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(54) Title: STEREOCOMPLEX-FORMING COMPOSITION AND IMPLANTABLE MEDICAL DEVICE COMPRISING SAME

(57) Abstract: The present invention relates to a composition of a first single enantiomer homopolymer and a separate stereo-complex formed of a second single enantiomer homopolymer and its mirror image enantiomer, wherein the first and second single enantiomer homopolymers can be the same or different.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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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)

C08L A61F A61L

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	YAMANE H; SASAI K; TAKANO M; TAKAHASHI M.: "Poly(D-lactic acid) as a rheological modifier of poly(L-lactic acid): shear and biaxial extensional flow behavior" JOURNAL OF RHEOLOGY, vol. 48, no. 3, 2004, pages 599-609, XP009093917 page 606 - page 608; figure 6 -----	1-3
A	ANDERSON ET AL: "Melt preparation and nucleation efficiency of polylactide stereocomplex crystallites" POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB, vol. 47, no. 6, 8 March 2006 (2006-03-08), pages 2030-2035, XP005326037 ISSN: 0032-3861 table 3 ----- -/--	1-3

☒ 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.
A	TSUJI HIDETO: "Poly(lactide) stereocomplexes: Formation, structure, properties, degradation, and applications" MACROMOLECULAR BIOSCIENCE, vol. 5, no. 7, 2005, pages 569-597, XP002462930 tables 1,4	1-16
A	SLAGER J ET AL: "Stereocomplexes based on poly(lactic acid) and insulin: formulation and release studies" BIOMATERIALS, ELSEVIER SCIENCE PUBLISHERS BV., BARKING, GB, vol. 23, no. 22, November 2002 (2002-11), pages 4389-4396, XP004374378 ISSN: 0142-9612 page 4390 - page 4391	9-16
A	US 5 317 064 A (SPINU MARIA [US]) 31 May 1994 (1994-05-31) column 1, line 11 - line 55; example 5	1,9,10
A	SLAGER J ET AL: "Hetero-stereocomplexes of d-poly(lactic acid) and the LHRH analogue leuprolide. Application in controlled release" EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS, ELSEVIER SCIENCE PUBLISHERS B.V., AMSTERDAM, NL, vol. 58, no. 3, November 2004 (2004-11), pages 461-469, XP004586425 ISSN: 0939-6411 the whole document	9-16
A	US 2006/142505 A1 (UMEMOTO KAZUHIKO [JP] ET AL) 29 June 2006 (2006-06-29) page 1, paragraph 12 - paragraph 18 page 4, paragraph 48 examples 10-14	1-16
A	US 6 365 173 B1 (DOMB ABRAHAM J [IL] ET AL) 2 April 2002 (2002-04-02) the whole document	9-16
A	WO 02/087411 A (YISSUM RES DEV CO [IL]; GAZIT DAN [IL]; DOMB AVRAHAM J [IL]; TURGEMAN) 7 November 2002 (2002-11-07) example 1	9-16
A	WO 2005/065735 A (SCIMED LIFE SYSTEMS INC [US]) 21 July 2005 (2005-07-21) page 3, line 2 - line 9 page 5, line 6 - line 7 page 8, line 1 - line 7; table 3	1-16
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INTERNATIONAL SEARCH REPORT

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PCT/US2007/016002

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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X	SCHMIDT S.C., HILLMYER M.A.: "Polylactide Stereocomplex Crystallites as Nucleating agents for isotactic Polylactide" JOURNAL OF POLYMER SCIENCE PART B: POLYMER PHYSICS, vol. 39, 2001, pages 300-313, XP002462931 figure 6	1-3
A	US 2005/216074 A1 (SAHATJIAN RONALD A [US] ET AL) 29 September 2005 (2005-09-29) page 1, paragraphs 8,9 page 4, paragraph 83 page 7, paragraph 98 page 13, paragraph 149-153	9-16

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/016002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5317064	A	31-05-1994	NONE	
US 2006142505	A1	29-06-2006	EP 1674528 A1 JP 2006206868 A	28-06-2006 10-08-2006
US 6365173	B1	02-04-2002	NONE	
WO 02087411	A	07-11-2002	AU 2002307791 A1 CA 2445523 A1 EP 1409647 A2 JP 2004528101 T	11-11-2002 07-11-2002 21-04-2004 16-09-2004
WO 2005065735	A	21-07-2005	CA 2541234 A1 EP 1699502 A1 JP 2007516776 T	21-07-2005 13-09-2006 28-06-2007
US 2005216074	A1	29-09-2005	US 2005010275 A1	13-01-2005