

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference L1240-20101		FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2022/049490	International filing date (<i>day/month/year</i>) 10 November 2022	(Earliest) Priority Date (<i>day/month/year</i>) 10 November 2021	
Applicant LORIA PRODUCTS LLC			

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 43.6bis(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. 63A
☒ 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. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: **18**
because they relate to subject matter not required to be searched by this Authority, namely:

Claim 18 pertains to a method for treatment of the human body by surgery and thus relate to a subject-matter which this International Searching Authority is not required to search under PCT Article 17(2)(a)(i) and PCT Rule 39.1(iv).
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

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A. CLASSIFICATION OF SUBJECT MATTER A61F 2/10(2006.01)i; A61F 2/00(2006.01)i 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) A61F 2/10(2006.01); A61B 17/34(2006.01); A61F 2/00(2006.01) Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: hair implant, anchor, at least one collagen receiving structure, hair strand, primary hair element, emerging hair element, hair stem		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 10561490 B2 (LORIA PRODUCTS LLC) 18 February 2020 (2020-02-18) claim 1; column 5, lines 1-6; column 9, lines 1-9; column 13, lines 5-17; column 27, lines 5-16).column 33, lines 40-53; column 41, lines 20-31; figure 38	1-11,19-23
A		12-17
A	CN 102665579 B (HAIRSTETICS LTD) 08 July 2015 (2015-07-08) whole document	1-17,19-23
A	US 2003-0195625 A1 (GARCIA, C. M. A. et al.) 16 October 2003 (2003-10-16) whole document	1-17,19-23
A	US 2007-0067033 A1 (BONATI, A. O.) 22 March 2007 (2007-03-22) whole document	1-17,19-23
A	US 2004-0149301 A1 (ARROYO, M. S. et al.) 05 August 2004 (2004-08-05) whole document	1-17,19-23
☐ 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 "D" document cited by the applicant in the international application "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		
Date of the actual completion of the international search 30 March 2023		Date of mailing of the international search report 31 March 2023
Name and mailing address of the ISA/KR Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon 35208, Republic of Korea Facsimile No. +82-42-481-8578		Authorized officer HEO, Joo Hyung Telephone No. +82-42-481-5373

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
US	10561490	B2	18 February 2020	EP	3661455	A1	10 June 2020
				EP	3661455	A4	28 April 2021
				EP	3934578	A1	12 January 2022
				JP	2020-529909	A	15 October 2020
				JP	2022-524508	A	06 May 2022
				KR	10-2021-0146941	A	06 December 2021
				US	10105212	B1	23 October 2018
				US	10682223	B2	16 June 2020
				US	10925718	B2	23 February 2021
				US	2019-0117378	A1	25 April 2019
				US	2019-0254806	A1	22 August 2019
				US	2019-0380827	A1	19 December 2019
				US	2020-0261210	A1	20 August 2020
				US	2020-0261211	A1	20 August 2020
				US	2020-0261212	A1	20 August 2020
				US	2021-0137673	A1	13 May 2021
				US	2021-0161648	A1	03 June 2021
				US	2021-0161649	A1	03 June 2021
				US	2021-0161650	A1	03 June 2021
				US	9993334	B1	12 June 2018
				WO	2019-027864	A1	07 February 2019
				WO	2020-106320	A1	28 May 2020
				WO	2020-180682	A1	10 September 2020
CN	102665579	B	08 July 2015	EP	2503945	A1	03 October 2012
				EP	2503945	A4	11 June 2014
				EP	2503945	B1	03 January 2018
				JP	2013-512031	A	11 April 2013
				JP	5733535	B2	10 June 2015
				KR	10-1623231	B1	20 May 2016
				US	2012-0245612	A1	27 September 2012
				US	9492196	B2	15 November 2016
				WO	2011-064772	A1	03 June 2011
US	2003-0195625	A1	16 October 2003	None			
US	2007-0067033	A1	22 March 2007	None			
US	2004-0149301	A1	05 August 2004	EP	1587383	A1	26 October 2005
				EP	1587383	B1	09 August 2006
				JP	04-459952	B2	28 April 2010
				JP	2006-516685	A	06 July 2006
				US	2006-0005848	A1	12 January 2006
				US	2008-0011314	A1	17 January 2008
				US	6938624	B2	06 September 2005
				US	7246623	B2	24 July 2007
				US	7726321	B2	01 June 2010
				WO	2004-068984	A1	19 August 2004