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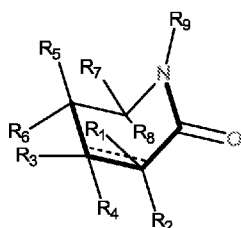
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see Notice of 14 June 2018 (14.06.2018)

(54) Title: GLYCOLACTAM COMPOUNDS, PROCESS FOR PREPARATION AND USES THEREOF



(57) Abstract: The present invention discloses compounds of Formula I, Wherein,  $R_1 = R_2 = R_3 = R_4 = R_5 = R_6 = R_7 = R_8$  and is selected from H, OBn, OH,  $CH_2OBn$ ,  $CH_2OH$ ,  $CH_3$ ;  $R_9$  is selected from alkyl, substituted alkyl, hydroxyl alkyl, alkenyl, benzyl; process for preparation of N-alkylated glycolactam compounds of Formula I and their use for the synthesis of piperidine alkaloids and their analogues.



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## INTERNATIONAL SEARCH REPORT

International application No PCT/IN2017/050163
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A. CLASSIFICATION OF SUBJECT MATTER  
INV. C07D211/76  
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

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

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>COOK GREGORY R ET AL: "Construction of hydroxylated alkaloids (racemic)-mannonolactam, (racemic)-deoxymannojirimycin, and (racemic)-prosopinine through aza-annulation", THE JOURNAL OF ORGANIC CHEMISTRY, AMERICAN CHEMICAL SOCIETY ETC., vol. 59, no. 13, 1 January 1994 (1994-01-01), pages 3575-3584, XP002516432, ISSN: 0022-3263, DOI: 10.1021/J000092A015 scheme 9, compound 52 and step b</p> <p style="text-align: center;">----- -/--</p>	1-7

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

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"&" document member of the same patent family

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## INTERNATIONAL SEARCH REPORT

International application No

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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>CARAMELLA P ET AL: "Cycloaddition of Nitrile Oxides to Cyclic and Acyclic alpha,beta-Unsaturated Amides. Frontier Orbital Interactions and an Unexpected Steric Drift Determine Regiochemistry", TETRAHEDRON, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 55, no. 22, 28 May 1999 (1999-05-28), pages 7027-7044, XP004165609, ISSN: 0040-4020, DOI: 10.1016/S0040-4020(99)00331-2 scheme 2, compound 7y</p>	1-7
X	<p>-----</p> <p>LI C-D ET AL: "INDUCTION OF DIFFERENTIATION OF LEUKEMIA CELLS IN-VITRO BY N SUBSTITUTED AMIDES LACTAMS AND 2 PYRIDONES", JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY, vol. 24, no. 9, 1 January 1981 (1981-01-01), pages 1092-1094, XP002489468, ISSN: 0022-2623, DOI: 10.1021/JM00141A016 table II, compounds 22 and 23</p>	1-7
A	<p>-----</p> <p>ALTENBACH H-J ET AL: "Stereocontrolled Synthesis of 1,5-Dideoxy-1,5-imino-allitol (1-Deoxy-allonojirimycin) from Serine", TETRAHEDRON ASYMMETRY, PERGAMON PRESS LTD, OXFORD, GB, vol. 6, no. 5, 1 May 1995 (1995-05-01), pages 1077-1080, XP004048205, ISSN: 0957-4166, DOI: 10.1016/0957-4166(95)00129-D scheme 3, step 2</p>	1-9
A	<p>-----</p> <p>FU R ET AL: "Asymmetric syntheses of 6-deoxyfagomin, d-deoxyrhamnojirimycin, and d-rhamnono-1,5-lactam", TETRAHEDRON, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 65, no. 47, 21 November 2009 (2009-11-21), pages 9765-9771, XP026696891, ISSN: 0040-4020, DOI: 10.1016/J.TET.2009.09.083 [retrieved on 2009-09-22] scheme 5, first step</p> <p>-----</p> <p style="text-align: center;">-/--</p>	1-9

## INTERNATIONAL SEARCH REPORT

International application No

PCT/IN2017/050163

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DIEZ J. A. ET AL.: "Stereoselective synthesis and biological evaluation of D-fagomine, D-3-epi-fagomine and D-3,4-epi-fagomine analogs from D-glyceraldehyde acetonide as a common building block", ORGANIC AND BIOMOLECULAR CHEMISTRY, vol. 10, 1 January 2012 (2012-01-01), pages 9278-9286, XP002773179, scheme 6, first step -----	1-9
A	SHING T K M ET AL: "Ruthenium catalysed cis-dihydroxylation of alkenes: Scope and limitations", CHEMISTRY - A EUROPEAN JOURNAL,, vol. 2, no. 1, 1 January 1996 (1996-01-01) , pages 50-57, XP002647127, ISSN: 0947-6539 the whole document -----	1-9
A	FU Z. ET AL.: "Access to oxoquinoline heterocycles by N-heterocyclic carbene catalysed ester activation for selective reaction with an enone", ANGEWANDTE CHEM. INT. ED., vol. 53, 18 May 2014 (2014-05-18), pages 6506-6510, XP002773180, scheme 2, preparation of compound 7 -----	1-9