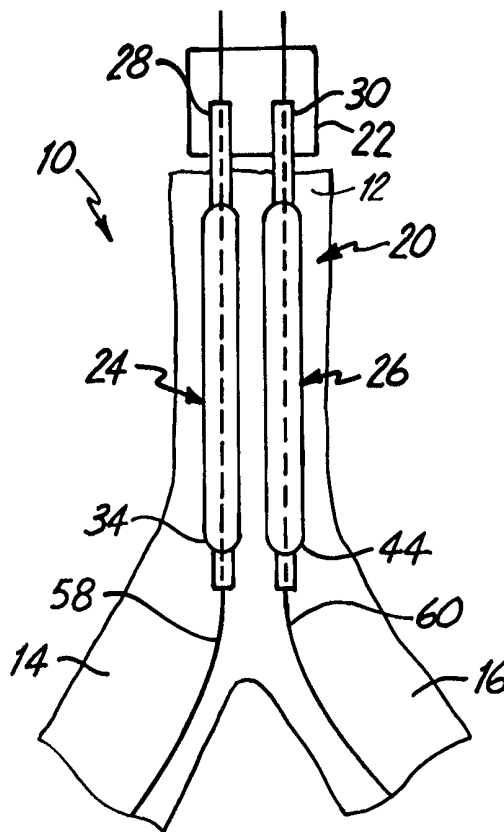




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A61F 2/06, A61M 25/00	A3	(11) International Publication Number: WO 99/44539 (43) International Publication Date: 10 September 1999 (10.09.99)
(21) International Application Number: PCT/US99/03988 (22) International Filing Date: 24 February 1999 (24.02.99) (30) Priority Data: 09/035,642 5 March 1998 (05.03.98) US (71) Applicant: SCIMED LIFE SYSTEMS, INC. [US/US]; One SciMed Place, Maple Grove, MN 55311-1566 (US). (72) Inventors: ADAMS, Daniel, O.; 1145 Tonkawa Road South, Orono, MN 55356 (US). BLAESER, David, J.; 7218 - 100th Circle N., Champlin, MN 55316 (US). MATTISON, Richard, C.; 14215 - 288th Avenue N.W., Zimmerman, MN 55398 (US). (74) Agents: KOEHLER, Steven, M.; Westman, Champlin & Kelly, P.A., Suite 1600, International Centre, 900 Second Avenue South, Minneapolis, MN 55402-3319 (US) et al.	(81) Designated States: CA, JP, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims</i> <i>and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 4 November 1999 (04.11.99)	
(54) Title: DILATATION AND STENT DELIVERY SYSTEM FOR BIFURCATION LESIONS (57) Abstract The present invention provides a dilatation and stent delivery device (20, 86, 120, 170, 180) which tracks over two guidewires (58, 60). One guidewire is disposed in each branch vessel (14, 16) of a bifurcation (10). The present invention provides a dilatation and stent delivery device (20, 86, 120, 170, 180) which enables efficient and accurate stent deployment and dilatation of bifurcation lesions (18).		



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/03988

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: A61F 2/06, A61M 25/00
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)

IPC6: A61F, 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 practicable, search terms used)

EPODOC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4983167 A (SAHOTA), 8 January 1991 (08.01.91), column 4, line 25 - column 5, line 48, figures 1-3 --	1-5
A	EP 0246998 A2 (ZETA LTD), 25 November 1987 (25.11.87), figures 1-3, abstract --	1-9
A	WO 9634580 A1 (DIBIE, ALAIN), 7 November 1996 (07.11.96), page 7, line 1 - page 8, line 10, figures 8-10 --	1-26, 46-47

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

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"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

27 August 1999

Date of mailing of the international search report

22. 09. 1999

Name and mailing address of the International Searching Authority
European Patent Office P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
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Authorized officer

Leif Brander

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/03988

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 9716217 A1 (DEBIOTECH S.A.), 9 May 1997 (09.05.97), page 4, line 35 - page 5, line 14, figures 1-3 -- -----	1-16

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/ 03988

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.: 27-45
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Methods for treatment of the human or animal body by surgery or therapy
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:

Claims 1-5: A catheter

Claims 6-9: A perfusion tube

Claims 10-26, 46-47: A system for treating a lesion at a bifurcation

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.:

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

02/08/99

International application No.
PCT/US 99/03988

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
US	4983167	A	08/01/91	US	5019042 A	28/05/91
				US	5090958 A	25/02/92
				US	5147377 A	15/09/92
				US	5160321 A	03/11/92

EP	0246998	A2	25/11/87	NONE		

WO	9634580	A1	07/11/96	AU	5345096 A	21/11/96
				CA	2220141 A	07/11/96
				FR	2733682 A,B	08/11/96

WO	9716217	A1	09/05/97	AU	7499296 A	22/05/97
				FR	2740346 A	30/04/97
