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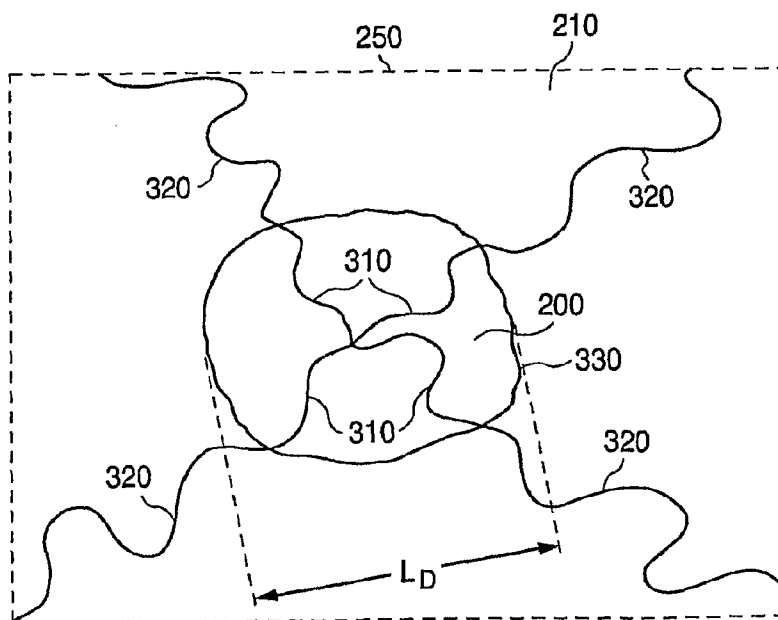
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[Continued on next page]

(54) **Title:** IMPLANTABLE MEDICAL DEVICES FABRICATED FROM BRANCHED POLYMERS



(57) **Abstract:** Implantable medical devices fabricated from branched polymers are disclosed.

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B. FIELDS SEARCHED

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Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/096967 A (PUSKAS JUDIT E [CA]; PAULO CHRISTOPHE [FR]; ANTONY PRINCE [CA]; UNIV W) 5 December 2002 (2002-12-05) page 1, lines 6-11 claim 71	1-25
X	US 2006/095122 A1 (PACETTI STEPHEN D [US]) 4 May 2006 (2006-05-04) page 1, paragraph 11 - page 2, paragraph 26	1
X	US 2002/032298 A1 (BENNETT STEVEN L [US] ET AL) 14 March 2002 (2002-03-14) page 1, paragraph 3 page 2, paragraph 16	1-4,6
A	page 4, paragraph 58 - page 5, paragraph 60	7,12,24,25
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Further documents are listed in the continuation of Box C.

See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99/02168 A (LIFE MEDICAL SCIENCES INC [US]) 21 January 1999 (1999-01-21) page 2, paragraph 3 - page 3, paragraph 3 page 33, paragraph 2 claim 1	1-4
X	ASPLUND BASSE ET AL: "Effects of hydrolysis on a new biodegradable co-polymer" JOURNAL OF BIOMATERIALS SCIENCE. POLYMER EDITION, VSP, UTRECHT, vol. 17, 1 January 2006 (2006-01-01), pages 615-630, XP008092308 ISSN: 0920-5063 cited in the application sequence INTRODUCTION sequence MATERIALS	1-4
A	BUSCHNAKOWSKI M. ET AL: "Influence of phase separation behaviour on toughness of compression moulded SBS star block copolymer / polystyrene blends" MACROMOLECULAR SYMPOSIA, vol. 233, February 2006 (2006-02), pages 66-77, XP002483623 the whole document	12,24

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2007/012981

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
WO 02096967	A	05-12-2002	CA 2446866 A1	05-12-2002
			CN 1604923 A	06-04-2005
			EP 1395622 A1	10-03-2004
			JP 2004526857 T	02-09-2004
US 2006095122	A1	04-05-2006	EP 1804848 A2	11-07-2007
			WO 2006049907 A2	11-05-2006
US 2002032298	A1	14-03-2002	NONE	
WO 9902168	A	21-01-1999	AT 250934 T	15-10-2003
			AU 8294798 A	08-02-1999
			BR 9811000 A	19-09-2000
			CA 2294711 A1	21-01-1999
			CN 1267222 A	20-09-2000
			DE 69818693 D1	06-11-2003
			DE 69818693 T2	08-07-2004
			EP 1014998 A1	05-07-2000
			JP 2001509519 T	24-07-2001
			US 2001009662 A1	26-07-2001