallow food.
27. The method of any one of claims 1 to 26, wherein treatment with the IL-4R inhibitor:
reduces the expression of a biomarker selected from the group consisting of TARC, eotaxin-3, and IgE;
normalizes the expression of one or more Type 2 inflammation-associated genes shown in Figure 3; and/or
normalizes the expression of one or more EoE-associated genes shown in Figure 6.
28. A method of improving the ability to swallow food in a subject, the method comprising:
administering to a subject having eosinophilic esophagitis (EoE) one or more doses of an interleukin-4 receptor (IL-4R) inhibitor, wherein the IL-4R inhibitor is an antibody or antigen-binding fragment thereof that binds IL-4R α and comprises a heavy chain complementarity determining region (HCDR)1 comprising the amino acid sequence of SEQ ID NO:3, an HCDR2 comprising the amino acid sequence of SEQ ID NO:4, an HCDR3 comprising the amino acid sequence of SEQ ID NO:5, a light chain complementarity determining region (LCDR)1 comprising the amino acid sequence of

SEQ ID NO:6, an LCDR2 comprising the amino acid sequence of SEQ ID NO:7, and an LCDR3 comprising the amino acid sequence of SEQ ID NO:8.

29. The method of claim 28, wherein the subject is ≥ 12 years of age.
30. The method of claim 29, wherein the subject is an adult.
31. The method of claim 29, wherein the subject is an adolescent ≥ 12 and < 18 years of age.
32. The method of any one of claims 28 to 31, wherein prior to the onset of treatment the subject has a Dysphagia Symptom Questionnaire (DSQ) score ≥ 10 .
33. The method of any one of claims 28 to 32, wherein the subject has a concomitant atopic disease.
34. The method of claim 33, wherein the concomitant atopic disease is a food allergy, atopic dermatitis, asthma, chronic rhinosinusitis, allergic rhinitis, or allergic conjunctivitis.
35. The method of any one of claims 28 to 34, wherein the subject has eosinophilic gastroenteritis.
36. The method of any one of claims 28 to 35, wherein the subject has a history of an average of at least two episodes of dysphagia per week for at least 4 weeks.
37. The method of any one of claims 28 to 36, wherein the subject is unresponsive or inadequately responsive to treatment with a swallowed topical corticosteroid and/or a proton pump inhibitor (PPI).
38. The method of any one of claims 28 to 37, wherein the IL-4R inhibitor comprises a heavy chain variable region (HCVR) comprising the amino acid sequence of SEQ ID NO:1 and a light chain variable region (LCVR) comprising the amino acid sequence of SEQ ID NO:2.
39. The method of any one of claims 28 to 38, wherein the IL-4R inhibitor comprises a heavy chain comprising the amino acid sequence of SEQ ID NO:9 and a light chain comprising the amino acid sequence of SEQ ID NO:10.
40. The method of any one of claims 28 to 39, wherein the IL-4R inhibitor is dupilumab or a bioequivalent thereof.
41. The method of any one of claims 28 to 40, wherein the IL-4R inhibitor is administered at a dose of about 50 mg to about 600 mg.
42. The method of claim 41, wherein the IL-4R inhibitor is administered at a dose of about 300 mg.

43. The method of claim 41 or 42, wherein the IL-4R inhibitor is administered once a week or once every two weeks.

44. The method of any one of claims 28 to 43, wherein the IL-4R inhibitor is administered in combination with a second therapeutic agent or therapy.

45. The method of claim 44, wherein the second therapeutic agent or therapy is an IL-1 β inhibitor, an IL-5 inhibitor, an IL-9 inhibitor, an IL-13 inhibitor, an IL-17 inhibitor, an IL-25 inhibitor, a TNF α inhibitor, an eotaxin-3 inhibitor, an IgE inhibitor, a prostaglandin D2 inhibitor, an immunosuppressant, a topical corticosteroid, an oral corticosteroid, a systemic corticosteroid, an inhaled corticosteroid, a glucocorticoid, a PPI, a decongestant, an antihistamine, a non-steroidal anti-inflammatory drug (NSAID), esophagus dilation, allergen removal, or diet management.

46. The method of claim 45, wherein the IL-4R inhibitor is administered in combination with a PPI.

47. The method of claim 46, wherein the PPI is administered as a high-dose regimen selected from the group consisting of: omeprazole at a dose of 40 mg QD or 20 mg BID, esomeprazole at a dose of 40 mg QD or 20 mg BID, lansoprazole at a dose of 60 mg QD or 30 mg BID, dexlansoprazole at a dose of 60 mg QD, rabeprazole at a dose of 40 mg QD or 20 mg BID, and pantoprazole at a dose of 80 mg QD or 40 mg BID.

48. The method of any one of claims 28 to 47, wherein treatment with the IL-4R inhibitor:

decreases the subject's DSQ score by at least 30%, relative to baseline, after 24 weeks of treatment;

decreases the subject's DSQ score by at least 10 points, relative to baseline, after 24 weeks of treatment; and/or

improves the subject's Patient Global Impression of Change (PGIC) of Dysphagia score.

49. The method of any one of claims 1 to 48, wherein the IL-4R inhibitor is contained within a container selected from the group consisting of a glass vial, a syringe, a pen delivery device, and an autoinjector.