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(54) Title: CANCER DIAGNOSTICS AND PROGNOSTICS

(57) Abstract: The invention is based on the discovery that occurrence of centrosomal abnormalities in cells correlates with the occurrence of cancer, and that the greater the degree of the centrosomal abnormalities, the greater the probability of cancer occurring and the severity of the cancer. The invention includes methods of detecting centrosome abnormalities in tissue samples. It provides new methods for predicting and diagnosing cancer.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/25195

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12Q 1/68, 3/00; G01N 33/48, 33/53; C12N 5/06
 US CL : 435/4, 6, 7.1, 325; 436/64

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)
 U.S. : 435/4, 6, 7.1, 325; 436/64

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 practicable, search terms used)
 Medline, Biosis, Scisearch, Cancerlit, lifesci, biotechds, Caplus, USpatfull, Europatfull, PCTfull on STN.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	PUROHIT et al. Methods for the Study of Pericentrim in Centrosome Assembly and Function. Methods in Cell Biology. 2001, Vol. 67, Chapter 4, pages 53-69, especially page 59, line 29 to page 60, line 4.	20 ----- 3
X --- Y	PIHAN et al. Centrosome Defects and Genetic Instability in Malignant Tumors. Cancer Research. 01 September 1998, Vol. 58, No. 17, pages. 3974-3985, especially page 3975, second column second full paragraph, page 3977, legend for Figure 2 and page 3984, first column, lines 5-30.	1, 2, 4, 9, 11-13, 15-19 ----- 3, 5-8
X --- Y	PIHAN et al. Centrosome Defects Can Account for Cellular and Genetic Changes That Characterize Prostate Cancer Progression. Cancer Research. 01 March 2001, Vol. 61, No. 5, pages 2212-2219, especially page 2212, second column, last full paragraph, page 2213, legend for Figure 1, page 2214, lines 13-30 and page 2216, second column, lines 12-16.	1, 2, 4, 5, 11-13, 15-20 ----- 3, 6-9

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	"T"
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"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer <i>Anthony Caputa</i> Telephone No. 703-308-0196

INTERNATIONAL SEARCH REPORT

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	KUO et al. Centrosome Abnormalities in Human Carcinomas of the Gallbladder and Intrahepatic and Extrahepatic Bile Ducts. Hepatology. January 2000, Vol. 31, No. 1, pages 59-64, especially page 59, line 26-31 of abstract, page 60, legend for Figure 1, page 61, second column, lines 1-9, page 63, second column, lines 17-19 under the heading of "Discussion", page 64, first column, lines 2-6 and lines 33-39.	1, 2, 4-9, 11-13, 15-19 ----- 3