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(54) Title: ALBUMIN-BINDING CONJUGATES COMPRISING A FATTY ACID AND PEG

(57) Abstract: The present invention provides an albumin-binding compound essentially of the following elements: a spacer group, a water-soluble bridging group, a fatty acid chain and an acidic group characterised in that the acidic group is attached to the distal end of the fatty acid chain. The invention also provides an albumin-binding compound to which one or more biologically active moieties are attached.



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INTERNATIONAL SEARCH REPORT

International application No

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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)

A61K

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, PAJ, EMBASE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/049684 A (CENTOCOR, INC; HEAVNER, GEORGE) 19 June 2003 (2003-06-19) cited in the application	1,2
Y	Pag. 43 lines 1-15; Scheme 4 pag. 45, pag. 46 lines 5-15; pag. 52 lines 16-21.	1-15
X	WO 03/022210 A (NOBEX CORPORATION; SOLTERO, RICHARD; EKWURIBE, NNOCHIRI, N; OPAWALE, F) 20 March 2003 (2003-03-20)	1,2,15
Y	pag. 6 line 33-pag. 24 line 18; pag. 30 lines 4-8; pag. 35 line 19-pag. 37 line 5; pag. 73 lines 1-5	1-15
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☒ See patent family annex.

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INTERNATIONAL SEARCH REPORT

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T/GB2005/002084

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 02/065985 A (NOBEX CORPORATION; EKWURIBE, NNOCHIRI, N; PRICE, CHRISTOPHER, H; STILL) 29 August 2002 (2002-08-29)	1,2,15
Y	pag. 18 lines 15-17; pag. 22 formula I; pag. 23 last 2 lines- pag. 24 first 2 lines; pag. 26 lines 5-33; pag. 29 lines 24-25; formula IV pag. 29 and V pag. 30; pag. 33 line 6; pag. 39 lines 1-5	1-15
X	----- ALLEN T M ET AL: "A NEW STRATEGY FOR ATTACHMENT OF ANTIBODIES TO STERICALLY STABILIZED LIPOSOMES RESULTING IN EFFICIENT TARGETING TO CANCER CELLS" BIOCHIMICA ET BIOPHYSICA ACTA, AMSTERDAM, NL, vol. 1237, no. 2, 26 July 1995 (1995-07-26), pages 99-108, XP000858826 ISSN: 0006-3002	1,2
Y	fig. 1 pag. 100; fig. 2 pag. 103; pag. 103 2nd column last par.	1-15
X	----- KNUDSEN LOTTE B ET AL: "Potent derivatives of glucagon-like peptide-1 with pharmacokinetic properties suitable for once daily administration" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, US, vol. 43, no. 9, 4 May 2000 (2000-05-04), pages 1664-1669, XP002201014 ISSN: 0022-2623 table 1 pag. 1665	1,2
X	----- HAMILTON -WESSLER M ET AL.: "Mechanism of protracted metabolic effects of fatty acid acylated insulin, NN304, in dogs: retention of NN304 by albumin" DIABETOLOGIA, vol. 42, 1999, pages 1254-1263, XP002378530 Germany pag. 1254 column 2 lines 3-13 abstract	1,2
A	----- VERONESE F M: "Peptide and protein PEGylation - a review of problems and solutions" BIOMATERIALS, ELSEVIER SCIENCE PUBLISHERS BV., BARKING, GB, vol. 22, no. 5, 1 March 2001 (2001-03-01), pages 405-417, XP004227886 ISSN: 0142-9612 pag. 410 1st column last par.	1-15

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03049684	A	19-06-2003	AU 2002357072 A1	23-06-2003
WO 03022210	A	20-03-2003	WO 03022208 A2	20-03-2003
			US 2004038866 A1	26-02-2004
WO 02065985	A	29-08-2002	BR 0207700 A	19-07-2005
			CA 2437940 A1	29-08-2002
			EP 1409006 A2	21-04-2004
			JP 2004527487 T	09-09-2004
			MX PA03007374 A	04-12-2003