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(74) Agent: **REINHOLD COHN AND PARTNERS**; P.O.
Box 4060, 61040 Tel Aviv (IL).

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(71) Applicant (*for all designated States except US*): **COMPU-
GEN LTD.** [IL/IL]; 72 Pinchas Rozen Street, 69512 Tel
Aviv (IL).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **MINTZ, Liat**
[IL/IL]; Harav Kook Street 14, 47254 Ramat Hasharon
(IL). **SAVITZKY, Kinneret** [IL/IL]; 44 Metodela Street,
69548 Tel Aviv (IL). **ENGEL, Sharon** [IL/IL]; Hagefen
Street 10A, 47254 Ramat Hasharon (IL).

(54) Title: NUCLEIC ACID AND AMINO ACID SEQUENCES OF A VEGF VARIANT

(57) Abstract: The invention concerns novel nucleic acid sequences and amino acid sequences of a novel variant of vascular endothelial growth factor (VEGF). The invention further concerns expression vectors and host cells containing said sequences as well as pharmaceutical compositions and detection methods using said sequences.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/IL 02/00491

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/19 C07K14/52 C12N5/10 A61K38/19 C12Q1/68
C07K16/24 G01N33/50 G01N33/68

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 7 C12N C07K A61K C12Q G01N

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)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, EMBASE, EMBL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 40197 A (COLLATERAL THERAPEUTICS INC ; ANDREASON GRAI (US); BAIRD ANDREW (US) 12 August 1999 (1999-08-12) claims 1-79; figure 3 ---	1,3,4, 12,16, 17, 25-28, 30-36
X	DATABASE EMBL 'Online! EBI; 7 January 2000 (2000-01-07) Database accession no. AL136131 XP002231090 --- -/--	26,28

☒ 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
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- * & * document member of the same patent family

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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

Mabit, H

INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PALEY PAMELA J ET AL: "Vascular endothelial growth factor expression in early stage ovarian carcinoma." CANCER, vol. 80, no. 1, 1997, pages 98-106, XP002231274 ISSN: 0008-543X page 100, column 1, line 3 -page 101, column 2, line 5 ---	9-11, 22-24, 37-39
X	DATABASE EMBL 'Online!' EBI; 18 April 1997 (1997-04-18) Database accession no. AA350839 XP002231091 ---	12,25
X	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 12, 29 October 1999 (1999-10-29) & JP 11 178593 A (FUJIREBIO INC), 6 July 1999 (1999-07-06) abstract ---	29
X	NIELSEN H J ET AL: "Soluble vascular endothelial growth factor in various blood transfusion components." TRANSFUSION (BETHESDA), vol. 39, no. 10, October 1999 (1999-10), pages 1078-1083, XP002231275 ISSN: 0041-1132 page 1080, column 1, paragraph 2 ---	43
X	ONO KATSUAKI ET AL: "Structural features in heparin that interact with VEGF165 and modulate its biological activity." GLYCOBIOLOGY, vol. 9, no. 7, July 1999 (1999-07), pages 705-711, XP009006033 ISSN: 0959-6658 page 705, column 2, paragraph 2 ---	40-42
A	ROBINSON C J ET AL: "THE SPLICE VARIANTS OF VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) AND THEIR RECEPTORS" JOURNAL OF CELL SCIENCE, ESSEX, GB, vol. 114, no. PART 5, March 2001 (2001-03), pages 853-865, XP001105017 -----	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL 02/00491

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:
see FURTHER INFORMATION sheet PCT/ISA/210
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:

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

Continuation of Box I.1

Although claims 6, 8, 19, 21, 33, 35, 36 are 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.

Although claims 9-11, 22-24, 37-39, and 43 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IL 02/00491

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9940197 A	12-08-1999	AU 2583399 A	23-08-1999
		CA 2319664 A1	12-08-1999
		CN 1295617 T	16-05-2001
		EP 1053326 A2	22-11-2000
		JP 2002502608 T	29-01-2002
		WO 9940197 A2	12-08-1999
		US 6479654 B1	12-11-2002
JP 11178593 A	06-07-1999	NONE	