

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference uz252wo	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2016/079276	International filing date (<i>day/month/year</i>) 30 November 2016 (30-11-2016)	(Earliest) Priority Date (<i>day/month/year</i>) 2 December 2015 (02-12-2015)
Applicant UNIVERSITÄT BASEL		

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

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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 13~~ter~~.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 13~~ter~~.1(a)).
- ☐ on paper or in the form of an image file (Rule 13~~ter~~.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:

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A. CLASSIFICATION OF SUBJECT MATTER

INV. C12N15/01 A61K31/7068 C07H19/06 A61L31/16 A01H1/06
A01H3/04

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)

A01H A61L A61K C07H 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, CHEM ABS Data, WPI Data, BIOSIS, Sequence Search, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DHAVAL VARSHNEY ET AL: "SINE transcription by RNA polymerase III is suppressed by histone methylation but not by DNA methylation", NATURE COMMUNICATIONS, vol. 6, 23 March 2015 (2015-03-23), page 6569, XP055272268, DOI: 10.1038/ncomms7569 abstract; pages 5-8, 10; Table 4 ----- -/--	1-3, 12-16, 18,19



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

23 February 2017

Date of mailing of the international search report

07/03/2017

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

Kurz, Birgit

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TUNCAY BAUBEC ET AL: "Effective, homogeneous and transient interference with cytosine methylation in plant genomic DNA by zebularine", THE PLANT JOURNAL, vol. 57, no. 3, 1 February 2009 (2009-02-01), pages 542-554, XP055271538, GB ISSN: 0960-7412, DOI: 10.1111/j.1365-313X.2008.03699.x Abstract; pages 543,546-548, 550; figure 6 -----	8,12,16
A	VLADIMIR V. CAVRAK ET AL: "How a Retrotransposon Exploits the Plant's Heat Stress Response for Its Activation", PLOS GENETICS, vol. 10, no. 1, 30 January 2014 (2014-01-30), page e1004115, XP055271558, DOI: 10.1371/journal.pgen.1004115 the whole document -----	1-19
A	W. MATSUNAGA ET AL: "The effects of heat induction and the siRNA biogenesis pathway on the transgenerational transposition of ONSEN, a copia-like retrotransposon in Arabidopsis thaliana", PLANT AND CELL PHYSIOLOGY, vol. 53, no. 5, 14 December 2011 (2011-12-14), pages 824-833, XP055271560, UK ISSN: 0032-0781, DOI: 10.1093/pcp/pcr179 the whole document -----	1-19
A	MARJORI A. MATZKE ET AL: "RNA-directed DNA methylation: an epigenetic pathway of increasing complexity", NATURE REVIEWS GENETICS, vol. 15, no. 6, 8 May 2014 (2014-05-08), pages 394-408, XP055271562, GB ISSN: 1471-0056, DOI: 10.1038/nrg3683 the whole document -----	1-19
A	WATARU MATSUNAGA ET AL: "Role of RNA polymerase IV in plant small RNA metabolism.", FRONTIERS IN PLANT SCIENCE, vol. 104, no. e129, 9 February 2015 (2015-02-09), page 4536, XP055271567, DOI: 10.1073/pnas.0611456104 the whole document -----	1-19
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	BUCHER ETIENNE ET AL: "Epigenetic control of transposon transcription and mobility in Arabidopsis", CURRENT OPINION IN PLANT BIOLOGY, vol. 15, no. 5, 2012, pages 503-510, XP028958933, ISSN: 1369-5266, DOI: 10.1016/J.PBI.2012.08.006 the whole document -----	1-19
A	S. VISPE ET AL: "Triptolide is an inhibitor of RNA polymerase I and II-dependent transcription leading predominantly to down-regulation of short-lived mRNA", MOLECULAR CANCER THERAPEUTICS, vol. 8, no. 10, 1 October 2009 (2009-10-01), pages 2780-2790, XP055272275, US ISSN: 1535-7163, DOI: 10.1158/1535-7163.MCT-09-0549 the whole document -----	1-19
A	H. SAZE ET AL: "DNA Methylation in Plants: Relationship to Small RNAs and Histone Modifications, and Functions in Transposon Inactivation", PLANT AND CELL PHYSIOLOGY, vol. 53, no. 5, 1 February 2012 (2012-02-01), pages 766-784, XP055272283, UK ISSN: 0032-0781, DOI: 10.1093/pcp/pcs008 abstract; pages 774, 776, 777 -----	1-19