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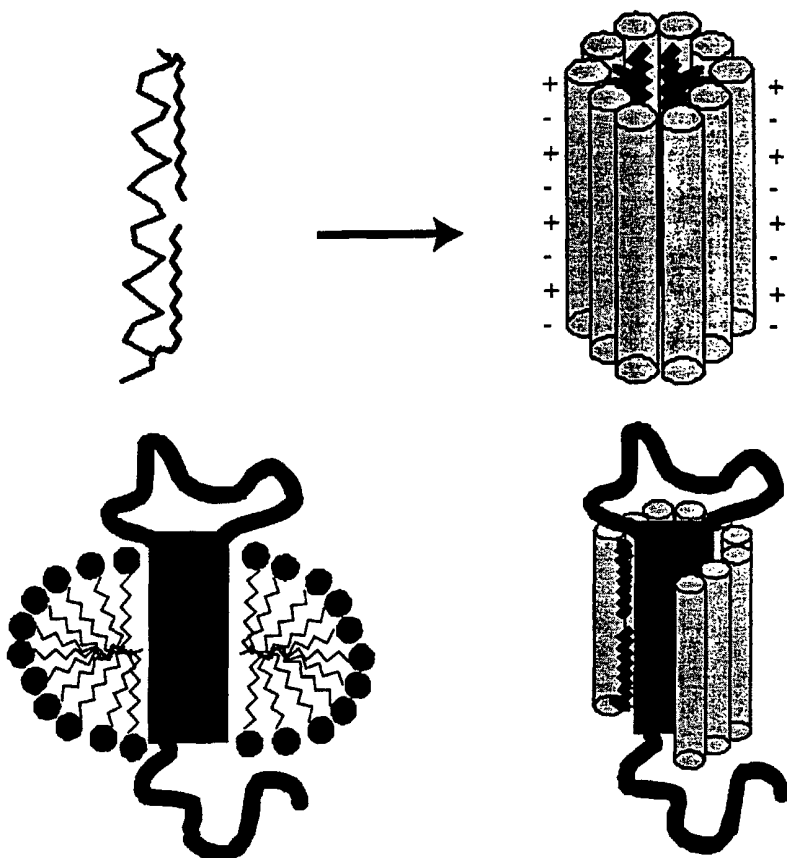
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[Continued on next page]

(54) Title: PEPTIDE CONJUGATES FOR THE STABILIZATION OF MEMBRANE PROTEINS AND INTERACTIONS WITH BIOLOGICAL MEMBRANES



(57) Abstract: The present invention provides a novel class of detergents referred to herein as lipopeptide detergents. Lipopeptide detergents comprise an amphipathic α -helical peptide having a hydrophobic or neutral face and a hydrophilic face. To each end of this peptide is covalently linked an aliphatic hydrocarbon tail, these aliphatic tails being linked thereto such that they associate with the hydrophobic or neutral face of the peptide. Lipopeptide detergents can advantageously be used to stabilize membrane proteins in the absence of a phospholipid bilayer in a manner that preserves the native conformation and permits the subsequent crystallization thereof.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 00/00773

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C07K14/00 C07K14/705

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 7 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)

WPI Data, EPO-Internal, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	P BERNDT ET AL.: "Synthetic lipidation of peptides and amino acids: monolayer structure and properties" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY., vol. 117, no. 37, 1995, pages 9515-9522, XP002155521 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC., US ISSN: 0002-7863 the whole document --- -/--	1-12

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

9 January 2001

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INTERNATIONAL SEARCH REPORT

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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	C E SCHAFMEISTER ET AL.: "Structure at 2.5 A of a designed peptide that maintains solubility of membrane proteins" SCIENCE., vol. 262, 29 October 1993 (1993-10-29), pages 734-738, XP002155522 AAAS. LANCASTER, PA., US cited in the application the whole document ---	1-12
T	WO 99 55383 A (J MARSDEN & NYCOMED) 4 November 1999 (1999-11-04) the whole document -----	1-12

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-5,7-12

Present claims 1-5 and 7-12 relate to an extremely large number of possible compounds. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compounds of claim 6.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

...ormation on patent family members

Internatinal Application No

PCT/CA 00/00773

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9955383 A	04-11-1999	AU 3618799 A	16-11-1999
		AU 3977499 A	29-11-1999
		WO 9958651 A	18-11-1999
