



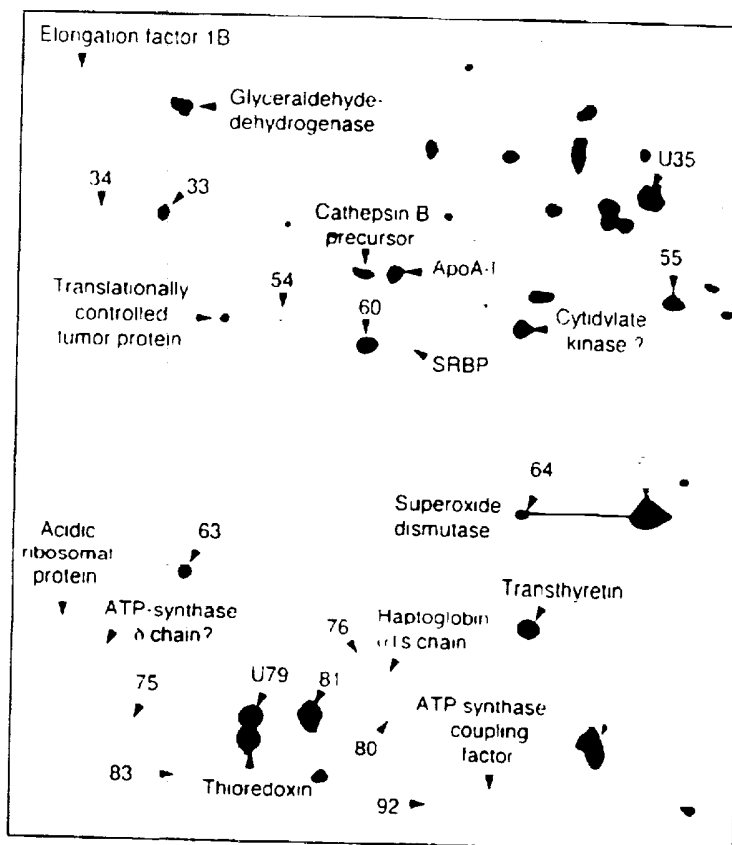
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification⁵: G01N 33/574, 33/561, C12Q 1/68</p>	<p>A3</p>	<p>(11) International Publication Number: WO 94/12881 (43) International Publication Date: 9 June 1994 (09.06.94)</p>
<p>(21) International Application Number: PCT/EP93/03314 (22) International Filing Date: 26 November 1993 (26.11.93) (30) Priority Data: 07/990,302 2 December 1992 (02.12.92) US (71)(72) Applicants and Inventors: HOCHSTRASSER, Denis, F. [CH/CH]; 27, chemin de la Savonnière, CH-1245 Collonge-Bellerive (CH). HUGHES, Graham, J. [GB/CH]; 12, rue du Collombier, CH-1202 Genève (CH). (72) Inventor; and (75) Inventor/Applicant (for US only): APPEL, Ron, D. [CH/CH]; 26, route des Carres, CH-1252 Meinier (CH). (74) Agent: BARO, Alain; Katzarov S.A., 19, rue des Epinettes, CH-1227 Genève (CH).</p>	<p>(81) Designated States: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, 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).</p> <p>Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</p> <p>(88) Date of publication of the international search report: 21 July 1994 (21.07.94)</p>	

(54) Title: A METHOD FOR DETECTING GROWING CELLS USING TRANSLATIONALLY CONTROLLED TUMOR PROTEIN p21

(57) Abstract

This invention relates to a novel method for detecting growing cells including cancer cells based upon elevated expression of a gene designated Translationally Controlled Tumor Protein p21. The invention provides for direct and indirect methods of quantifying this marker including immunoassays and nucleic acid hybridization assays.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgyzstan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LU	Luxembourg	TD	Chad
CS	Czechoslovakia	LV	Latvia	TG	Togo
CZ	Czech Republic	MC	Monaco	TJ	Tajikistan
DE	Germany	MD	Republic of Moldova	TT	Trinidad and Tobago
DK	Denmark	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	US	United States of America
FI	Finland	MN	Mongolia	UZ	Uzbekistan
FR	France			VN	Viet Nam
GA	Gabon				

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 93/03314

A. CLASSIFICATION OF SUBJECT MATTER

IPC 5 G01N33/574 G01N33/561 C12Q1/68

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 G01N C07K C12Q

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.
A	NUCLEIC ACIDS RES., 17(20), 8367 1989 Gross, Burckhard et al 'cDNA sequence coding for a translationally controlled human tumor protein' cited in the application see the whole document	1-16
A	NUCLEIC ACIDS RES., 16(5, PT. B), 2350 1988 Chitpatima, S. Tim et al 'Nucleotide sequence of a major messenger RNA for a 21 kilodalton polypeptide that is under translational control in mouse tumor cells' cited in the application see the whole document	1-16
	-/--	

 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

4 May 1994

Date of mailing of the international search report

18.05.94

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

Döpfer, K-P

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 93/03314

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PLANT MOL. BIOL., 19(3), 501-3 1992 Pay, Aniko et al 'An alfalfa cDNA encodes a protein with homology to translationally controlled human tumor protein' cited in the application ---	1-16
A	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA vol. 82, no. 6, March 1985, WASHINGTON US pages 1795 - 1799 GARY E. GALLICK ET AL. 'Expression of p21ras in fresh primary and metastatic human colorectal tumors' see the whole document ---	1-4, 6-9, 11-13, 15
A	EP,A,0 505 012 (F. HOFFMANN-LAROCHE &CO. AKTIENGESELLSCHAFT) 23 September 1992 see the whole document ---	1, 2, 5, 7, 10, 14, 16
A	WO,A,90 10233 (BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM) 7 September 1990 see the whole document ---	1-4, 6-9, 11-13, 15
A	EP,A,0 177 814 (CETUS CORPORATION) 16 April 1986 see the whole document -----	1-4, 6-9, 11-13, 15

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 93/03314

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP-A-0505012	23-09-92	US-A, B 4683202	28-07-87
		AU-B- 586233	06-07-89
		AU-A- 5532286	02-10-86
		AU-B- 591104	30-11-89
		AU-A- 5532386	02-10-86
		CA-A- 1237685	07-06-88
		DE-A- 3687287	28-01-93
		DE-A- 3687537	04-03-93
		DE-T- 502588	16-12-93
		EP-A, B 0200362	05-11-86
		EP-A, B 0201184	12-11-86
		EP-A- 0502588	09-09-92
		EP-A- 0509612	21-10-92
		EP-A- 0502589	09-09-92
		JP-B- 4067957	29-10-92
		JP-A- 62000281	06-01-87
		JP-B- 4067960	29-10-92
JP-A- 61274697	04-12-86		
JP-A- 6007166	18-01-94		
US-A- 5176995	05-01-93		

WO-A-9010233	07-09-90	US-A- 5221612	22-06-93
		AU-B- 635917	08-04-93
		AU-A- 5042290	26-09-90
		EP-A- 0462115	27-12-91
		JP-T- 4504168	23-07-92

EP-A-0177814	16-04-86	US-A- 4762706	09-08-88
		AU-B- 591461	07-12-89
		AU-A- 4756985	27-03-86
		CA-A- 1265649	06-02-90
		EP-A- 0175360	26-03-86
		JP-A- 61085327	30-04-86
		US-A- 4798787	17-01-89
		AU-B- 596952	24-05-90
		AU-A- 4876585	24-04-86
		CA-A- 1257540	18-07-89
		JP-A- 61204135	10-09-86
