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(54) Title: COMPOUNDS FOR THE TREATMENT OF BOVINE OR SWINE RESPIRATORY DISEASE

(57) Abstract: The present invention provides compounds for use in the treatment of respiratory diseases of animals, especially Bovine or Swine Respiratory disease (BRD and SRD).



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K31/16 A61P11/00 A61P31/00
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)
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, 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.
X	NING GAO ET AL: "Overexpression of Pseudomonas aeruginosa LpxC with its inhibitors in an acrB-deficient Escherichia coli strain", PROTEIN EXPRESSION AND PURIFICATION., vol. 104, 18 September 2014 (2014-09-18), pages 57-64, XP055337356, SAN DIEGO, CA. ISSN: 1046-5928, DOI: 10.1016/j.pep.2014.09.006 figure 2 table 1	1-29
X	WO 2013/170030 A1 (ACHAOGEN INC [US]) 14 November 2013 (2013-11-14) claims 1-20 ----- -/--	1-29

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 18 December 2018	Date of mailing of the international search report 04/01/2019
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 Albayrak, Timur

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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	<p>CHUL-JIN LEE ET AL: "Structural Basis of the Promiscuous Inhibitor Susceptibility of Escherichia coli LpxC", ACS CHEMICAL BIOLOGY, vol. 9, no. 1, 17 January 2014 (2014-01-17), pages 237-246, XP055341583, US ISSN: 1554-8929, DOI: 10.1021/cb400067g page 242 - page 243</p> <p style="text-align: center;">-----</p>	1-29
X	<p>BARB A W ET AL: "Inhibition of lipid A biosynthesis as the primary mechanism of CHIR-090 antibiotic activity in Escherichia coli", BIOCHEMISTRY, AMERICAN CHEMICAL SOCIETY, US, vol. 46, no. 12, 27 March 2007 (2007-03-27), pages 3793-3802, XP002610964, ISSN: 0006-2960, DOI: 10.1021/BI6025165 [retrieved on 2007-03-03] the whole document</p> <p style="text-align: center;">-----</p>	1-29
X	<p>TITECAT MARIE ET AL: "High susceptibility of MDR and XDR Gram-negative pathogens to biphenyl-diacetylene-based difluoromethyl-allo-threonyl-hydroxamate LpxC inhibitors", JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY, vol. 71, no. 10, October 2016 (2016-10), pages 2874-2882, XP002773656, ISSN: 0305-7453(print) page 2876</p> <p style="text-align: center;">-----</p>	1-22,28, 29
X	<p>KURASAKI HARUAKI ET AL: "LpxC Inhibitors: Design, Synthesis, and Biological Evaluation of Oxazolidinones as Gram-negative Antibacterial Agents", ACS MEDICINAL CHEMISTRY LETTERS, vol. 7, no. 6, June 2016 (2016-06), pages 623-628, XP002773657, ISSN: 1948-5875 table 1</p> <p style="text-align: center;">-----</p>	1-29
X	<p>LIANG XIAOFEI ET AL: "Synthesis, Structure, and Antibiotic Activity of Aryl-Substituted LpxC Inhibitors", JOURNAL OF MEDICINAL CHEMISTRY, vol. 56, no. 17, September 2013 (2013-09), pages 6954-6966, XP002773658, the whole document</p> <p style="text-align: center;">-----</p>	1-29

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2013170030	A1	14-11-2013	
		EP 2847162 A1	18-03-2015
		US 2015175530 A1	25-06-2015
		WO 2013170030 A1	14-11-2013
