#### (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 10 June 2004 (10.06.2004)

**PCT** 

# (10) International Publication Number WO 2004/047677 A3

(51) International Patent Classification<sup>7</sup>:

A61F 2/06

(21) International Application Number:

PCT/US2003/037727

(22) International Filing Date:

24 November 2003 (24.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/429,281 25 November 2002 (25.11.2002) US 10/634,655 5 August 2003 (05.08.2003) US

(71) Applicant: EV3 SANTA ROSA, INC. [US/US]; 4600 Nathan Lane North, Plymouth, MN 55442-2920 (US).

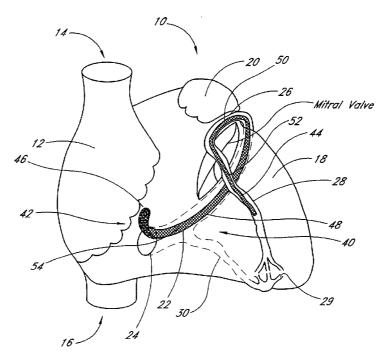
(72) Inventors: LASHINSKI, Randall; 675 Pleasant Avenue, Santa Rosa, CA 95403 (US). TAYLOR, David; 50 Fairlie Drive, Santa Rosa, CA 95403 (US). BIRDSALL,

Matthew; 4012 Polled Hereford Drive, Santa Rosa, CA 95404 (US). LAU, Jan; 457 Quince Street, Windsor, CA 95492 (US).

- (74) Agent: ALTMAN, Daniel, E.; Knobbe, Martens, Olson & Bear, LLP, 2040 Main Street, Fourteenth Floor, Irvine, CA 92614 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), 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, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,

[Continued on next page]

(54) Title: METHODS AND APPARATUS FOR REMODELING AN EXTRAVASCULAR TISSUE STRUCTURE



(57) Abstract: A medical apparatus and method for remodeling a mitral valve annulus adjacent to the coronary sinus (22) includes an elongate body (40) having a proximal end (42) and a distal end (44). The elongate body (40) is movable from a first, flexible configuration for transluminal delivery to at least a portion of the coronary sinus (22) to a second configuration for remodeling the mitral valve annulus.

## WO 2004/047677 A3



SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

(88) Date of publication of the international search report: 27 January 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/US03/37727

		<del></del>	· · · · · · · · · · · · · · · · · · ·	
A. CLASSIFICATION OF SUBJECT MATTER				
IPC(7) : A61F 2/06				
US CL: 623/2.37 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.: 623/2.37, 2.36, 2.1, 11.11, 1.1, 1.11, 12, 66.1, 902; 600/37; 128/898; 606/108, 191, 194				
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 a		Relevant to claim No.	
X, P	US 2003/0130731 A1 (VIDLUND et al) 10 July 2003 (10.07.2003), see Figures 4e, 4h and		1-3	
Y, P	4i, paragraphs [0121], [0122] and [0124].		13-21	
1, 1			13-21	
Y	US 2002/0087173 A1 (ALFERNESS et al) 04 July 2	2002 (04 07 2002) see Figure 5 and	13-21	
-	paragraphs [0030]-[0034].			
X	US 6,210,432 B1 (SOLEM et al) 03 April 2001 (03.04.2001), see Figures 12 and 13,		25	
	column 2, lines 44-47, columns 4-5, lines 56-4 and c			
A, P	US 2003/0083538 A1 (ADAMS et al) 01 May 2003	(01.05.2003), see Figure 3 and	1-3, 13-22, 25	
	paragraph [0051].			
		•		
		<u></u>		
Further	documents are listed in the continuation of Box C.	See patent family annex.		
Special categories of cited documents:		"T" later document published after the inter	rnational filing date or priority	
"A" document defining the general state of the art which is not considered to be		date and not in conflict with the applic principle or theory underlying the inve		
"A" document defining the general state of the art which is not considered to be of particular relevance		principle of dieory underlying the inve	ntion	
"E" earlier application or patent published on or after the international filing date		"X" document of particular relevance; the considered novel or cannot be consider		
71		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		"Y" document of particular relevance; the	laimed invention cannot be	
specified)		considered to involve an inventive step	when the document is	
"O" document referring to an oral disclosure, use, exhibition or other means		combined with one or more other such being obvious to a person skilled in the	*	
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent i	amily	
		Date of maline differentementional search	th report	
-		Date of mains of the interpretional search		
13 October 2004 (13.10.2004)		Authorized officer	A	
Name and mailing address of the ISA/US		Authorized officer  Urmi Chattopadhyay  Aurley  Aurley		
Mail Stop PCT, Attn: ISA/US Commissioner for Patents		Urmi Chattopadhyay		
P.O. Box 1450		Telephone No. (703) 308-8510		
Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230			•	

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/37727

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)			
This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:			
1. Claim Nos.: because they relate to subject matter not required to be searched by this Authority, namely:			
2. Claim 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. Claim Nos.: 4-12,23 and 24 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:			
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.			
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.			