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(54) Title: INTRACELLULAR DELIVERY SYSTEM FOR PROTEIN PHOSPHATASES AND OTHER POLYPEPTIDES

(57) Abstract: This invention provides a polymer-based intracellular delivery system for protein phosphatases and other polypeptides. This delivery system can be used to deliver polypeptides for anti-tumor, anti-inflammatory, or immunosuppressive therapy, for treatment of genetic disorder or disease, and for therapy of any condition which requires intracellular delivery of polypeptides. Preferred embodiments according to the invention utilize acrylamide based polymers, most preferably copolymers comprising hydroxypropyl methacrylamide.

INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) : Please See Extra Sheet.		
US CL : 530/402; 514/2		
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)		
U.S. : 530/402; 514/2		
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 practicable, search terms used)		
WEST, BIOSIS, EMBASE, CAPLUS, MEDLINE		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,042,822 A (GILBERT et al.) 28 March 2000, see entire document.	1-56
Y	US 5,548,064 A (RUSSELL-JONES et al.) 20 August 1996, see entire document.	1-56
Y	FLANAGAN, P.A. et al. Evaluation of protein-N-(2-hydroxypropyl)methacrylamide copolymer conjugates as targetable drug carriers. 1. Binding, pinocytic uptake and intracellular distribution of transferrin and anti-transferrin receptor antibody conjugates. Biochim. Biophys. Acta. 1989, Vol. 993, pages 83-91, see entire document.	1-56
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* "A"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"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
"E"	earlier document published on or after the international filing date	"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
"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)	"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
"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	"&" document member of the same patent family
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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.
Y	SOLOVSKIJ, M. et al. Polymer water-soluble derivatives of polypeptide antibiotic, gramicidin-S based on reactive copolymers of N-(2-hydroxypropyl) methacrylamide. <i>J. Control Release</i> . 1999, Vol. 58, pages 1-8, see entire document.	1-58
Y	ULBRICH, K. et al. Polymeric drugs based on conjugates of synthetic and natural macromolecules I. Synthesis and physico-chemical characterisation. <i>J. Control Release</i> . 2000, Vol. 64, pages 63-79, see entire document.	1-58

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