NON-INVASIVE DIAGNOSTIC SYSTEMS FOR LOWER URINARY TRACT DISORDERS

Abstract: An analysis, measurement, and data reduction system for carrying out a noninvasive urodynamic analysis of the human male or female urogenital tract. The apparatus comprises a urethral extender device, a vacuum system, a flow and pressure measuring and control system, a parameter variation device, and a control, acquisition and analysis system capable of the analysis of time dependent urine pressure and flow data so as to obtain clinically significant parameters, including bladder pressure and resistance and compliance parameters for the components of the urogenital tract.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B5/20

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 7 A61B A61F

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)
WPI Data, EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
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<tbody>
<tr>
<td>X</td>
<td>DE 196 19 597 A (FRENKEL WALTER) 20 November 1997 (1997-11-20) abstract; figures 2,3</td>
<td>1-13</td>
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<td>X</td>
<td>WO 00 27285 A (GRIFFITHS CLIVE JAVAN; MEDIPLUS LIMITED (GB)) 18 May 2000 (2000-05-18) abstract; figures 1,2 page 1 - page 8</td>
<td>31,33,35 16-30, 32,36-46</td>
</tr>
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</table>

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
  *L* document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
  *C* 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

*Y* 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.

*Y* document member of the same patent family

Data of the actual completion of the international search
10 July 2003

Date of mailing of the international search report
18.07.03

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentstasjon 2 NL - 2280 HV Haagwijk, Tel. (+31-70) 540-2040, Tx. 31 651 epo nl, Fax: (+31-70) 540-3016

Authorized officer
Gaillard, A

Form PCT/01/210 (second sheet) (July 1992)
**INTERNATIONAL SEARCH REPORT**

**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(3)(a) for the following reasons:

1. **X** Claims Nos.: 14-15, 47-51
   because they relate to subject matter not required to be searched by this Authority, namely:
   - Rule 39.1(iv) PCT - Diagnostic method practised on the human or animal body
   - Rule 39.1(iv) PCT and Method for treatment of the human or animal body by surgery

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 additional sheet

1. □ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. **X** 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.

Form PCT/ISA/210 (continuation of first sheet (1)) (July 1999)
This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

   Urethral extender device having vacuum chamber and extension tube for male and female.

2. Claims: 16-30
   Flow and pressure measurement apparatus.

3. Claims: 31-34
   Control, data acquisition and analysis apparatus.

4. Claims: 35-39
   Parameter variation device for measurement.

5. Claims: 40-46
   Urodynamic diagnosis device.
<table>
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<th>Patent family member(s)</th>
<th>Publication date</th>
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<tr>
<td></td>
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<td>EP 1124486 A</td>
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