

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
13 January 2005 (13.01.2005)

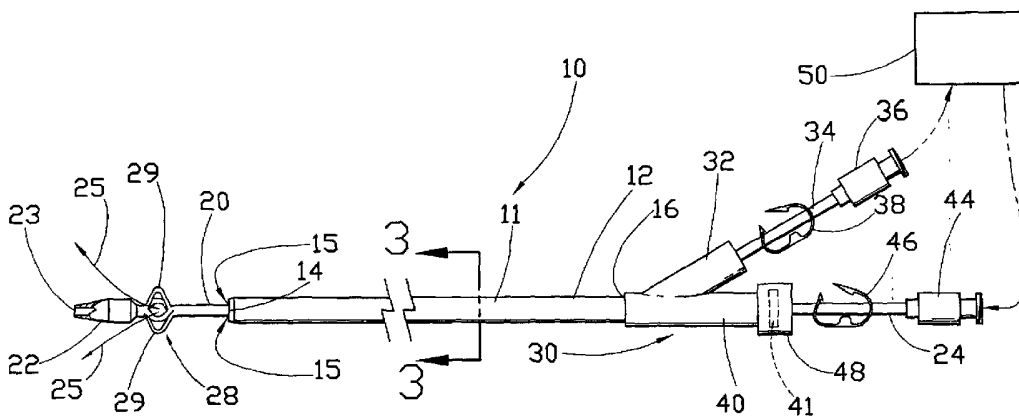
PCT

(10) International Publication Number  
WO 2005/002648 A3

- (51) International Patent Classification<sup>7</sup>: A61M 1/36, 25/00
- (21) International Application Number: PCT/US2004/020097
- (22) International Filing Date: 23 June 2004 (23.06.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/482,149 24 June 2003 (24.06.2003) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published: — with international search report

[Continued on next page]

(54) Title: CATHETER FOR EXTRACORPOREAL TREATMENT



(57) Abstract: A catheter assembly for use in extracorporeal treatment of a bodily fluid. The catheter assembly includes a catheter body having an outer tubular member and an inner tubular member. At least one of the tubular members includes an expansion member, such as a malecot, for centering the catheter assembly in a body vessel. Body fluid is withdrawn from the vessel, and passed through one of the tubular members to a treatment instrument, such as a dialyzer. Treated fluid from the treatment instrument is then passed through the other tubular member and returned to the body vessel through one or more openings in said other tubular member.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**  
10 March 2005

# INTERNATIONAL SEARCH REPORT

International	Classification No
PCT/US2004/020097	

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 A61M1/36 A61M25/00				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 7 A61M				
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) EPO-Internal, WPI Data				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	WO 02/064202 A (REX MEDICAL L P) 22 August 2002 (2002-08-22)  page 5, paragraph 2 page 19, last paragraph - page 21, paragraph 1	1-3, 8-12, 14-16, 20-24		
Y	page 22, paragraph 3 - page 23, last paragraph; figures 3,17a-c -----	4-7,13, 17-19		
Y	US 2002/177822 A1 (SHECTERLE LINDA M ET AL) 28 November 2002 (2002-11-28) abstract; figure 2 -----	4-7,13, 17-19		
X	US 6 071 263 A (KIRKMAN THOMAS R) 6 June 2000 (2000-06-06) column 8, line 51 - line 60; figure 3 ----- -/--	1		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.</td> <td style="width: 50%; border: none;"><input checked="" type="checkbox"/> Patent family members are listed in annex.</td> </tr> </table>			<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.	<input checked="" type="checkbox"/> Patent family members are listed in annex.
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.	<input checked="" type="checkbox"/> 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 doubts on priority claim(s) or which is cited to establish the publication date of another 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  <div style="text-align: center; font-size: 1.2em;">11 October 2004</div>	Date of mailing of the international search report  <div style="text-align: center; font-size: 1.2em;">28.12.2004</div>			
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  <div style="text-align: center; font-size: 1.2em;">Valfort, C</div>			

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Internatio      lication No  
PCT/US2004/020097

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/19425 A (COOK INC) 22 March 2001 (2001-03-22) page 43, paragraph 1-3; figure 6 -----	1
A	EP 0 301 854 A (LAUB GLENN W) 1 February 1989 (1989-02-01) column 3, line 14 - column 4, line 3; figures 1-3 -----	1

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2004/020097

## Box 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.: 33-50  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy  
Method claim 33 comprises the following steps : withdrawing bodily fluid from a bod vessel, infusing treated bodily fluid into said said body vessel
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 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:

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.  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.:

1-24

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Claims Nos.: 33-50

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy

Method claim 33 comprises the following steps : withdrawing bodily fluid from a bod vessel, infusing treated bodily fluid into said said body vessel (hemodialysis).

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-24

Catheter assembly for use in extracorporeal treatment of a bodily fluid with an outer and an inner tubular member as well as an expansion member.  
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2. claims: 25-32

Assembly for use in treating a bodily fluid with an outer member with an expansion member and a dilator device.  
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## INTERNATIONAL SEARCH REPORT

 International Application No  
 PCT/US2004/020097

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