#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization

International Bureau



# 

#### (43) International Publication Date 4 August 2005 (04.08.2005)

(51) International Patent Classification: A61F 2/06 (2006.01)

(21) International Application Number:

PCT/US2005/002294

(22) International Filing Date: 24 January 2005 (24.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/538,597 23 January 2004 (23.01.2004) US 10/900,982 27 July 2004 (27.07.2004) US

- (71) Applicant (for all designated States except US): THE BIOMETRIX CORPORATION [US/US]; 41 West 57th Street, New York, NY 10019 (US).
- (72) Inventors; and
- Inventors/Applicants (for US only): JORDAN, Maybelle [US/US]; 8502 Bells Ridge Terrace, Potomac, MD 20854 (US). DATTA, Arindam [US/US]; 26 Baker Circle, Hillsborough, NJ 08844 (US). FRIEDMAN, Craig,

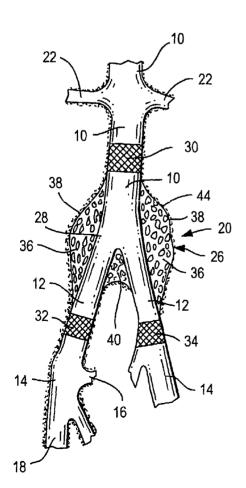
# (10) International Publication Number WO 2005/070015 A3

D. [US/US]; 19 Cross Highway, Westport, CT 06880 (US). SANDERSON, George [US/US]; 1722A Westover Road, Clark, NJ 07066 (US). KULA, John [US/US]; P.O. Box 338, Birdsboro, PA 19508 (US). SEPETKA, Ivan [US/US]; 346 Costello Court, Los Altos, CA 94024 (US).

- (74) Agents: DIPPERT, William, H. et al.; Reed Smith LLP, 29th Floor, 599 Lexington Avenue, New York, NY 10022-7650 (US).
- (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, SM, 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,

[Continued on next page]

#### (54) Title: ENDOVASCULAR TREATMENT DEVICES AND METHODS



(57) Abstract: A device for treating or preventing a vascular condition at a mammalian vascular site, comprises an implant formed from a compressible, reticulated elastomeric matrix in a shape conducive to delivery through a delivery instrument. One or more implants are delivered in a compressed state to the mammmalian vascular site where each implant recovers substantially to its uncompressed state following deployment from a delivery instrument. In a preferred embodiment the matrix comprises cross-linked polycarbonate polyurethane-urea or cross-linked polycarbonate polyurea-urethane. In another preferred embodiment the matrix comprises a cross-linked polycarbonate polyurethane. In a yet further embodiment, the matrix comprises thermoplastic polycarbonate polyurethane or thermoplastic polycarbonate polyurethane-urea.



# WO 2005/070015 A3



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, IS, IT, LT, 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).

### **Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv))

#### **Published:**

— with international search report

- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 10 May 2007

# (15) Information about Correction: Previous Correction:

see PCT Gazette No. 44/2005 of 3 November 2005

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.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/02294

A. CLAS	SIFICATION OF SUBJECT MATTER A61F 2/06( 2006.01)		
USPC: 623/1.11,1.34,1.39,1.44,1.46			
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.: 623/1.11,1.34,1.39,1.44,1.46			
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)			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where ap		Relevant to claim No.
X	US 6,165,212 A (DEREUME et al) 26 December 200		1-7, 9, 10, 12-24, 26-33
Y	2 line 58 - column 3 line 36, column 10 line 30, column 12 line 8.		8, 11, 25
Y	US 6,099,562 A (DING et al) 08 August 2000 (08.08.2000), column 7 lines 17-25.		8, 11, 25
<b></b>		<u> </u>	
Further	documents are listed in the continuation of Box C.	See patent family annex.	
* S <sub>1</sub>	pecial categories of cited documents:	"T" later document published after the inten- date and not in conflict with the applica	
"A" document defining the general state of the art which is not considered to be of particular relevance		principle or theory underlying the inven  "X" document of particular relevance; the cl	aimed invention cannot be
"E" earlier application or patent published on or after the international filing date		considered novel or cannot be considere when the document is taken alone	ed to involve an inventive step
"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	
"O" document	referring to an oral disclosure, use, exhibition or other means	obvious to a person skilled in the art	
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family	
20 February 2007 (20.02.2007)		27 MAR 2007	
Name and mailing address of the ISA/US		Authorized officer	1
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450		Timothy J. Neal Markan	treene for
Ale	200 1430 xandria, Virginia 22313-1450 . (571) 273-3201	Telephone No. (571) 272-0625	U

Form PCT/ISA/210 (second sheet) (April 2005)

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/02294

Box No. 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:			
Claims Nos.: 34-62 because they relate to subject matter not required to be searched by this Authority, namely: No search was performed on claims 34-62 are drawn to methods for treatment of the human or animal body by surgery or therapy as set forth in PCT Rule 67.1(iv).			
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:			
Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).			
Observations where unity of invention is lacking (Continuation of item 3 of first sheet)			
ional Searching Authority found multiple inventions in this international application, as follows:			
As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.  As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.  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.:			
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.:  Protest  The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.  The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.  No protest accompanied the payment of additional search fees.			

Form PCT/ISA/210 (continuation of first sheet(2)) (April 2005)