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(21) International Application Number: PCT/US95/09838 (22) International Filing Date: 18 July 1995 (18.07.95) (30) Priority Data: 08/276,462 18 July 1994 (18.07.94) US (71) Applicant: UNIVERSITY OF CINCINNATI [US/US]; 309 Braunstein Hall, Cincinnati, OH 45221-0627 (US). (72) Inventors: GEHRKE, Stevin, Henry; 5444 Sprucewood Drive, Cincinnati, OH 45239 (US). LUPTON, Elmer, C.; 23 Pinckney Street, Boston, MA 02114 (US). SCHILLER, Matthew, E.; 23C Sagamore Way, Waltham, MA 02154 (US). LORELLE, Uhden; Mail Location 171, University Cincinnati, Cincinnati, OH 45221 (US). VAID, Nitin; 23B Sarvodaya Nagar, Kanpur 208005 (IN). (74) Agent: JARRELL, Brenda, H.; Choate, Hall & Stewart, 53 State Street, Exchange Place, Boston, MA 02109 (US).		(81) Designated States: AU, CA, CN, FI, JP, KR, MX, NO, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> (88) Date of publication of the international search report: 13 February 1997 (13.02.97)
(54) Title: ENHANCED LOADING OF SOLUTES INTO POLYMER GELS AND METHODS OF USE		
(57) Abstract A method of loading a drug into a crosslinked polymer network and protecting the drug from the effects of inactivation is described. The method includes the steps of contacting of a biologically active solute (i.e., drug) with: (i) a gel network; (ii) a second protectant polymer that is somewhat immiscible with the gel; and (iii) a protectant salt, under conditions sufficient for the biologically active solute to selectively partition into the gel and the protectants to be entrained in the gel. A drug delivery system is also described. It comprises a polymer gel network including the drug to be delivered; protectants including a salt and a loading polymer, the salt and the loading polymer capable of protecting the drug from loss of activity. The polymer gel network is capable of expanding or collapsing in response to a change in an environmental condition to which the gel is exposed, the expanding or collapsing sufficient to release the drug into an environment of use.		

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INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER IPC 6 A61K/22		
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 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.
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X	DE,A,19 25 919 (AMERICAN HOME PRODUCTS CORP.) 27 November 1969 see page 2, line 1 - page 9, line 22 ---	11, 14, 17, 18, 31
Y	WO,A,92 13566 (MASSACHUSETTS INSTITUTE OF TECHNOLOGY) 20 August 1992 see the whole document ---	1-41
Y	DE,A,34 00 106 (BREMECKER) 11 July 1985 see page 16 - page 18; examples 2,3,6,11 --- -/--	1-41
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
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Date of the actual completion of the international search <p style="text-align: center; font-weight: bold;">15 December 1995</p>	Date of mailing of the international search report <p style="text-align: center; font-weight: bold;">16.01.96</p>	
Name and mailing address of the ISA 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	Authorized officer <p style="text-align: center; font-weight: bold;">Benz, K</p>	

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