

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2020/078611

A. CLASSIFICATION OF SUBJECT MATTER**C07D 471/04**(2006.01)i; **C07B 57/00**(2006.01)i

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; C07B

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2008104306 A2 (BAYER HEALTHCARE AG [DE]; BAERFACKER LARS [DE] ET AL.) 04 September 2008 (2008-09-04) cited in the application example 5	1-15
A	WO 2016016287 A1 (BAYER PHARMA AG [DE]) 04 February 2016 (2016-02-04) cited in the application example 8	1-15
X	SOBOLEV A ET AL. "CANDIDA RUGOSA LIPASE-CATALYZED KINETIC RESOLUTION OF 3-(ISOBUTYRYLOXY)METHYL 4-Ä2-(DIFLUOROMETHOXY)PHENYL-2-METHYL-5,5-DIOXO-1,4-DIHYDROBENZOTHIENO- Ä3,2-BÜPYRIDINE-3-CARBOXYLATE" <i>CHEMISTRY OF HETEROCYCLIC COMPOUNDS</i> , Vol. 40, No. 7, 01 January 2004 (2004-01-01), pages 931-937 DOI: 10.1023/B:COHC.0000044578.17992.95 ISSN: 0009-3122, XP009074922 the whole document	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

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"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

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"&" document member of the same patent family

Date of the actual completion of the international search

09 November 2020

Date of mailing of the international search report

23 November 2020

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SUSANA Y. TORRES ET AL. "Chemoenzymatic approach to optically active 1,4-dihydropyridine derivatives" <i>TETRAHEDRON</i> , AMSTERDAM, NL, Vol. 71, No. 23, 01 June 2015 (2015-06-01), pages 3976-3984 DOI: 10.1016/j.tet.2015.04.047 ISSN: 0040-4020, XP055748163 the whole document	15
X	US 5234821 A (ACHIWA KAZUO [JP]) 10 August 1993 (1993-08-10) examples 3, 7, 9, 11, 12, 15, 16, 17, 19, 21, 23, claims 1-5	15

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)		Publication date (day/month/year)	
WO	2008104306	A2	04 September 2008	AR	065463	A1	10 June 2009
				AU	2008221071	A1	04 September 2008
				BR	PI0808098	A2	17 June 2014
				CA	2679232	A1	04 September 2008
				CL	2008000502	A1	13 June 2008
				CN	101641352	A	03 February 2010
				CO	6220951	A2	19 November 2010
				CR	10976	A	13 January 2010
				CU	20090148	A7	26 April 2011
				CY	1116455	T1	15 March 2017
				DE	102007009494	A1	28 August 2008
				DK	2132206	T3	06 July 2015
				DO	P2009000205	A	28 February 2010
				EC	SP099581	A	29 September 2009
				EP	2132206	A2	16 December 2009
				ES	2540803	T3	13 July 2015
				GT	200900230	A	29 November 2011
				HK	1140194	A1	08 October 2010
				HN	2009001597	A	16 January 2012
				HR	P20150702	T1	14 August 2015
				HU	E026441	T2	28 June 2016
				IL	200060	A	31 July 2016
				JO	3018	B1	05 September 2016
				JP	5367586	B2	11 December 2013
				JP	5752754	B2	22 July 2015
				JP	2010519232	A	03 June 2010
				JP	2014012678	A	23 January 2014
				KR	20090129992	A	17 December 2009
				MA	31245	B1	01 March 2010
				MY	150748	A	28 February 2014
				NZ	579230	A	27 April 2012
				PA	8770101	A1	15 May 2009
				PE	20090724	A1	17 July 2009
				PL	2132206	T3	31 August 2015
				PT	2132206	E	04 August 2015
				RU	2009135659	A	10 April 2011
				SI	2132206	T1	31 August 2015
				TN	2009000318	A1	31 December 2010
				TW	200843755	A	16 November 2008
				TW	201340968	A	16 October 2013
				UA	102065	C2	10 June 2013
				US	2010136142	A1	03 June 2010
				US	2014100243	A1	10 April 2014
				UY	30931	A1	30 September 2008
				WO	2008104306	A2	04 September 2008
				ZA	200905730	B	27 October 2010
WO	2016016287	A1	04 February 2016	AR	101403	A1	14 December 2016
				AU	2015295376	A1	16 February 2017
				BR	112017001678	A2	17 July 2018
				CA	2956529	A1	04 February 2016

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International application No.

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Patent document cited in search report			Publication date (day/month/year)		Patent family member(s)		Publication date (day/month/year)	
					CL	2017000263	A1	29 September 2017
					CN	106795155	A	31 May 2017
					EP	3174875	A1	07 June 2017
					EP	3660015	A1	03 June 2020
					IL	250239	A	26 September 2019
					JP	2017522357	A	10 August 2017
					KR	20170040278	A	12 April 2017
					MX	369467	B	08 November 2019
					PE	20170141	A1	02 April 2017
					RU	2017106602	A	05 September 2018
					SG	11201700785U	A	27 February 2017
					TW	201619155	A	01 June 2016
					US	2017217957	A1	03 August 2017
					US	2019127369	A1	02 May 2019
					UY	36251	A	29 January 2016
					WO	2016016287	A1	04 February 2016
					US	5234821	A	10 August 1993
					US	5336774	A	09 August 1994