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SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, 18 July 2013
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— *with international search report (Art. 21(3))*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/065877**A. CLASSIFICATION OF SUBJECT MATTER***C12Q 1/68(2006.01)i, C12N 15/11(2006.01)i*

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 1/68

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

Korean utility models and applications for utility models
Japanese utility models and applications for utility models

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

NCBI PubMed, eKOMPASS (KIPO internal), 'EML4-ALK variant, NSCLC, amplification, PCR, primer, probe, etc.'

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WONG, D. W. et al., 'A novel KIF5B-ALK variant in nonsmall cell lung cancer' Cancer, 2011 Jun. 15, Vol. 117, No. 12, pp. 2709-2718 (Epub. 2011 Jan. 10) - see the whole document, especially Abstract; Fig. 2; Pages 2710-2711.	1-6,9-11
A	SANDERS, H. R. et al., 'Exon scanning by reverse transcriptase-polymerase chain reaction for detection of known and novel EML4-ALK fusion variants in non-small cell lung cancer' Cancer Genet., 2011 Jan., Vol. 204, No. 1, pp. 45-52 - see the whole document, especially Abstract.	1-6,9-11
A	LIN, E. et al., 'Exon array profiling detects EML4-ALK fusion in breast, colorectal, and non-small cell lung cancers' Mol. Cancer Res., 2009 Sep., Vol. 7, No. 9, pp. 1466-1476 - see the whole document, especially Abstract.	1-6,9-11

 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 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

29 April 2013 (29.04.2013)

Date of mailing of the international search report

29 April 2013 (29.04.2013)

Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/065877

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WONG, D. W. et al., 'The EML4-ALK fusion gene is involved in various histologic types of lung cancers from nonsmokers with wild-type EGFR and KRAS' Cancer, 2009 Apr. 15, Vol. 115, No. 8, pp. 1723-1733 - see the whole document, especially Abstract.	1-6,9-11

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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.: 7,8
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 7 and 8 are a method for determining a chemotherapeutic regimen for treating a tumor in a patient comprising (a) obtaining a tissue sample of the tumor; and (e) determining a chemotherapeutic regimen. The method is thus considered a therapeutic method or a diagnosing method falling into the category of methods for treatment of the human body by surgery or therapy as well as diagnostic methods [PCT Article 17(2)(a)(i), 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 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 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

International application No.

PCT/US2012/065877

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
None			