

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference X21660	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2019/037146	International filing date (<i>day/month/year</i>) 14 June 2019 (14-06-2019)	(Earliest) Priority Date (<i>day/month/year</i>) 22 June 2018 (22-06-2018)
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 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 43.6**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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International application No
PCT/US2019/037146

A. CLASSIFICATION OF SUBJECT MATTER INV. A61K47/02 A61K47/10 A61K38/00 A61K38/16 A61P3/10 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) 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, BIOSIS, CHEM ABS Data, EMBASE, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 9 474 780 B2 (LILLY CO ELI [US]) 25 October 2016 (2016-10-25) claims 1-18	1-43
A	----- US 2012/329708 A1 (DIMARCHI RICHARD D [US] ET AL) 27 December 2012 (2012-12-27) paragraphs [0250], [0256]; claims 1-39 -----	1-43
☐ 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 22 January 2020		Date of mailing of the international search report 03/02/2020
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 Wörth, Christian

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Information on patent family members

International application No

PCT/US2019/037146

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 9474780	B2	25-10-2016	AR 103242 A1 26-04-2017
		AU 2016205435 A1 08-06-2017	
		BR 112017010596 A2 06-03-2018	
		CA 2973352 A1 14-07-2016	
		CL 2017001760 A1 16-03-2018	
		CN 107207576 A 26-09-2017	
		DK 3242887 T3 02-09-2019	
		DO P2017000153 A 15-07-2017	
		EA 201791281 A1 30-11-2017	
		EA 201892057 A1 28-02-2019	
		EP 3242887 A1 15-11-2017	
		EP 3597662 A1 22-01-2020	
		HR P20191614 T1 13-12-2019	
		JP 6219534 B2 25-10-2017	
		JP 6545766 B2 17-07-2019	
		JP 2017507124 A 16-03-2017	
		JP 2018052933 A 05-04-2018	
		JP 2019203000 A 28-11-2019	
		KR 20170092661 A 11-08-2017	
		KR 20190026967 A 13-03-2019	
		LT 3242887 T 11-11-2019	
		MA 41315 B1 29-11-2019	
		MD 3242887 T2 30-11-2019	
		NZ 732000 A 30-11-2018	
		PE 20170954 A1 13-07-2017	
		PH 12017501252 A1 30-10-2017	
		PT 3242887 T 29-10-2019	
		SG 11201705603Y A 30-08-2017	
		SI 3242887 T1 30-10-2019	
		SV 2017005453 A 27-08-2018	
		TN 2017000198 A1 19-10-2018	
		TW 201636362 A 16-10-2016	
		UA 118239 C2 10-12-2018	
		US 2016199438 A1 14-07-2016	
		WO 2016111971 A1 14-07-2016	
		ZA 201703930 B 26-06-2019	
US 2012329708	A1	27-12-2012	AR 086998 A1 05-02-2014
		AU 2012273364 A1 16-01-2014	
		CA 2839686 A1 27-12-2012	
		CL 2013003688 A1 25-07-2014	
		CN 103857408 A 11-06-2014	
		CO 6821895 A2 31-12-2013	
		CY 1119577 T1 07-03-2018	
		DK 2723367 T3 17-07-2017	
		DO P2013000310 A 15-07-2014	
		EA 201490070 A1 30-05-2014	
		EC SP13013097 A 31-01-2014	
		EP 2723367 A2 30-04-2014	
		ES 2636445 T3 05-10-2017	
		GT 201300319 A 26-11-2014	
		HR P20170890 T1 08-09-2017	
		HU E035776 T2 28-05-2018	
		JP 6179864 B2 16-08-2017	
		JP 2014525901 A 02-10-2014	
		KR 20140043792 A 10-04-2014	
		LT 2723367 T 25-08-2017	
		ME 02816 B 20-01-2018	

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Information on patent family members

International application No

PCT/US2019/037146

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		MX 347703 B	09-05-2017
		NZ 619447 A	29-04-2016
		PE 20140724 A1	10-07-2014
		PL 2723367 T3	31-10-2017
		PT 2723367 T	11-08-2017
		SI 2723367 T1	31-08-2017
		TW 201300408 A	01-01-2013
		US 2012329708 A1	27-12-2012
		US 2014221283 A1	07-08-2014
		US 2015376256 A1	31-12-2015
		US 2017349642 A1	07-12-2017
		US 2019127433 A1	02-05-2019
		WO 2012177443 A2	27-12-2012
		ZA 201309626 B	27-09-2017
