



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

<b>(51) International Patent Classification <sup>7</sup> :</b> <b>C12N 15/12, C07K 14/47, C12Q 1/68,  C07K 16/18, A61K 38/17</b>	<b>A3</b>	<b>(11) International Publication Number:</b> <b>WO 00/17355</b> <b>(43) International Publication Date:</b> 30 March 2000 (30.03.00)
<b>(21) International Application Number:</b> PCT/US99/21565 <b>(22) International Filing Date:</b> 17 September 1999 (17.09.99) <b>(30) Priority Data:</b> 60/172,226 18 September 1998 (18.09.98) US 60/131,321 27 April 1999 (27.04.99) US <b>(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Applications</b> US 60/172,226 (CIP) Filed on 18 September 1998 (18.09.98) US 60/131,321 (CIP) Filed on 27 April 1999 (27.04.99) <b>(71) Applicant (for all designated States except US):</b> INCYTE PHARMACEUTICALS, INC. [US/US]; 3174 Porter Drive, Palo Alto, CA 94304 (US). <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> LAL, Preeti [IN/US]; 2382 Lass Drive, Santa Clara, CA 95054 (US). TANG, Y., Tom [CN/US]; 4230 Ranwick Court, San Jose, CA 95118 (US). YUE, Henry [US/US]; 826 Lois Avenue, Sunnyvale, CA 94087 (US). HILLMAN, Jennifer, L. [US/US]; 230	Monroe Drive #12, Mountain View, CA 94040 (US). BANDMAN, Olga [US/US]; 366 Anna Avenue, Mountain View, CA 94043 (US). CORLEY, Neil, C. [US/US]; 1240 Dale Avenue #30, Mountain View, CA 94040 (US). GUEGLER, Karl, J. [CH/US]; 1048 Oakland Avenue, Menlo Park, CA 94025 (US). PATTERSON, Chandra [US/US]; 490 Sherwood Way #1, Menlo Park, CA 94025 (US). AZIMZAI, Yalda [US/US]; 2045 Rock Springs Drive, Hayward, CA 94545 (US). BAUGHN, Mariah, R. [US/US]; 14244 Santiago Road, San Leandro, CA 94577 (US). <b>(74) Agents:</b> BILLINGS, Lucy, J. et al.; Incyte Pharmaceuticals, Inc., 3174 Porter Drive, Palo Alto, CA 94304 (US). <b>(81) Designated States:</b> AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, 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, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, 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> 6 July 2000 (06.07.00)	
<b>(54) Title:</b> HUMAN CYTOSKELETON ASSOCIATED PROTEINS <b>(57) Abstract</b> <p>The invention provides human cytoskeleton associated proteins (CYSKP) and polynucleotides which identify and encode CYSKP. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorders associated with expression of CYSKP.</p>		

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/21565

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 C12N15/12 C07K14/47 C12Q1/68 C07K16/18 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 7 C12N C07K C12Q 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	<p>YASUHIKO KOYANO ET AL.: "Molecular cloning and characterization of CDEP, a novel human protein containing the Ezrin-like domain of the band 4.1 superfamily and the Dbl homology domain of Eho Guanine Nucleoide Exchange Factors." BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 241, no. 2, 18 December 1997 (1997-12-18), pages 369-375, XP002124973 ORLANDO, FL US abstract page 370, right-hand column, paragraph 2 -page 372, left-hand column, paragraph 1; figure 2 page 372, right-hand column, paragraph 2 -page 374, left-hand column, paragraph 1                      ---                      -/--</p>	1-16, 19



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

8 December 1999

Date of mailing of the international search report

31. 03. 00

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/21565

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 99 28458 A (CHUGAI SEIYAKU KABUSHIKI KAISHA) 10 June 1999 (1999-06-10) figure 1 & AU 12615 99 A -----	1-16,19

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/ 21565

## 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 19  
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.: 17, 18, 20  
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:  
see FURTHER INFORMATION sheet PCT/ISA/210
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 additional sheets

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.:

1-20 partially

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

## 1. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:2, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:18, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

## 2. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:3, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:19, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

## 3. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:4, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:20, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

## 4. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:5, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:21, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

## 5. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:6, variant .

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:22, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

6. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:7, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:23, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

7. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:8, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:24, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

8. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:9, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:25, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

9. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:10, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:26, expression vector and host cell comprising the

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

10. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:11, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:27, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

11. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:12, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:28, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

12. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:13, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:29, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

13. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:14, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:30, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

14. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:15, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:31, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

15. Claims: 1-20 partially

Polypeptide comprising sequence SEQ ID NO:16, variant thereof, polynucleotides encoding the same and variants thereof, polynucleotide comprising sequence SEQ ID NO:23, expression vector and host cell comprising the polynucleotides; use of the polynucleotides in hybridization tests and for production of the polypeptide; pharmaceutical composition comprising the polypeptide; antibody, agonist and antagonist directed to the polypeptide, and uses thereof in a therapeutic treatment.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 17, 18, 20

Present claims 17, 18, 20, directed to agonists and antagonists 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 not to be found, however, for any specific example 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, no search has been carried out for claims 17, 18 and 20.

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

Information on patent family members

International Application No.

PCT/US 99/21565

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9928458 A	10-06-1999	AU 1261599 A	16-06-1999
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