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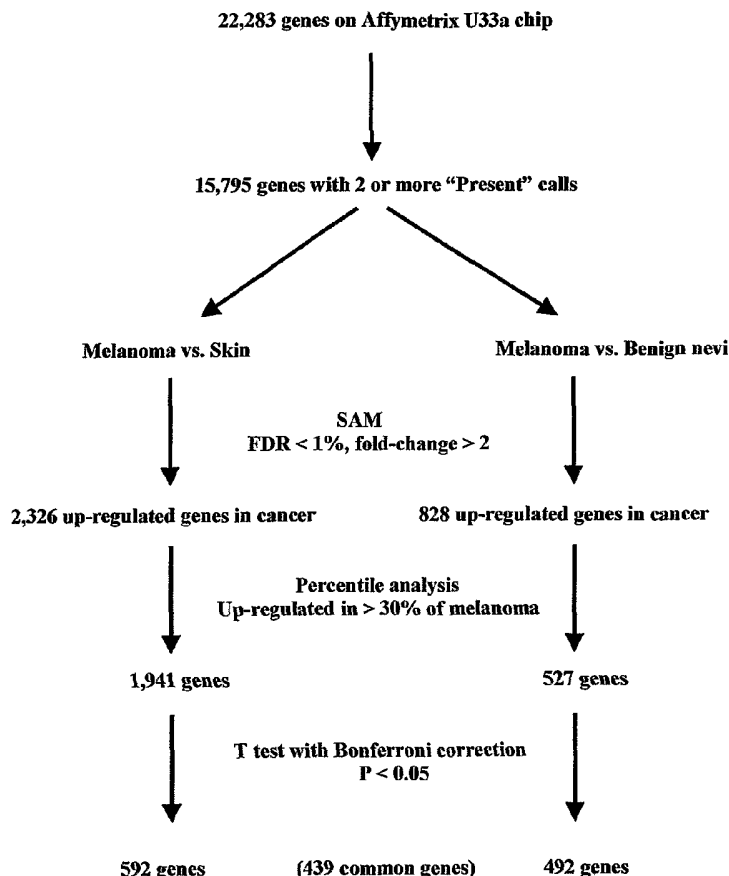
(74) Agents: JOHNSON, Philip et al.; 1 Johnson and Johnson Plaza, New Brunswick, NJ 08933 (US).

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(54) Title: METHODS AND REAGENTS FOR THE DETECTION OF MELANOMA



(57) Abstract: An assay for identifying a malignant melanocyte is conducted by determining whether differential expression of particular genes is indicative of melanoma exceed a cut-off value. The assay can be performed intra-operatively on lymph node tissue.

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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, IS, IT, LT, LU, MC, NL, PL, PT, RO,
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GQ, GW, ML, MR, NE, SN, TD, TG).

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Declaration under Rule 4.17:

— *as to the identity of the inventor (Rule 4.17(i))*

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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2005/022846

A. CLASSIFICATION OF SUBJECT MATTER
INV. 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)
C12Q

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, EMBASE, 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.
A	FOGEL MINA ET AL: "L1 adhesion molecule (CD 171) in development and progression of human malignant melanoma." CANCER LETTERS, vol. 189, no. 2, 28 January 2003 (2003-01-28), pages 237-247, XP002377433 ISSN: 0304-3835 abstract	1-221
A	XU XIAOWEI ET AL: "Expression of neurotrophin receptor Trk-C in nevi and melanomas." JOURNAL OF CUTANEOUS PATHOLOGY, vol. 30, no. 5, May 2003 (2003-05), pages 318-322, XP002377434 ISSN: 0303-6987 abstract	1-221
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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 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

9 May 2006

Date of mailing of the international search report

19/05/2006

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2005/022846

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	VIHINEN PIA P ET AL: "New prognostic factors and developing therapy of cutaneous melanoma." ANNALS OF MEDICINE, vol. 35, no. 2, 2003, pages 66-78, XP009065071 ISSN: 0785-3890 abstract	1-221
A	THIES ANKA ET AL: "Overexpression of the cell adhesion molecule L1 is associated with metastasis in cutaneous malignant melanoma." EUROPEAN JOURNAL OF CANCER (OXFORD, ENGLAND : 1990) SEP 2002, vol. 38, no. 13, September 2002 (2002-09), pages 1708-1716, XP002377435 ISSN: 0959-8049 abstract	1-221
A	BITTNER M ET AL: "Molecular classification of cutaneous malignant melanoma by gene expression profiling" NATURE (LONDON), vol. 406, no. 6795, 3 August 2000 (2000-08-03), pages 536-540, XP000990000 ISSN: 0028-0836 abstract	1-221
A	WO 02/27028 A (ATAIRGIN TECHNOLOGIES, INC; SKINNER, MICHAEL, K; PATTON, JODI, L; CHAU) 4 April 2002 (2002-04-04) example 1	
A	WO 01/27295 A (DEUTSCHES KREBSFORSCHUNGSZENTRUM STIFTUNG DES OEFFENTLICHEN RECHTS; SC) 19 April 2001 (2001-04-19) figure 1	
A	WO 2004/019886 A (CYTOCURE LLC; DURDA, PAUL, J; KURNICK, JAMES, T; DUNN, IAN, S) 11 March 2004 (2004-03-11) example 1	
A	WO 01/94629 A (AVALON PHARMACEUTICALS) 13 December 2001 (2001-12-13) abstract	
P,X	WO 2005/044990 A (BAYER HEALTHCARE LLC; MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEAR) 19 May 2005 (2005-05-19) the whole document	1-221

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2005/022846

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	<p>TALANTOV DMITRI ET AL: "Novel genes associated with malignant melanoma but not benign melanocytic lesions." CLINICAL CANCER RESEARCH : AN OFFICIAL JOURNAL OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH. 15 OCT 2005, vol. 11, no. 20, 15 October 2005 (2005-10-15), pages 7234-7242, XP002377436 ISSN: 1078-0432 the whole document</p>	1-221

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2005/022846

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.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-216 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2005/022846

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