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

WO 02/07676 A3

(54) Title: COMPOUNDS HAVING AFFINITY FOR THE GRANULOCYTE-COLONY STIMULATING FACTOR RECEPTOR (G-CSFR)

(57) Abstract: Novel compounds are provided that bind to G-CSFR. The novel compounds have a peptide chain approximately 6 to 40 amino acids in length that binds to G-CSFR. The compounds are useful as probes for affinity screening. In addition, the compounds have demonstrated agonist or antagonist activity for the G-CSFR, and are therefore useful in treatment of diseases including patients who suffer from a low white blood cell titer. Pharmaceutical compositions and methods of use are provided as well.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/23046

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : C07K 7/00
US CL : 530/328
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)
U.S. : 530/328, 350

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 practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 494 260 B1 (SMITH et al.) 14 June 1995 (14.06.1995), see entire document.	1-5 and 32-40
A	US 5,589,456 A (SMITH et al.) 31 December 1996 (31.12.1996), se entire document.	1-5, 32-40

☐ Further documents are listed in the continuation of Box C. ☐ See patent family 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 application or patent 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	Date of mailing of the international search report
16 January 2002 (16.01.2002)	18 MAR 2002
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer Bradley L. Sisson Telephone No. (703) 308-0196

Dorthea Lawrence for

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/23046

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claim 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. ☐ Claim 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:
Please See Continuation 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.: 1-5 and 32-40 to the extent that they read on SEQ ID NO:8

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/23046

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In order for more than one species to be examined, the appropriate additional examination fees must be paid. The species are as follows:

a) the 2,783,486,160 species encompassed by SEQ ID NO:1 (claim 1);
b) the 375 species encompassed by SEQ ID NO:2 (claim 6);
c) the 160 species encompassed by SEQ ID NO:3 (claim 10);
d) the 16 species encompassed by SEQ ID NO:4 (claim 15);
e) the 1,209,158,496 species encompassed by SEQ ID NO:5 (claim 18);
f) the 55,440 species encompassed by SEQ ID NO:6 (claim 23);
g) the 136,080 species encompassed by SEQ ID NO:7 (claim 28); and
f) the 57 species encompassed by claim 41.

Continuation of 1(ii).
Claims 1-5 and 32-40 relate to the first invention and will be searched to the extent that they read on the first disclosed peptide species: SEQ ID NO:8
The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Each of the species is directed to a peptide that has a different amino acid compound and as such constitute different invnetions. Accordingly, the species of polypeptides are not so linked by a special technical feature that they have unity of invention.

Continuation of B. FIELDS SEARCHED Item 3:
EAST, STN Registry File
Search terms: SEQ ID NO:8