

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PCT3259.2	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/ES2018/070463	International filing date (<i>day/month/year</i>) 28 June 2018 (28-06-2018)	(Earliest) Priority Date (<i>day/month/year</i>) 28 June 2017 (28-06-2017)
Applicant FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL...		

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 43.6*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/ES2018/070463

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12Q1/6886
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)
C12Q

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2012/067970 A2 (DAWSON TED M [US]; DAWSON VALINA L [US]; KO HAN SEOK [US]; SHIN JOOHO) 24 May 2012 (2012-05-24) paragraph [0274]	34-37
A	----- T. T. VELLINGA ET AL: "SIRT1/PGC1 -Dependent Increase in Oxidative Phosphorylation Supports Chemotherapy Resistance of Colon Cancer", CLINICAL CANCER RESEARCH, vol. 21, no. 12, 15 June 2015 (2015-06-15), pages 2870-2879, XP55523240, US ISSN: 1078-0432, DOI: 10.1158/1078-0432.CCR-14-2290 ----- -/--	1-40

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 15 November 2018	Date of mailing of the international search report 30/11/2018
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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 Cornelis, Karen
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2018/070463

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:
- 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:

INTERNATIONAL SEARCH REPORT

International application No
PCT/ES2018/070463

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MARGALIDA TORRENS-MAS ET AL: "SIRT3 Silencing Sensitizes Breast Cancer Cells to Cytotoxic Treatments Through an Increment in ROS Production :", JOURNAL OF CELLULAR BIOCHEMISTRY, vol. 118, no. 2, 1 February 2017 (2017-02-01), pages 397-406, XP55524101, ISSN: 0730-2312, DOI: 10.1002/jcb.25653 the whole document	14,15
A	----- WO 2012/113819 A1 (PANGAEA BIOTECH S L [ES]; TARON ROCA MIGUEL [ES]; ROSELL COSTA RAFAEL) 30 August 2012 (2012-08-30)	1-40
A	----- VALERIE S. LEBLEU ET AL: "PGC-1[alpha] mediates mitochondrial biogenesis and oxidative phosphorylation in cancer cells to promote metastasis", NATURE CELL BIOLOGY, vol. 16, no. 10, 21 September 2014 (2014-09-21), pages 992-1003, XP55523217, GB ISSN: 1465-7392, DOI: 10.1038/ncb3039	1-40
X,P	----- ALBERTO CRUZ-BERMÚDEZ ET AL: "PGC-1alpha levels correlate with survival in patients with stage III NSCLC and may define a new biomarker to metabolism-targeted therapy", SCIENTIFIC REPORTS, vol. 7, no. 1, 30 November 2017 (2017-11-30), XP55523682, DOI: 10.1038/s41598-017-17009-6 the whole document	1-40

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/ES2018/070463

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2012067970	A2	24-05-2012	
		US 2012122958 A1	17-05-2012
		US 2014045921 A1	13-02-2014
		US 2014378536 A1	25-12-2014
		WO 2012067970 A2	24-05-2012

WO 2012113819	A1	30-08-2012	
		EP 2492688 A1	29-08-2012
		WO 2012113819 A1	30-08-2012
