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(54) Title: USE OF A MARKER OR A MARKER SET FOR DETERMINING THE RISK OF AN INDIVIDUAL TO HAVE ASCITES

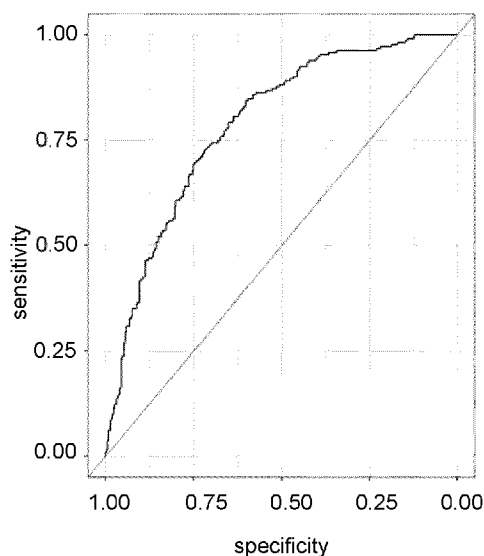


FIG 1A

(57) Abstract: The present invention relates, amongst others, to the use of a marker or a marker set in an in vitro method for determining the risk of an individual to have ascites. The marker is chosen from a first group consisting of high-density lipoprotein, apolipoprotein A1, valine, and pyruvate; the marker set comprises at least two substances chosen from a second group consisting of high-density lipoprotein, apolipoprotein A1, valine, pyruvate, lactate, myo-inositol, and anhydrosorbitol.

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*

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13 February 2025 (13.02.2025)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2024/068881

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.:
because they relate to subject matter not required to be searched by this Authority, namely:
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).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims;; it is covered by claims Nos.:
1 - 15 (partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2024/068881

A. CLASSIFICATION OF SUBJECT MATTER

INV. G01N33/68 G01N33/92
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)

G01N

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**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SAMAR MASOUMI-MOGHADDAM ET AL: "Intratumoral interleukin-6 predicts ascites formation in patients with epithelial ovarian cancer: A potential tool for close monitoring", JOURNAL OF OVARIAN RESEARCH, BIOMED CENTRAL LTD, LONDON, UK, vol. 8, no. 1, 19 August 2015 (2015-08-19) , page 58, XP021228235, ISSN: 1757-2215, DOI: 10.1186/S13048-015-0183-X ----- - / - -	1 - 15



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

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2024/068881

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GUO QIANG ET AL: "Soluble myeloid triggering receptor expressed on myeloid cell 1 might have more diagnostic value for bacterial ascites than C-reactive protein", OPEN LIFE SCIENCESJUL 8 2022, vol. 13, no. 1, 5 December 2018 (2018-12-05), pages 456-462, XP093214816, Open Life SciencesJUL 8 2022 ISSN: 2391-5412, DOI: 10.1515/biol-2018-0054 -----	1-15
A	Li Wenkuan: "Urinary Bile Acid Indices as Prognostic Biomarkers for the Urinary Bile Acid Indices as Prognostic Biomarkers for the Complications of Liver Diseases Complications of Liver Diseases", , 13 August 2021 (2021-08-13), XP093215177, Retrieved from the Internet: URL:https://digitalcommons.unmc.edu/cgi/viewcontent.cgi?article=1563&context=etd -----	1-15
A	ABUDEIF AHMED ET AL: "Serum copeptin is associated with major complications of liver cirrhosis and spontaneous bacterial peritonitis", CLINICAL AND EXPERIMENTAL HEPATOLOGY, vol. 9, no. 1, 1 January 2023 (2023-01-01), pages 71-78, XP093215233, ISSN: 2392-1099, DOI: 10.5114/ceh.2023.125970 -----	1-15
X	ZAMBON S. ET AL: "The lipoprotein composition of plasma and ascitic fluid in liver cirrhosis", EUROPEAN JOURNAL OF CLINICAL INVESTIGATION, vol. 25, no. 3, 1 March 1995 (1995-03-01), pages 143-148, XP093214807, GB ISSN: 0014-2972, DOI: 10.1111/j.1365-2362.1995.tb01540.x	1,13,14
A	abstract, table 5 ----- -/--	2-12,15

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2024/068881

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SHIGEFUKU RYUTA ET AL: "Serum copeptin level is a biomarker associated with ascites retention and the formation of a portosystemic shunt in chronic liver disease", JOURNAL OF GASTROENTEROLOGY AND HEPATOLOGY, vol. 36, no. 4, 17 September 2020 (2020-09-17), pages 1006-1014, XP093215267, Hoboken, USA ISSN: 0815-9319, DOI: 10.1111/jgh.15215 Retrieved from the Internet: URL:https://onlinelibrary.wiley.com/doi/full/10.1111/jgh.15215> -----	1 - 15

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-15 (partially)

Biomarker for the risk of ascites, wherein the biomarker is HDL or apoA1.

2. claims: 1-15 (partially)

Biomarker for the risk of ascites, wherein the biomarker is valine.

3. claims: 1-15 (partially)

Biomarker for the risk of ascites, wherein the biomarker is pyruvate.
