

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 February 2003 (13.02.2003)

PCT

(10) International Publication Number
WO 03/011277 A3

(51) International Patent Classification⁷: **A61K 31/33**,
31/555

(74) Agents: **MURASHIGE, Kate, H.** et al.; Morrison & Foerster LLP, 3811 Valley Centre Drive, Suite 500, San Diego, CA 92130-2332 (US).

(21) International Application Number: PCT/US02/24212

(22) International Filing Date: 30 July 2002 (30.07.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/309,196 31 July 2001 (31.07.2001) US
60/382,155 20 May 2002 (20.05.2002) US

(71) Applicant (for all designated States except US):
ANORMED INC. [CA/CA]; No. 200-20353 64th
Avenue, Langley, British Columbia V2Y 1N5 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BRIDGER, Gary, J.** [US/US]; 445 South Garden Street, Bellingham, WA 98225 (US). **ABRAMS, Michael, J.** [US/US]; 9543 Stein Road, Custer, WA 98240 (US). **HENSON, Geoffrey, W.** [US/US]; 6128 N. Beulah Avenue, Ferndale, WA 98248 (US). **MACFARLAND, Ronald, Trevor** [US/CA]; No. 301 - 1066 Hamilton Street, Vancouver, British Columbia V6B 2R9 (CA). **CALANDRA, Gary, B.** [US/US]; 50 Wyndham Drive, Cresco, PA 18326 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
22 May 2003

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.

(54) Title: METHODS TO MOBILIZE PROGENITOR/STEM CELLS

(57) Abstract: The present invention is directed to methods to elevate progenitor and stem cell counts in animal subjects using compounds which bind to the chemokine receptor CXCR4.



WO 03/011277 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US02/24212

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :A61K 31/33, 31/555

US CL :514/183, 184

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. : 514/183, 184

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,021,409 (MURRER ET AL) 04 June 1991 (04.06.91), see the entire document.	1-29
A	US 5,583,131 A (BRIDGER ET AL) 10 December 1996 (10.12.96), see the entire document.	1-29
A	US 5,698,546 A (BRIDGER ET AL) 16 December 1997 (16.12.97), see the entire document.	1-29

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:		"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
"A"	document defining the general state of the art which is not considered to be of particular relevance	"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
"E"	earlier document published on or after the international filing date	"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
"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)	"&"	document member of the same patent family
"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		

Date of the actual completion of the international search	Date of mailing of the international search report
17 SEPTEMBER 2002	19 DEC 2002

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-8230

Authorized officer

Delicia D. Roberts for
RAYMOND J. HENLEY III

Telephone No. (703) 308-1235

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US02/24212

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. ☐ 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:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers 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.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US02/24212

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The abstract is too long (PCT Rule 8.1(b)). The abstract must be less than 150 words, or 200 words when no Figure is to be published.

THE NEW ABSTRACT IS AS FOLLOWS:

THE PRESENT INVENTION IS DIRECTED TO METHODS TO ELEVATE PROGENITOR AND STEM CELL COUNTS IN ANIMAL SUBJECTS USING COMPOUNDS WHICH BIND TO THE CHEMOKINE RECEPTOR CXCR4.