

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

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| Applicant's or agent's file reference 524787PCT | | FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below. | |
| International application No. PCT/AU2019/051325 | International filing date (<i>day/month/year</i>) 04 December 2019 | (Earliest) Priority Date (<i>day/month/year</i>) 04 December 2018 | |
| Applicant CSL INNOVATION PTY LTD | | | |
| 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 6 sheets. <input type="checkbox"/> It is also accompanied by a copy of each prior art document cited in this report. | | | |
| <p>1. Basis of the report</p> <p>a. With regard to the language, the international search was carried out on the basis of:</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> The international application in the language in which it was filed.</p> <p style="padding-left: 20px;"><input type="checkbox"/> 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)).</p> <p>b. <input type="checkbox"/> 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)).</p> <p>c. <input checked="" type="checkbox"/> With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.</p> <p>2. <input type="checkbox"/> Certain claims were found unsearchable (See Box No. II).</p> <p>3. <input type="checkbox"/> Unity of invention is lacking (See Box No. III).</p> <p>4. With regard to the title,</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> the text is approved as submitted by the applicant.</p> <p style="padding-left: 20px;"><input type="checkbox"/> the text has been established by this Authority to read as follows:</p> <p>5. With regard to the abstract,</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> the text is approved as submitted by the applicant.</p> <p style="padding-left: 20px;"><input type="checkbox"/> 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.</p> <p>6. With regard to the drawings,</p> <p>a. the figure of the drawings to be published with the abstract is Figure No.</p> <p style="padding-left: 40px;"><input type="checkbox"/> as suggested by the applicant.</p> <p style="padding-left: 40px;"><input type="checkbox"/> as selected by this Authority, because the applicant failed to suggest a figure.</p> <p style="padding-left: 40px;"><input type="checkbox"/> as selected by this Authority, because this figure better characterizes the invention.</p> <p>b. <input checked="" type="checkbox"/> none of the figures is to be published with the abstract.</p> | | | |

Box No. 1 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:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
2. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

SEQ ID NO: 4-11 searched.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2019/051325

A. CLASSIFICATION OF SUBJECT MATTER

C07K 16/28 (2006.01) A61K 39/395 (2006.01) A61P 17/06 (2006.01) A61P 17/10 (2006.01) A61P 37/06 (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PATENW (based on EPODOC, WPIAP and the English full-text databases), MEDLINE, CAPLUS, BIOSIS, EMBASE: G-CSF antibody, granulocyte colony stimulating factor antibody, C1.2, CSL324, neutrophilic dermatosis, neutrophilic skin lesion, hidradenitis suppurativa, palmoplantar pustulosis, neutrophil, neutropenia and similar terms. Internal databases provided by IP Australia, PubMed, Espacenet, ClinicalTrials.gov, ANZCTR: Applicant/Inventor and keywords search. GenomeQuest: Sequence search.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| | Documents are listed in the continuation of Box C | |

 Further documents are listed in the continuation of Box C See patent family annex

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| * Special categories of cited documents: | | |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention | |
| "D" document cited by the applicant in the international application | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone | |
| "E" earlier application or patent but published on or after the international filing date | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art | |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "&" document member of the same patent family | |
| "O" document referring to an oral disclosure, use, exhibition or other means | | |
| "P" document published prior to the international filing date but later than the priority date claimed | | |

Date of the actual completion of the international search
30 January 2020Date of mailing of the international search report
30 January 2020

Name and mailing address of the ISA/AU

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| INTERNATIONAL SEARCH REPORT | | International application No. |
| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | PCT/AU2019/051325 |

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | SCALZO-INGUANTI, K. et al., 'A neutralizing anti-G-CSFR antibody blocks G-CSF-induced neutrophilia without inducing neutropenia in nonhuman primates', JOURNAL OF LEUKOCYTE BIOLOGY. 2017, Vol. 102, No. 2, pages 537-549 See Abstract, Materials and Methods, Results, Figure 3, Introduction, Discussion | 1-23 |
| X | WO 2012/171057 A1 (CSL LIMITED) 20 December 2012 See Example 6, Figure 3, page 18, lines 21-29, page 53, line 14 – page 54, line 3, page 57, lines 31-35, SEQ ID NO: 2-5, 64-65 and 68 | 1-23 |
| A | CAMPBELL, I.K. et al., 'Therapeutic Targeting of the G-CSF Receptor Reduces Neutrophil Trafficking and Joint Inflammation in Antibody-Mediated Inflammatory Arthritis', THE JOURNAL OF IMMUNOLOGY. 2016, Vol. 197, No. 11, pages 4392-4402 See Abstract, Materials and Methods, Results | 1-19 |
| A | GOLDBERG, G.L. et al., 'G-CSF and Neutrophils Are Nonredundant Mediators of Murine Experimental Autoimmune Uveoretinitis', THE AMERICAN JOURNAL OF PATHOLOGY. 2016, Vol. 186, No. 1, pages 172-184 See Abstract, Materials and Methods, Results | 1-19 |
| A | ANZCTR, 'Dose escalation, placebo-controlled phase 1 study to assess the safety and tolerability of CSL324 in healthy adults', Registration number ACTRN12616000846426, date registered 29 June 2016, [retrieved from internet on 6 January 2020], <URL: https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?ACTRN=12616000846426 > See whole document | 1-23 |
| A | FUJII, A. et al., 'Sweet's Syndrome Successfully Treated with Granulocyte and Monocyte Adsorption Apheresis', CASE REPORTS IN DERMATOLOGY. 2017, Vol. 9, No. 2, pages 13-18 See Abstract | 1-23 |
| P,X | WO 2019/178645 A1 (CSL LIMITED) 26 September 2019 See Abstract, page 45, lines 9-10, page 50, lines 34-36, page 51, lines 19-23, Example 3, Claims 1-20, SEQ ID NO: 2-5, 14-15 and 18 | 3-19 |
| P,X | WO 2019/104385 A1 (CSL LIMITED) 06 June 2019 See Abstract, page 8, lines 8-14, page 58, lines 8-9, Examples 3, 6 and 9, Claims 1-26, SEQ ID NO: 2-5, 14-15 and 18 | 3, 9-11 and 13-18 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2019/051325

This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document/s Cited in Search Report | | Patent Family Member/s | |
|---|-------------------------|-------------------------------|-------------------------|
| Publication Number | Publication Date | Publication Number | Publication Date |
| WO 2012/171057 A1 | 20 December 2012 | WO 2012171057 A1 | 20 Dec 2012 |
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| | | AU 2012269720 B2 | 22 Jan 2015 |
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| | | CA 2838246 A1 | 20 Dec 2012 |
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End of Annex

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2019/051325

This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document/s Cited in Search Report**Patent Family Member/s****Publication Number****Publication Date****Publication Number****Publication Date**

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

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