



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C12Q 1/68, C12N 9/64, C07K 16/40	A3	(11) International Publication Number: WO 98/21365 (43) International Publication Date: 22 May 1998 (22.05.98)
(21) International Application Number: PCT/US97/20948 (22) International Filing Date: 14 November 1997 (14.11.97) (30) Priority Data: 08/759,354 14 November 1996 (14.11.96) US (71) Applicants: MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH [US/US]; 200 1st Street S.W., Rochester, MN 55905 (US). HYBRITECH INCORPORATED [US/US]; 8958 Terman Court, San Diego, CA 92121 (US). (72) Inventors: TINDALL, Donald, J.; 2304 Telemark Lane, Rochester, MN 55901 (US). YOUNG, Charles, Y., F.; 5100 St. Mary Drive N.W., Rochester, MN 55901 (US). MC-CORMICK, Daniel, J.; 1353 9th Avenue S.E., Rochester, MN 55904 (US). KLEE, George, G.; 5949 - 11th Avenue S.W., Rochester, MN 55902 (US). SAEDI, Mohammad, Saeed; 7898 Hendricks Drive, San Diego, CA 92126 (US). KUMAR, Abhay; 12638 Salmon River Road, San Diego, CA 92129 (US). RITTENHOUSE, Harry, G.; 13972 Mercado Drive, Del Mar, CA 92014 (US). WOLFERT, Robert, L.; 10495 Canyon Lake Drive, San Diego, CA 92131 (US).		(74) Agent: VIKSNINS, Ann, S.; Schwegman, Lundberg, Woessner & Kluth, P.O. Box 2938, Minneapolis, MN 55402 (US). (81) Designated States: AU, CA, CN, JP, MX, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> (88) Date of publication of the international search report: 15 October 1998 (15.10.98)
(54) Title: METHOD FOR DETECTION OF METASTATIC PROSTATE CANCER (57) Abstract Prostate cancer is detected by determining the presence of prostate specific glandular Kallikrein (hK2) polypeptide or hK2 RNA in a physiological sample.		

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EE	Estonia						

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/20948

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12Q1/68 C12N9/64 C07K16/40

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 6 C12Q C12N

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 95 30758 A (MAYO FOUNDATION ;HYBRITECH INC (US); TINDALL DONALD J (US); YOUNG) 16 November 1995	25,35
Y	see the whole document	1-24, 26-28, 36-38

X	WO 95 28498 A (UNIV COLUMBIA ;KATZ AARON E (US); BUTTYAN RALPH (US); RAFFO ANTHON) 26 October 1995	25,35
Y	see the whole document	1-24, 26-28, 36-38

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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
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- "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.
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Date of the actual completion of the international search

18 March 1998

Date of mailing of the international search report

03.07.98

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/20948

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	TAKAYAMA ET AL.: "Newer applications of serum PSA in the management of prostate cancer" SEMINARS IN ONCOLOGY, vol. 21, no. 5, October 1994, pages 542-533, XP002059296 cited in the application see the whole document ---	1-24
Y	WO 94 10343 A (UNIV JEFFERSON) 11 May 1994 see the whole document ---	1-24
Y	DEGUCHI ET AL.: "Detection of micrometastatic prostate cancer cells in lymph nodes by RT-PCR" CANCER RESEARCH, vol. 53, November 1993, pages 5350-5354, XP002059297 see the whole document ---	1-24
X	WO 96 26272 A (SLOAN KETTERING INST CANCER ;ISRAELI RON S (US); HESTON WARREN D W) 29 August 1996 see example 3 ---	25,35
X	WO 96 21042 A (UNIV BOSTON) 11 July 1996 see claim 33 ---	25,35
A	YOUNG C Y -F ET AL: "TISSUE-SPECIFIC AND HORMONAL REGULATION OF HUMAN PROSTATE-SPECIFIC GLANDULAR KALLIKREIN" BIOCHEMISTRY, vol. 31, no. 3, 1992, pages 818-824, XP002050778 cited in the application see the whole document ---	
A	SAEDI M S ET AL: "OVEREXPRESSION OF A HUMAN PROSTATE-SPECIFIC GLANDULAR KALLIKREIN, HK2, IN E. COLI AND GENERATION OF ANTIBODIES" MOLECULAR AND CELLULAR ENDOCRINOLOGY, vol. 109, 1995, pages 237-241, XP002015421 ---	
A	SCHEDLICH L J ET AL: "PRIMARY STRUCTURE OF A HUMAN GLANDULAR KALLIKREIN GENE" DNA, vol. 6, no. 5, 1987, pages 429-437, XP002044466 -----	

INTERNATIONAL SEARCH REPORT

...international application No.

PCT/US 97/ 20948

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.:
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 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:

see annex

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.:

1-28 and 35-38

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/ US 97/20948

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: 1-28 and 35-38

Methods for detecting human kallikrein 2 DNA by reverse transcriptase PCR, oligonucleotides usefull therefore and kits containing them.

2. Claims: 29-34 and 39-42

Method for determining metastatic prostate cancer by detecting human kallikrein polypeptides, peptides and antibodies usefull therefore, hybridoma cell lines and methods for producing said antibodies.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/20948

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