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(54) Title: MODIFIED GLYCOSIDES, COMPOSITIONS COMPRISED THEREOF AND METHODS OF USE THEREOF

(57) Abstract

Modified glycosides are provided which can be used to form a variety of materials including solid delivery systems, and optically clear coloured devices or coatings. The solid delivery systems can be used for delivery and release of a variety of substances can be in the form of tablets for oral administration, or in the form of powders, microspheres or implants for intravenous, intradermal, transdermal, pulmonary or other route of administration. The modified glycosides may be processed to form a vitreous glass matrix having a substance, such as a therapeutic agent, or an optically active dye incorporated therein. In one embodiment, the vitreous glass matrix is provided in a solid dose form which is capable of releasing a therapeutic substance *in situ* at various controlled rates.

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INTERNATIONAL SEARCH REPORT

Int ational Application No
PCT/GB 98/01962

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 C07H15/04 A61K47/26 A61K9/16

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)
IPC 6 C07H 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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BEBAULT, GWENDOLYN M. ET AL: "Synthesis of 4-O-.beta.-D-mannopyranosyl-L-rhamnopyranose" 1974 , CARBOHYDR. RES. (1974), 37(2), 309-19 CODEN: CRBRAT XP002085499 See page 318 compound 18. see page 312, paragraph 1 ---	1-3,5,6
X	NANASI, P. ET AL: "Synthesis of O-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-.beta.-D-glucopyranosyl-(1.fwdarw.6)-D-glucose" 1976 , ACTA CHIM. ACAD. SCI. HUNG. (1976), 88(2), 154-8 CODEN: ACASA2 XP002085500 See Structure 8 page 158. ---	1-3,5
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[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
16 December 1998	13/01/1999

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	Riolo, J

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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	STANLEY PEAT ET AL.: "The structure of Laminarin. Part III. Synthesis of structural Oligosaccharides." J. CHEM. SOC. , - 1960 pages 175-178, XP002085498 See structure If. ---	1-3,5
X	COLOMBO, DIEGO ET AL: "Optically pure 1-O- and 3-O-.beta.-D-glucosyl- and galactosyl-sn-glycerols through lipase-catalyzed transformations" 1995 , TETRAHEDRON LETT. (1995), 36(27), 4865-8 CODEN: TELEAY;ISSN: 0040-4039 XP004027788 See structures 1-8 on page 4866. ---	1,2,5
A	WO 96 03978 A (QUADRANT HOLDINGS CAMBRIDGE ;ROSER BRUCE JOSEPH (GB); COLACO CAMIL) 15 February 1996 cited in the application see claims 4-7,38 -----	1,7,15, 19

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INTERNATIONAL SEARCH REPORT

Information on patent family members

Int ional Application No
PCT/GB 98/01962

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9603978 A	15-02-1996	AU 688557 B	12-03-1998
		AU 3185195 A	04-03-1996
		AU 7186498 A	20-08-1998
		BG 101278 A	30-12-1997
		CA 2197982 A	15-02-1996
		CZ 9700476 A	13-08-1997
		EP 0773781 A	21-05-1997
		FI 970867 A	08-04-1997
		HU 77777 A	28-08-1998
		JP 10503769 T	07-04-1998
		NO 971688 A	11-04-1997
		NZ 290896 A	24-04-1997
		PL 318898 A	21-07-1997
		SK 27797 A	06-08-1997