

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference X20729	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2016/040612	International filing date (<i>day/month/year</i>) 1 July 2016 (01-07-2016)	(Earliest) Priority Date (<i>day/month/year</i>) 7 July 2015 (07-07-2015)
Applicant ELI LILLY AND COMPANY		

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**,

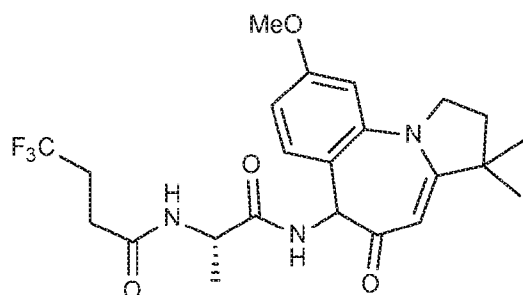
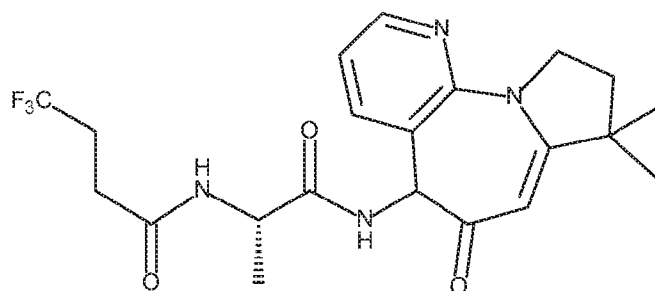
- ☐ the text is approved as submitted by the applicant
☒ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

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

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

The present invention provides the following compounds, or pharmaceutically acceptable salts thereof, and pharmaceutical compositions containing said compounds useful as a Notch pathway signaling inhibitor for the treatment of named cancers, sensorineural hearing loss caused by auditory hair cell loss, and inducing auditory hair cell generation.



INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/040612

A. CLASSIFICATION OF SUBJECT MATTER INV. C07D487/14 C07D471/14 A61K31/55 A61P27/16 A61P35/00 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) C07D A61K A61P		
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, CHEM ABS Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2014/039781 A1 (MASSACHUSETTS EYE & EAR INFIRM [US]) 13 March 2014 (2014-03-13) cited in the application claims 1-15; figure 10B; compounds LY-411575, R04929097, Y0-010277 -----	1-16
A	US 2013/029972 A1 (HIPSKIND PHILIP ARTHUR [US] ET AL) 31 January 2013 (2013-01-31) claims 1-9 ----- -/-	1-16
☒ 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 24 August 2016		Date of mailing of the international search report 15/09/2016
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 Sáez Díaz, R

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2016/040612

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CATERINA FATTORUSSO ET AL: "Specific Targeting Highly Conserved Residues in the HIV-1 Reverse Transcriptase Primer Grip Region. Design, Synthesis, and Biological Evaluation of Novel, Potent, and Broad Spectrum NNRTIs with Antiviral Activity", JOURNAL OF MEDICINAL CHEMISTRY, vol. 48, no. 23, 1 November 2005 (2005-11-01), pages 7153-7165, XP055064516, ISSN: 0022-2623, DOI: 10.1021/jm050257d compound 20a -----	1-16

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2016/040612

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		WO 2014039781 A1	13-03-2014

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