

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|                                                    |                                                                                                  |                                                                                  |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Applicant's or agent's file reference<br>X22742    | <b>FOR FURTHER ACTION</b><br>see Form PCT/ISA/220<br>as well as, where applicable, item 5 below. |                                                                                  |
| International application No.<br>PCT/US2022/074575 | International filing date ( <i>day/month/year</i> )<br>5 August 2022 (05-08-2022)                | (Earliest) Priority Date ( <i>day/month/year</i> )<br>5 August 2021 (05-08-2021) |
| Applicant<br><br>ELI LILLY AND COMPANY             |                                                                                                  |                                                                                  |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed  
☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_  
☐ as suggested by the applicant  
☐ as selected by this Authority, because the applicant failed to suggest a figure  
☐ as selected by this Authority, because this figure better characterizes the invention
- b. ☒ none of the figures is to be published with the abstract

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### Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.c of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of a sequence listing:
  - a. ☒ forming part of the international application as filed.
  - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)).

☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
2. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this report has been established to the extent that a meaningful search could be carried out without a WIPO Standard ST.26 compliant sequence listing.
3. Additional comments:

International application No  
**PCT/US2022/074575**

**ADD .**

C07K

EPO-Internal, BIOSIS, EMBASE

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                                                                                     | Relevant to claim No.                                  |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| X         | <p>WO 2020/048312 A1 (SUNSHINE GUOJIAN PHARMACEUTICAL SHANGHAI CO LTD [CN])<br/>12 March 2020 (2020-03-12)</p> <p>claims 17, 18, 20; figure 6; example 8;<br/>table 2</p> <p>-----</p> | <p>1-9,<br/>15-17,<br/>36-40,<br/>42-46,<br/>48-51</p> |
| X         | <p>US 2013/336978 A1 (ERIKSSON PER-OLOF FREDRIK [SE] ET AL)<br/>19 December 2013 (2013-12-19)</p>                                                                                      | <p>1-3, 8, 9</p>                                       |
| Y         | <p>example 3.2; table 5</p> <p>-----</p> <p>-/--</p>                                                                                                                                   | <p>15-20,<br/>25-29,<br/>31-52</p>                     |

☒☒

Hix, Rebecca

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| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT |                                                                                                                                                                                                                                                                                                                                                                                     |                                   |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Category*                                            | Citation of document, with indication, where appropriate, of the relevant passages                                                                                                                                                                                                                                                                                                  | Relevant to claim No.             |
| Y                                                    | <p>KIM JUNG-EUN ET AL: "Engineering of anti-human interleukin-4 receptor alpha antibodies with potent antagonistic activity", SCIENTIFIC REPORTS, vol. 9, no. 1, 1 December 2019 (2019-12-01), XP055858581, DOI: 10.1038/s41598-019-44253-9 Retrieved from the Internet: URL:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6533264/pdf/41598_2019_Article_44253.pdf&gt; figure 4</p> | 1-9,<br>15-20,<br>25-29,<br>31-52 |
| Y                                                    | <p>D M PATON: "Dupilumab: human monoclonal antibody against IL-4Ralpha for moderate to severe atopic dermatitis", DRUGS TODAY, vol. 53, no. 9, 1 September 2017 (2017-09-01), pages 477-487, XP055465888, DOI: 10.1358/dot.2017.53.9.2693150 the whole document</p>                                                                                                                 | 1-9,<br>15-20,<br>25-29,<br>31-52 |
| Y                                                    | <p>AUDREY LE FLOC'H ET AL: "Dual blockade of IL-4 and IL-13 with dupilumab, an IL-4R[alpha] antibody, is required to broadly inhibit type 2 inflammation", ALLERGY, WILEY-BLACKWELL PUBLISHING LTD, UNITED KINGDOM, vol. 75, no. 5, 3 January 2020 (2020-01-03), pages 1188-1204, XP071463316, ISSN: 0105-4538, DOI: 10.1111/ALL.14151 the whole document</p>                       | 1-9,<br>15-20,<br>25-29,<br>31-52 |
| A                                                    | <p>WO 2020/135471 A1 (QYUNS THERAPEUTICS CO LTD [CN]) 2 July 2020 (2020-07-02) claim 2</p>                                                                                                                                                                                                                                                                                          | 1-52                              |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2022/074575

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
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