



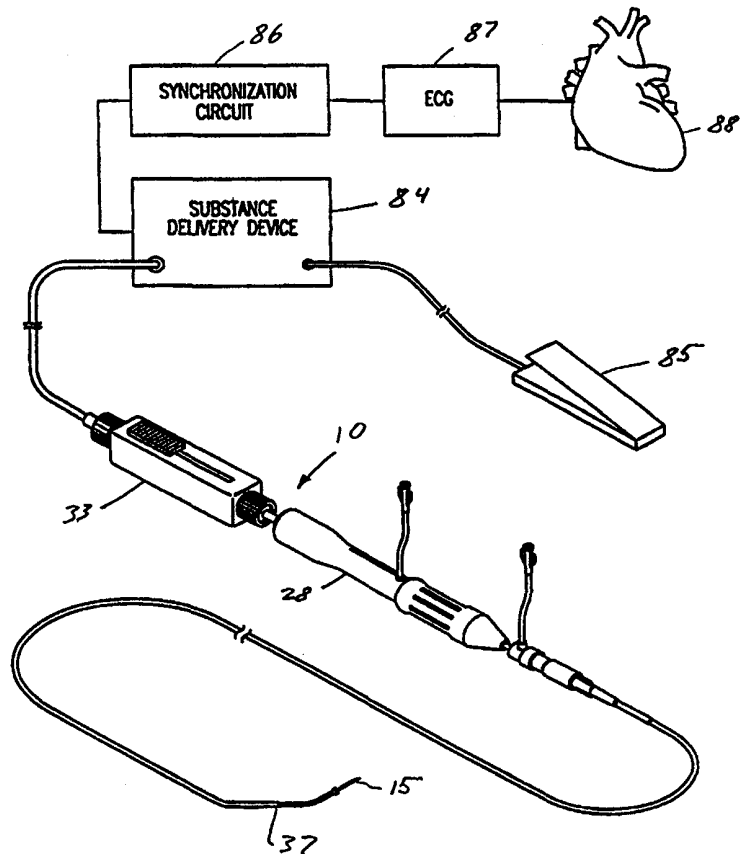
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁶ : A61M 25/00</p>	<p>A3</p>	<p>(11) International Publication Number: WO 99/49773 (43) International Publication Date: 7 October 1999 (07.10.99)</p>
<p>(21) International Application Number: PCT/US99/06852 (22) International Filing Date: 31 March 1999 (31.03.99) (30) Priority Data: 09/052,971 31 March 1998 (31.03.98) US (71) Applicant: CARDIOGENESIS CORPORATION [US/US]; 540 Oakmead Parkway, Sunnyvale, CA 94086 (US). (72) Inventors: PAYNE, Sam, G.; 2175 Hoover Drive, Santa Clara, CA 95051 (US). KESTEN, Randy, J.; 181 Ada Avenue #41, Mountain View, CA 94043 (US). AITA, Michael; 4067 North Farwell Avenue, Shorewood, WI 53211 (US). KUME, Stewart; 2309 Buena Vista Avenue, Belmont, CA 94002 (US). PEARCE, Stephen, B.; 2250 Monroe Street #273, Santa Clara, CA 95051 (US). JAVIER, Manuel, A., Jr.; 768 Valley Way, Santa Clara, CA 95051 (US). (74) Agents: LYNCH, Edward, J.; Heller Ehrman White & McAuliffe, 525 University Avenue, Palo Alto, CA 94301-1900 (US) et al.</p>		<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> (88) Date of publication of the international search report: 20 July 2000 (20.07.00)</p>

(54) Title: DELIVERY CATHETER SYSTEM FOR HEART CHAMBER

(57) Abstract

A delivery catheter system (10) for delivering a substance delivery member (15) into a patient's left ventricle (38) which includes a first delivery catheter (11) with a shaped distal extremity configured to be aligned with or parallel to a longitudinal axis (44) or long dimension of the patient's left ventricle (38) and a second delivery catheter (12) slidably and rotatably disposed within an inner lumen (45) of the first delivery catheter (11) which has a shaped distal shaft section and an inner lumen configured to slidably receive a substance delivery member such as an elongated cannula (16) slidably disposed within a polymer sheath (17, 18). The shaped distal section of the first delivery catheter is shaped or is sheapeable within the patient's heart chamber. The second delivery catheter (12) is advanced out of the inner lumen (45) of the first delivery catheter (11) until the distal end (21) extends out of the port in the distal end (32) of the first delivery catheter (11) and provides a passageway for substance delivery member (15) to engage the endocardial surface (43) at a perpendicular or near perpendicular orientation.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 99/06852

A. CLASSIFICATION OF SUBJECT MATTER IPC 6 A61M25/00		
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 6 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)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	EP 0 818 208 A (ASAHI OPTICAL CO LTD) 14 January 1998 (1998-01-14) column 8, line 44 -column 10, line 52; figures 6-17 ---	1-6, 12, 48 26
X A	WO 96 35469 A (CARDIOGENESIS CORP) 14 November 1996 (1996-11-14) page 8, line 3 - line 26 page 13, line 5 - line 26; figures 1,3-5 page 19, line 3 -page 20, line 2; figure 15 page 21, line 11 -page 22, line 9; claims 1-5,8,21-25,39,41-48; figures 20-26 ---	1-3, 12, 26-28, 47 5, 7
A	US 5 267 982 A (SYLVANOWICZ JOHN T) 7 December 1993 (1993-12-07) column 6, line 37 -column 8, line 16; figures 9-14 --- -/--	1, 2, 12, 26-28, 47
<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.		
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Date of the actual completion of the international search	Date of mailing of the international search report	
26 April 2000	12/05/2000	
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 Levert, C	

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 99/06852

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 96 39965 A (CARDIOGENESIS CORP) 19 December 1996 (1996-12-19) page 6, line 12 -page 10, line 18; figures 1-7 -----	5,7,9-11
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E,L	WO 99 22797 A (CARDIOGENESIS CORP) 14 May 1999 (1999-05-14) L: Priority page 15, line 14 -page 20, line 15; claims 1-20; figures 1-6 -----	1-3, 12-30, 33-39

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/06852

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(2)(a) for the following reasons:

1. Claims Nos.: 40-46
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
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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:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all
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3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report
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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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/06852

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