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## INTERNATIONAL SEARCH REPORT

Inter:    nal Application No  
PCT/GB 93/01999

A. CLASSIFICATION OF SUBJECT MATTER IPC 5    A61K47/48		
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 5    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	IMMUNOLOGY, VOL. 44, NO. 1, PAGE(S) 41-50, 1981. TAYLOR W A et al 'ADJUVANT AND SUPPRESSIVE EFFECTS OF GRASS CONJUVAC AND OTHER ALGINATE CONJUGATES ON IMMUNO GLOBULIN G AND IMMUNO GLOBULIN E ANTIBODY RESPONSES IN MICE.'	1-7, 14-17, 25-29
Y	see abstract	8-10
X	ANN ALLERGY, VOL. 56, NO. 5, PAGE(S) 384-391, 1986. BRUNO G et al 'A MULTICENTER TRIAL OF IMMUNOTHERAPY WITH ALGINATE - CONJUGATED GRASS POLLEN EXTRACT.'	1-7, 14-17, 25-29
Y	see abstract	8-10
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<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.		
* 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  3 June 1994		Date of mailing of the international search report  16. 06. 94
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patendaan 2 NL - 2280 HV Rijswijk Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl, Fax (+ 31-70) 340-3016		Authorized officer  Dullaart, A

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB 93/01999

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ALLERGY (CPH), VOL. 45, NO. 4, PAGE(S) 241-248, 1990. BOYE N P et al 'IMMUNOTHERAPY OF TREE POLLEN ALLERGY WITH A MODIFIED ALGINATE CONJUGATED BIRCH POLLEN EXTRACT COMPARED TO AN ALUMINUM ADSORBED EXTRACT.'	1-7, 14-17, 25-29
Y	see page 243 see page 247	8-10
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X	FEMS (FED EUR MICROBIOL SOC) MICROBIOL IMMUNOL, VOL. 76, NO. 4, PAGE(S) 185-192, 1991. COIN D et al 'A PSEUDOMONAS-AERUGINOSA ALGINATE EXOTOXIN A CONJUGATE THAT ELICITS ANTI- ALGINATE AND EXOTOXIN A-NEUTRALIZING ANTIBODIES.'	1-8, 14-17, 25-29
Y	see paragraph 3.4 see paragraph 4.3	9,10
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X	FORTY-FOURTH ANNUAL MEETING OF THE AMERICAN ACADEMY OF ALLERGY AND IMMUNOLOGY, ANAHEIM, CALIFORNIA, USA, MARCH 11-16, 1988.;& J ALLERGY CLIN IMMUNOL, VOL. 81, NO. 1, PAGE(S) 262, 1988. ORTOLANI C et al 'EFFICACY OF ONE YEAR OF SPECIFIC IMMUNOTHERAPY SIT WITH AN ALGINATE CONJUGATED PARIETARIA-OFFICINALIS EXTRACT IN PARIETARIA ALLERGIC RHINITIS.'	1-7, 14-17, 25-29
Y	* abstract 378 *	8-10
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X	FOLIA ALLERGOL IMMUNOL CLIN, VOL. 37, NO. 3, PAGE(S) 135-142, 1990. PASTORELO E A et al 'EFFECTS OF IMMUNOTHERAPY ON IMMEDIATE AND LATE SPECIFIC NASAL REACTIVITY.'	1-7, 14-17, 25-29
Y	see abstract see page 140 - page 141	8-10
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X	HOIBY, N. AND S. S. PEDERSEN (ED.). INTERNATIONAL CONGRESS SERIES, NO., VOL. 977. CYSTIC FIBROSIS, BASIC AND CLINICAL RESEARCH;17TH ANNUAL MEETING OF THE EUROPEAN WORKING GROUP ON CYSTIC FIBROSIS, COPENHAGEN, DENMARK, JUNE 17-21, 1991. pages 159 - 163 CRYZ S J JR et al 'PHASE I CLINICAL EVALUATION OF A PSEUDOMONAS-AERUGINOSA ALGINATE -TOXIN A CONJUGATE VACCINE.'	1-8, 14-17, 25-29
Y	see page 159	9,10
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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 93/01999

