

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number
WO 2005/012912 A3

(51) International Patent Classification⁷: **G01N 33/574**

(21) International Application Number:
PCT/US2004/023055

(22) International Filing Date: 16 July 2004 (16.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/490,112 25 July 2003 (25.07.2003) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
30 June 2005

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: LAMP-1 MEMBRANE EXPRESSION BY CANCER CELLS

(57) Abstract: The invention provides methods of detecting a cancer cell and methods of reducing the proliferation of a cancer cell. For reducing the proliferation, the method consists of contacting the neoplastic cell with a cytotoxic or cytostatic binding agent specifically reactive with LAMP 1, a lysosome-associated membrane protein expressed on the cancer cell membrane. A method of reducing tumor growth through the targeting of a cytotoxic agent using an antibody specific for LAMP-1 is also provided, as is a method of detecting cancer cells expressing LAMP-1, to aid in diagnosis.



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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/023055

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01N33/574

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 G01N

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, 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	DO K-Y ET AL: "LAMP-1 IN CHO CELLS IS A PRIMARY CARRIER OF POLY-N-ACETYLLACTOSAMINE CHAINS AND IS BOUND PREFERENTIALLY BY A MAMMALIAN S-TYPE LECTIN" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 173, no. 3, 1990, pages 1123-1128, XP009045077 ISSN: 0006-291X abstract page 1127, paragraph 4 ----- -/--	1-9, 13, 28

☒ 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

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- *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.
- *G* document member of the same patent family

Date of the actual completion of the international search

8 April 2005

Date of mailing of the international search report

26/04/2005

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/023055

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JONES KIMBERLY L ET AL: "Chediak-Higashi lymphoblastoid cell lines: Granule characteristics and expression of lysosome-associated membrane proteins" CLINICAL IMMUNOLOGY AND IMMUNOPATHOLOGY, vol. 65, no. 3, 1992, pages 219-226, XP001205557 ISSN: 0090-1229 abstract page 220, column 1, paragraph 4 -----	1-9,13
X	WOYNAROWSKA B ET AL: "Inhibition of lectin-mediated ovarian tumor cell adhesion by sugar analogs" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 269, no. 36, 9 September 1994 (1994-09-09), pages 22797-22803, XP002971638 ISSN: 0021-9258 abstract page 22798, column 2, paragraph 8 page 22803, column 1, last paragraph; figure 1 -----	14-27
P,X	WO 2004/048537 A (EXELIXIS, INC; COSTA, MICHAEL, R; MAXWELL, MARK, E; LACKNER, MARK, R;) 10 June 2004 (2004-06-10) abstract page 2, paragraph 1 page 33, last paragraph; claims 23,24 -----	1-9,13, 20-28
P,A	BONEHILL AUDE ET AL: "Messenger RNA-electroporated dendritic cells presenting MAGE-A3 simultaneously in HLA class I and class II molecules" JOURNAL OF IMMUNOLOGY, vol. 172, no. 11, 1 June 2004 (2004-06-01), pages 6649-6657, XP001205558 ISSN: 0022-1767 abstract page 6654, column 1, paragraphs 3,FF; figure 1 -----	1-9, 13-28

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/023055

Box 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.: 10-12
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
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 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 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 II.1

Claims Nos.: 10-12

The specific sequences of claims 10-12 have, according to PCT Rule 13ter.1.c, not been searched since the Sequence Listing as present in the description does not comply with WIPO Standard ST25 prescribed in the administrative instructions under Rule 5.2. The Sequence Listing has been furnished neither in paper form nor in machine readable form as provided for in the same instructions and the applicant has not remedied the disclosed deficiencies within the time limit fixed in the invitation pursuant to PCT Rule 13ter.1.a.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/023055

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2004048537 A	10-06-2004	WO 2004048537 A2	10-06-2004