Title: GLEASON GRADE 4/5 PROSTATE CANCER GENES

Abstract: Sixty-four down regulated and 22 up regulated genes have been indentified in Gleason grade 4/5 cancer, using the gene profile from benign prostatic hyperplasia as control tissue. Hepsin appears to be the most promising of the up regulated genes. PSMA is also highly overexpressed at the transcript level in grade 4/5 cancer, re-emphasizing its potential importance as a target for chemotherapy. The regulated genes can be used diagnostically, prognostically, and therapeutically. They can be used to form prostate specific expression monitoring tools.
**INTERNATIONAL SEARCH REPORT**

**A. CLASSIFICATION OF SUBJECT MATTER**

**IPC** : G01N 88/88; C12Q 1/68

**US CL** : 435/25, 6

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. : 435/25, 6

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

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

WEST, STN, MEDLINE, BIOSIS, CAPLUS, EMBASE

Search terms: prostate, cancer, hepsin, maspin, normal, control

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

<table>
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<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<tbody>
<tr>
<td>X</td>
<td>WO 97/36179 A1 (DANA FARBER CANCER INSTITUTE) 02 October 1997, see entire document.</td>
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<td>X</td>
<td>US 6,268,165 B1 (O'BRIEN) 31 July 2001, see entire document.</td>
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<td>US 5,981,830 A (WU et al) 09 November 1999, see entire document.</td>
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<td>US 6,262,245 B1(XU et al) 17 July 2001, see entire document.</td>
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</table>

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

Date of the actual completion of the international search: 25 October 2002

Date of mailing of the international search report: 20 March 2003

Name and mailing address of the ISA/US Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Authorized officer

KRUH CHABABATHI

Telephone No. (703) 505-0196

Form PCT/ISA/210 (second sheet) (July 1998)*
INTERNATIONAL SEARCH REPORT

This international report has not been established in respect of certain claims under Article 17(9)(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 8.4(a).

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.
C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<td>X,P</td>
<td>US 6,413,228 B1 (HUNG et al) 02 July 2002, see entire document.</td>
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<td>X,P</td>
<td>US 6,423,543 B1 (MARCOTTE et al) 23 July 2002, see entire document.</td>
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<td>US 6,413,780 B1 (BACH et al) 02 July 2002, see entire document.</td>
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<td>US 6,335,170 B1 (ORNTOFT) 01 January 2002, see entire document.</td>
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