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FORTY-SECOND ANNUAL MEETING OF THE AMERICAN ACADEMY OF ALLERGY AND IMMUNOLOGY, NEW ORLEANS, LA., USA, MAR. 21-26, 1986.; & J ALLERGY CLIN IMMUNOL, VOL. 77, NO. 1 PART 2, PAGE(S) 138, 1986. PASTORELLO E et al 'A DOUBLE-BLIND PLACEBO CONTROLLED STUDY OF SPECIFIC IMMUNOTHERAPY WITH ALGINATE CONJUGATED MITE ALPHA FRACTION IN PERENNIAL ALLERGIC RHINITIS.'	1-7, 14-17, 25-29
Y	* abstract 72 * ---	8-10
X	US,A,4 003 792 (P.J. MILL ET AL.) 18 January 1977	1-8, 14-17, 25-29
Y	see claims 9-19; examples ---	9, 10
X	US,A,5 013 669 (D.F.PETERS ET AL.) 7 May 1991	1-7, 14-17, 25-29
Y	see the whole document ---	
Y	BIOCHEM. BIOPHYS. RES. COMMUN., 102(3), 1048-54 1981 Shen, Wei Chiang et al 'cis-Aconityl spacer between daunomycin and macromolecular carriers: a model of pH-sensitive linkage releasing drug from a lysosomotropic conjugate' see the whole document ---	7-10, 25-29
Y	BIOCONJUGATE CHEM, VOL. 3, NO. 2, PAGE(S) 154-159, 1992. MANN J S et al 'MOLECULAR AMPLIFIERS SYNTHESIS AND FUNCTIONALIZATION OF A POLYAMINOPROPYLDEXTRAN BEARING A UNIQUELY REACTIVE TERMINUS FOR UNIVALENT ATTACHMENT TO BIOMOLECULES.' see page 157 ---	7-10, 25-29
Y	US,A,4 631 190 (W.C. SHEN ET AL.) 23 December 1986 see column 3 - column 7, line 31; claims; examples ---	7-10, 25-29
Y	CANCER IMMUNOL IMMUNOTHER, 1991, VOL. 33, NO. 4, PAGE(S) 223-30, Lavie E et al 'Monoclonal antibody L6-daunomycin conjugates constructed to release free drug at the lower pH of tumor tissue.' * materials and methods * ---	7-10, 25-29
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## INTERNATIONAL SEARCH REPORT

Internal Application No  
PCT/GB 93/01999

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SCIENCE (USA), 1986, VOL. 231, NO. 4734, PAGE(S) 148-150, Diener E. et al 'Specific immunosuppression by immunotoxins containing daunomycin' see abstract ---	7-10, 25-29
Y	ANTICANCER RES, VOL. 9, NO. 4, PAGE(S) 1201-1206, 1989. GAUREAULT R C et al 'ERYTHROCYTE MEMBRANE-BOUND DAUNORUBICIN AS A DELIVERY SYSTEM IN ANTICANCER TREATMENT.' * materials and methods *	7-10, 25-29
Y	CANCER RES, VOL. 48, NO. 21, PAGE(S) 6097-6102, 1988. DILLMAN R O et al 'SUPERIORITY OF AN ACID-LABILE DAUNORUBICIN-MONOCLONAL ANTIBODY IMMUNOCONJUGATE COMPARED TO FREE DRUG.' * materials and methods *	7-10, 25-29
Y	BIANCHI, C., ET AL. (ED.). CONTRIBUTIONS TO NEPHROLOGY, VOL., VOL. 101. KIDNEY, PROTEINS AND DRUGS: AN UPDATE; 7TH INTERNATIONAL SYMPOSIUM OF NEPHROLOGY, MONTECATINI TERME, ITALY, OCTOBER 14-16, 1991, S. KARGER AG: BASEL, CH pages 99 - 103 FRANSSEN E J F et al 'LOW-MOLECULAR-WEIGHT PROTEINS AS CARRIERS FOR RENAL DRUG TARGETING.' * materials and methods *	7-10, 25-29

## INTERNATIONAL SEARCH REPORT

Inte. tional application No.

PCT/GB93/01999

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

For further information please see Form PCT/ISA/206 sent 17.03.94

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/GB 93/01999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US-A-4003792	18-01-77	BE-A- 717689	16-12-68
		CH-A- 526590	15-08-72
		DE-A, B, C 1768841	18-11-71
		FR-M- 7784	23-03-70
		FR-A- 1584763	02-01-70
		GB-A- 1174854	17-12-69
		LU-A- 56423	21-10-68
		NL-A- 6809538	09-01-69
		SE-B- 383100	01-03-76
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