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(54) Title: DIMERIC AND MULTIMERIC FVIIA COMPOUND

(57) Abstract: The present invention relates to dimeric or multimeric FVIIa compounds comprising at least two FVIIa polypeptides covalently connected such as to retain the intrinsic catalytic activity of the FVIIa polypeptides.

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. C07K1/113 C12N9/64

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)
C07K

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)
EPO-Internal, WPI Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02/077218 A (NOVO NORDISK AS [DK]) 3 October 2002 (2002-10-03) cited in the application the whole document	
A	WO 03/076461 A2 (NOVO NORDISK AS [DK]) 18 September 2003 (2003-09-18) cited in the application page 22, last paragraph - page 23, paragraph 1 page 16, line 5 - line 12	

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA/	Authorized officer
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	Schmitz, Till

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International application No
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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	PERSSON E ET AL: "Augmented intrinsic activity of Factor VIIa by replacement of residues 305, 314, 337 and 374: evidence of two unique mutational mechanisms of activity enhancement" BIOCHEMICAL JOURNAL, THE BIOCHEMICAL SOCIETY, LONDON, GB, vol. 379, no. Pt 2, 15 April 2004 (2004-04-15), pages 497-503, XP002398830 ISSN: 0264-6021 cited in the application the whole document	
A	WO 01/21661 A (NOVO NORDISK AS [DK]; FRESKGAARD PER OLA [SE]; JAKOBSEN PALLE [DK]) 29 March 2001 (2001-03-29) example 6	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2006/063311

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 02077218 A	03-10-2002	BR 0208203 A	19-04-2005
		CA 2441580 A1	03-10-2002
		CN 1522299 A	18-08-2004
		CZ 20032454 A3	17-03-2004
		EP 1373493 A1	02-01-2004
		HU 0401124 A2	30-08-2004
		JP 2004529640 T	30-09-2004
		MX PA03008590 A	08-12-2003
		NO 20034168 A	21-11-2003
		ZA 200307061 A	27-05-2005
WO 03076461 A2	18-09-2003	AU 2003214023 A1	22-09-2003
		EP 1485476 A2	15-12-2004
		JP 2005538936 T	22-12-2005
WO 0121661 A	29-03-2001	AU 7270600 A	24-04-2001