

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 2015P00018WO | FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below. | |
| International application No. PCT/EP2018/055192 | International filing date (<i>day/month/year</i>) 2 March 2018 (02-03-2018) | (Earliest) Priority Date (<i>day/month/year</i>) 9 March 2017 (09-03-2017) |
| Applicant EVONIK TECHNOCHEMIE GMBH | | |

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 4 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 43.6**bis**(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

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2018/055192

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12N5/00
ADD.
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)
C12N
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)
EPO-Internal, WPI Data, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| A | US 5 534 538 A (DRAUZ KARLHEINZ [DE] ET AL) 9 July 1996 (1996-07-09) cited in the application column 2, line 1 - line 48 figure 1 | 1-14 |
| A | ----- ANDRES SÁNCHEZ-KOPPER ET AL: "Tracking dipeptides at work-uptake and intracellular fate in CHO culture", AMB EXPRESS, vol. 6, no. 1, 22 December 2016 (2016-12-22), XP055365341, DOI: 10.1186/s13568-016-0221-0 abstract ----- -/-- | 1-14 |

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"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)

"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

"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

"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

"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

"&" document member of the same patent family

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| Date of the actual completion of the international search 20 April 2018 | Date of mailing of the international search report 14/05/2018 |
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| Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016 | Authorized officer Loubradou-Bourges, N |
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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2018/055192

| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|--|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | KIM DO YUN ET AL: "Fed-batch CHO cell t-PA production and feed glutamine replacement to reduce ammonia production", BIOTECHNOLOGY PROGRESS, WILEY-BLACKWELL PUBLISHING, INC, US, vol. 29, no. 1, 1 January 2013 (2013-01-01), pages 165-175, XP009191145, ISSN: 1520-6033 abstract table 2 | 1-14 |
| A | ----- US 2003/134851 A1 (BAXTER JEFFREY H [US] ET AL) 17 July 2003 (2003-07-17) figures 1-3 | 1-14 |
| A | ----- YASUFUMI IMAMOTO ET AL: "Advantages of AlaGln as an additive to cell culture medium: use with anti-CD20 chimeric antibody-producing POTELLIGENT(TM) CHO cell 1", CYTOTECHNOLOGY, KLUWER ACADEMIC PUBLISHERS, DO, vol. 65, no. 1, 14 June 2012 (2012-06-14), pages 135-143, XP035159425, ISSN: 1573-0778, DOI: 10.1007/S10616-012-9468-8 abstract | 1-10 |
| A | ----- VAN DER VALK J ET AL: "Optimization of chemically defined cell culture media Replacing fetal bovine serum in mammalian in vitro methods", TOXICOLOGY IN VITRO, ELSEVIER SCIENCE, GB, vol. 24, no. 4, 1 June 2010 (2010-06-01), pages 1053-1063, XP027048454, ISSN: 0887-2333 [retrieved on 2010-05-13] the whole document page 1061, right-hand column | 1-10 |
| A | ----- SALAZAR ANDREW ET AL: "Amino acids in the cultivation of mammalian cells", AMINO ACIDS, SPRINGER VERLAG, AU, vol. 48, no. 5, 1 February 2016 (2016-02-01), pages 1161-1171, XP035889636, ISSN: 0939-4451, DOI: 10.1007/S00726-016-2181-8 [retrieved on 2016-02-01] the whole document page 1167, right-hand column ----- | 1-10 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2018/055192

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|-------------------------|---------------------------|
| US 5534538 | A | 09-07-1996 | DE 4022267 A1 16-01-1992 |
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| US 2003134851 | A1 | 17-07-2003 | NONE |
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