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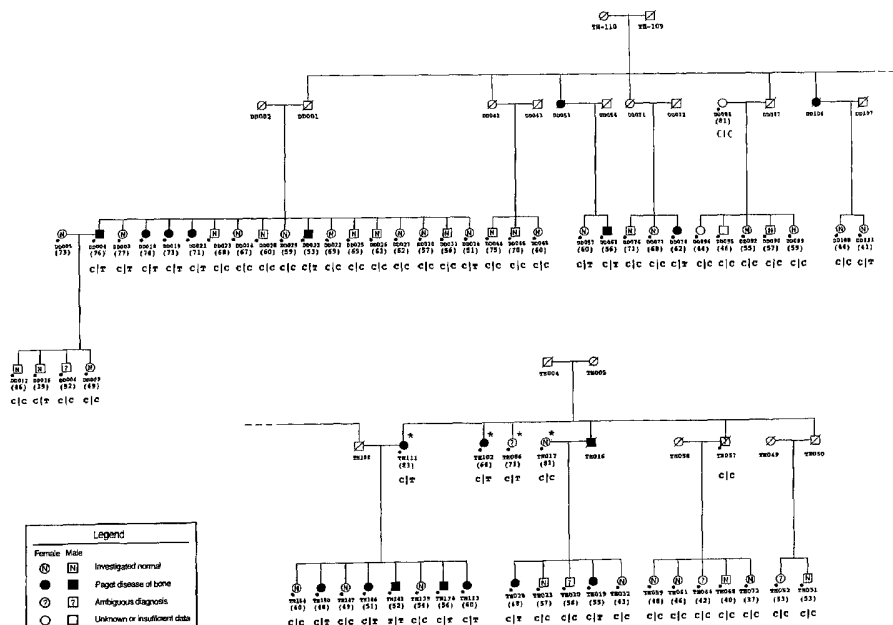
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PAGET DISEASE OF BONE



(57) Abstract: Mutations in the atypical protein kinase C-interacting protein p62/ sequestosome 1 (p62/SQSTM1) causing Paget disease of bone are described. Methods of detecting and treating Paget disease of bone are also disclosed.



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INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 02/01186

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/11 C12N15/63 C07K14/47 C07K16/18 A01K67/027
C12Q1/68

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)

IPC 7 C07K

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, BIOSIS, MEDLINE, WPI Data, PAJ, SEQUENCE SEARCH

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96 38556 A (TOCQUE BRUNO ; RHONE POULENC RORER SA (FR); SCHWEIGHOFFER FABIEN (F) 5 December 1996 (1996-12-05) the whole document ---	1,7, 9-11,13, 16-21
X	WO 97 22255 A (DANA FARBER CANCER INST INC ; STROMINGER JACK L (US); VADLAMUDI RAT) 26 June 1997 (1997-06-26) the whole document ---	1,7, 9-11,13, 16-21
X	WO 92 20794 A (CETUS ONCOLOGY CORP) 26 November 1992 (1992-11-26) the whole document ---	1,7, 9-11,13, 16-19
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 Further documents are listed in the continuation of box C. Patent family members are listed in 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 document 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

4 August 2003

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22/08/2003

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 02/01186

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>JOUNG INSIL ET AL: "Molecular cloning of a phosphotyrosine-independent ligand of p56-lck SH2 domain." PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 93, no. 12, 1996, pages 5991-5995, XP002250052 1996 ISSN: 0027-8424 the whole document</p>	1-21,25
P,X	<p>LAURIN NANCY ET AL: "Recurrent mutation of the gene encoding sequestosome 1 (SQSTM1/p62) in Paget disease of bone." AMERICAN JOURNAL OF HUMAN GENETICS, vol. 70, no. 6, June 2002 (2002-06), pages 1582-1588, XP002250053 June, 2002 ISSN: 0002-9297 the whole document</p>	1-21,25
T	<p>HOCKING LYNNE J ET AL: "Domain-specific mutations in sequestosome 1 (SQSTM1) cause familial and sporadic Paget's disease." HUMAN MOLECULAR GENETICS, vol. 11, no. 22, 2002, pages 2735-2739, XP002250054 15 October, 2002 ISSN: 0964-6906 the whole document</p>	1-21,25

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA 02/01186

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: 22-24
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:
see FURTHER INFORMATION sheet PCT/ISA/210

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 II Observations where unity of invention is lacking (Continuation of item 2 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 an additional fee, this Authority did not invite payment of any additional fee.

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.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 22-24

Present claims 22-24 relate to an extremely large number of possible compounds. No support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found for said compounds in the application. Consequently the claims lack support, and the application lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, no search has been carried out for those parts of the claims.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 02/01186

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