

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 February 2000 (10.02.2000)

PCT

(10) International Publication Number
WO 00/06713 A3

(51) International Patent Classification⁷: C12N 5/10,
C07K 14/71, 14/475, C12M 5/00, C12N 15/12

(21) International Application Number: PCT/US99/15367

(22) International Filing Date: 8 July 1999 (08.07.1999)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/124,605 28 July 1998 (28.07.1998) US

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(81) Designated States (national): 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.

(84) Designated States (regional): 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).

Published:

— with international search report

(88) Date of publication of the international search report:
9 August 2001

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: METHODS FOR RECOMBINANT PROTEIN PRODUCTION IN MAMMALIAN CELLS COMPRISING CO-EX-
PRESSION WITH FETUIN

(57) Abstract: The invention teaches methods, constructs and host cells for the effective expression of a desired protein in mam-
malian cell culture. In particular, the efficient expression of human GGF2 is taught.



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INTERNATIONAL SEARCH REPORT

International Application No

PC1/US 99/15367

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N5/10 C07K14/71 C07K14/475 C12M5/00 C12N15/12

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 C07K C12N C12M

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>LEE, C.-C. ET AL.: "Human alpha2-HS-glycoprotein: the A and B chains with a connecting sequence are encoded by a single mRNA transcript." PROC.NAT'L.ACAD.SCI.USA, vol. 84, July 1987 (1987-07), pages 4403-7, XP002120635 the whole document</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/--</p>	<p>19-21, 24,26</p>

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

29 October 1999

Date of mailing of the international search report

11/11/1999

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/15367

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 94 00140 A (CAMBRIDGE NEUROSCIENCE INC ;LUDWIG INST CANCER RES (US)) 6 January 1994 (1994-01-06) cited in the application page 5, line 32 page 9, line 22 - line 24 page 13, line 33 - line 35 page 14, line 22 - line 28; claims 89-91,112; figures 9,12; examples 2,4,6,7,12 ---	22, 23, 25, 27, 28
A	EP 0 112 174 A (IMMUNEX CORP) 27 June 1984 (1984-06-27) claim 1; table 3 ---	
A	WO 97 33978 A (LIFE TECHNOLOGIES INC) 18 September 1997 (1997-09-18) page 16, line 13 ---	
A	EP 0 485 689 A (RIKAGAKU KENKYUSHO) 20 May 1992 (1992-05-20) page 2, line 22 - line 25 ---	
A	NIE, Z. ET AL.: "Fetuin: its enigmatic property of growth promotion." AMERICAN JOURNAL OF PHYSIOLOGY, vol. 32, no. 3, September 1992 (1992-09), pages C551-C562, XP002120636 the whole document ---	
A	GAILLARD, D. ET AL.: "Fetuin modulates growth and differentiation of Ob17 preadipose cells in serum-free hormone-supplemented medium." BIOCHIMICA ET BIOPHYSICA ACTA, vol. 846, 1985, pages 185-91, XP002120637 abstract -----	

INTERNATIONAL SEARCH REPORT

I national application No.

PCT/US 99/ 15367

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:

See additional 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.:

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: 1-21,24,26

Method of expressing a recombinant protein in mammalian cells (in serum-free medium) comprising co-expression of said recombinant protein with fetuin or its human analog alpha-2-HS-glycoprotein, vectors for use in this method, and mammalian host cell transformed with said vector(s).

2. Claims: 22,23,25,27,28

Glial Growth Factor 2 and vectors encoding it.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/15367

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