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Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

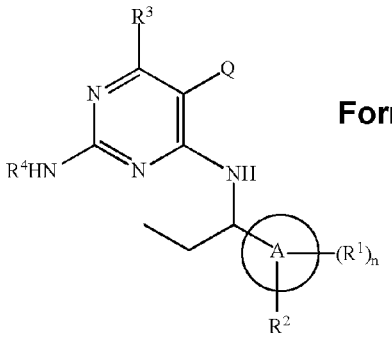
— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*

(88) Date of publication of the international search report:
18 December 2014

(54) Title: SUBSTITUTED 2-AMINO PYRIMIDINE DERIVATIVES AS KINASE INHIBITORS



Formula (1)

(57) Abstract: The present invention provides novel substituted 2-amino pyrimidine derivatives kinase enzyme inhibitor compounds of formula (1), which may be therapeutically useful kinase inhibitor, more particularly PI3K inhibitors. Formula (1) in which A, R^1, R^2 R^3. R^4, Q and 'n' have the same meanings given in the specification, and pharmaceutically acceptable salts and stereoisomers thereof that are useful in the treatment and prevention in diseases or disorder, in particular their use in diseases or disorder where there is an advantage in inhibiting kinase enzyme, more particularly PI3K enzyme. The present invention also provides methods for synthesizing and administering the kinase inhibitor compounds. The present invention also provides pharmaceutical formulations comprising at least one of the kinase inhibitor compounds together with a pharmaceutically acceptable carrier, diluent or excipient therefor.

WO 2014/106800 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2013/061358

A. CLASSIFICATION OF SUBJECT MATTER
A61K31/4725,A61K31/519,C07D01/12,C07D471/04 Version=2014.01

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, C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Orbit,Ipo internal

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO2009081105 A2 ,ALLEN DANIEL REES[GB]; BUCKLEY GEORGE MARTIN[GB] 02 JULY 2009 (02-07-2009) claims,Abstract	1-14,16-20,
A	US 20110207713 A1 CASTANEDO GEORGETTE, ; CHAN BRYAN,Inc 25 August 2011 [25-08-2011] claims,Abstract	1-14,16-20

☐ 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	Date of mailing of the international search report
23-06-2014	23-06-2014
Name and mailing address of the ISA/ Indian Patent Office Plot No.32, Sector 14,Dwarka,New Delhi-110075 Facsimile No.	Authorized officer G Nagendra Telephone No. +91-1125300200

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2013/061358

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 15, 21-22
because they relate to subject matter not required to be searched by this Authority, namely:
The subject matter of claim 1 relates to a method for treatment of the human or animal body by sugery or therapy/scientific , which does not require an international search by the International Searching Authority in accordance with PCT Article 17(2)(a)(i) and [Rule 39.1(iv)].

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
Information on patent family members

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Citation	Pub.Date	Family	Pub.Date
WO 2009/081105 A2	02-07-2009	US 2011105508 A1	05-05-2011
		EP 2231641 A2	29-09-2010
		AU 2010300719 A1	03-05-2012
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