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7 August 2014

(54) Title: HETEROCYCLIC COMPOUNDS AND THEIR USE AS PI3K INHIBITORS

(57) Abstract: Substituted bicyclic heteroaryls and compositions containing them, for the treatment of general inflammation, arthritis, rheumatic diseases, osteoarthritis, inflammatory bowel disorders, inflammatory eye disorders, inflammatory or unstable bladder disorders, psoriasis, skin complaints with inflammatory components, chronic inflammatory conditions, including but not restricted to autoimmune diseases such as systemic lupus erythematosus (SLE), myasthenia gravis, rheumatoid arthritis, acute disseminated encephalomyelitis, idiopathic thrombocytopenic purpura, multiples sclerosis, Sjogren's syndrome and autoimmune hemolytic anemia, allergic conditions including all forms of hypersensitivity, The present invention also enables methods for treating cancers that are mediated, dependent on or associated with p110 activity, including but not restricted to leukemias, such as Acute Myeloid leukaemia (AML) Myelo-dysplastic syndrome (MDS) myelo-proliferative diseases (MPD) Chronic Myeloid Leukemia (CML) T-cell Acute Lymphoblastic leukaemia (T-ALL) B-cell Acute Lymphoblastic leukaemia (B-ALL) Non Hodgkins Lymphoma (NHL) B-cell lymphoma and solid tumors, such as breast cancer.



INTERNATIONAL SEARCH REPORT

International application No

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A. CLASSIFICATION OF SUBJECT MATTER

INV. C07D401/14 C07D403/12 C07D471/04 C07D409/12 C07D473/34
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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 practical, search terms used)

EPO-Internal, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 252 507 A1 (MARUISHI PHARMA [JP]) 13 January 1988 (1988-01-13) claim 1; compounds XX-XIV,XLVIII-XLVIII,LI-LIV,LVI-LXXIII,LXXV -----	1
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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"E" earlier document 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

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"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.

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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.
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INTERNATIONAL SEARCH REPORT

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