



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>C12N 15/12, C07K 14/47, A61K 38/17</b>	<b>A3</b>	<b>(11) International Publication Number:</b> <b>WO 98/42741</b> <b>(43) International Publication Date:</b> 1 October 1998 (01.10.98)
<b>(21) International Application Number:</b> PCT/US98/05972 <b>(22) International Filing Date:</b> 25 March 1998 (25.03.98) <b>(30) Priority Data:</b> 08/825,145            25 March 1997 (25.03.97)            US 09/046,881            24 March 1998 (24.03.98)            US <b>(71) Applicant:</b> GENETICS INSTITUTE, INC. [US/US]; 87 CambridgePark Drive, Cambridge, MA 02140 (US). <b>(72) Inventors:</b> JACOBS, Kenneth; 151 Beaumont Street, Newton, MA 02160 (US). MCCOY, John, M.; 56 Howard Street, Reading, MA 01867 (US). LAVALLIE, Edward, R.; 113 Ann Lee Road, Harvard, MA 01451 (US). RACIE, Lisa, A.; 124 School Street, Acton, MA 01720 (US). MERBERG, David; 2 Orchard Street, Acton, MA 01720 (US). TREACY, Maurice; 93 Walcott Road, Chestnut Hill, MA 02167 (US). SPAULDING, Vikki; 11 Meadowbank Road, Billerica, MA 01821 (US). AGOSTINO, Michael, J.; 26 Wolcott Avenue, Andover, MA 01810 (US). <b>(74) Agent:</b> SPRUNGER, Suzanne, A.; Genetics Institute, Inc., 87 CambridgePark Drive, Cambridge, MA 02140 (US).	<b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). <b>Published</b> <i>With international search report.</i> <b>(88) Date of publication of the international search report:</b> 23 December 1998 (23.12.98)	
<b>(54) Title:</b> SECRETED PROTEINS AND POLYNUCLEOTIDES ENCODING THEM		
<b>(57) Abstract</b> <p>Polynucleotides and the proteins encoded thereby are disclosed.</p>		

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INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 98/05972

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 C12N15/12 C07K14/47 A61K38/17

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 C12N C07K 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.
Y	FILIPEK A. AND WOJDA U.: "p30, a novel protein target of mouse calyculin (S100A6)" BIOCHEMICAL JOURNAL, vol. 320, no. 2, 1 December 1996, pages 585-587, XP002069354 see page 587, left-hand column, paragraph 1	1-13
X	Database EMBL, entry HSAA47377, Accession number AA147377 14 December 1996 99% identity with Seq.ID:1 nt.5-348 XP002069355 cited in the application	1,13
Y	see the whole document	1-13

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

26 June 1998

Date of mailing of the international search report

28.09.98

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 98/05972

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Database EMBL, entry HSAA29803, Accession number AA129803 6 December 1996 99% identity with Seq.ID:1 nt.202-603 XP002069356	1,13
Y	see the whole document	1-13
X	Database EMBL, entry HSAA47341, Accession number AA147341 14 December 1996 97% identity with Seq.ID:1 nt.509-937 reverse orientation XP002069357 see the whole document	1,13
X	Database EMBL, entry HSAA28382, Accession number AA128382 6 December 1996 99% identity with Seq.ID:1 nt.614-1045 reverse orientation XP002069358 see the whole document	1,13
X	Database EMBL, entry HSAA59926, Accession number AA159926 19 January 1997 99% identity with Seq.ID:1 nt.973-1459 reverse orientation XP002069359 see the whole document	1,13
X	EP 0 679 716 A (MATSUBARA KENICHI; OKUBO KOUSAKU (JP)) 2 November 1995 see abstract see page 5, line 34 - page 9, line 45 see page 195; table 175 Seq.ID:6271 is 100% homologous to Seq.ID1 nt.609-891 see page 1783 - page 1784	1,13
A	WO 97 07198 A (GENETICS INSTITUTE INC.) 27 February 1997	
A	US 5 536 637 A (JACOBS KENNETH) 16 July 1996 cited in the application	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 98/ 05972

**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:  
**Remark: Although claim 12 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.**
  
- 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:

see further information sheet

- 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.:

1-13

Remark on Protest

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

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

## 1. Claims: 1-13

Polynucleotide comprising the nucleotide sequence of Seq.ID:1 and encoding a polypeptide of Seq.ID:2 or fragments. Polynucleotide fragments, variants, homologues, gene thereof. Host cell transformed with said polynucleotide. Protein comprising an amino acid sequence of Seq.ID:2 or fragments thereof. Process for producing said protein. Application of said protein in therapy.

## 2. Claims: 14-16

Polynucleotide comprising the nucleotide sequence of Seq.ID:3 and encoding a polypeptide of Seq.ID:4 or fragments. Polynucleotide fragments, variants, homologues, gene thereof. Protein comprising an amino acid sequence of Seq.ID:4 or fragments thereof.

## 3. Claims: 17-19

As invention 2 but concerning Seq.ID:5 and 6.

## 4. Claims: 20-22

As invention 2 but concerning Seq.ID:7 and 8.

## 5. Claims: 23-25

As invention 2 but concerning Seq.ID:9, 10 and 11.

## 6. Claims: 26-28

As invention 2 but concerning Seq.ID:12 and 13.

## 7. Claims: 29-31

As invention 2 but concerning Seq.ID:14 and 15.

## 8. Claims: 32-34

As invention 2 but concerning Seq.ID:16, 17, 18 and 19.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

9. Claims: 35-37

As invention 2 but concerning Seq.ID:20 and 21.

10. Claims: 38-40

As invention 2 but concerning Seq.ID:22 and 23.

**INTERNATIONAL SEARCH REPORT**

In relation on patent family members

International Application No  
PCT/US 98/05972

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0679716 A	02-11-95	AU 8116494 A	13-06-95
		CA 2153480 A	01-06-95
		WO 9514772 A	01-06-95
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WO 9707198 A	27-02-97	US 5707829 A	13-01-98
		AU 6712396 A	18-02-97
		AU 6768596 A	12-03-97
		EP 0839196 A	06-05-98
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