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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 November 2004 (25.11.2004)

PCT

(10) International Publication Number
WO 2004/101606 A3

(51) International Patent Classification[7]: C07K 14/505, 14/71, 7/64, A61K 38/18, 38/12

(21) International Application Number: PCT/US2004/014889

(22) International Filing Date: 12 May 2004 (12.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/469,993 12 May 2003 (12.05.2003) US
60/470,244 12 May 2003 (12.05.2003) US

(71) Applicant *(for all designated States except US)*: **AFFYMAX, INC.** [US/US]; 4001 Miranda Avenue, Palo Alto, CA 94304 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **HOLMES, Christopher, P.** [US/US]; 13633 Westover Drive, Saratoga, CA 95070 (US). **YIN, Qun** [CN/US]; 747 Coastland Drive, Palo Alto, CA 94303 (US). **LALONDE, Guy** [CA/US]; 20007 Skyline Boulevard, Woodside, CA 94062 (US). **SCHATZ, Peter** [US/US]; 10949 Sycamore Drive, Cupertino, CA 95014 (US). **TUMELTY, David** [US/US]; 250 Santa Fe Terrace #106, Sunnyvale, CA 94085 (US). **PALANI, Balu** [US/US]; 21856 Dolores Avenue, Cupertino, CA 95014 (US). **ZEMEDE, Gemete, H.** [ET/US]; 1000 Kiley Blvd. #106, Santa Clara, CA 95051 (US).

(74) Agents: **FEHLNER, Paul, F.** et al.; Darby & Darby P.C., P.O. Box 5257, New York, NY 10150-5257 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (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 September 2005

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: NOVEL PEPTIDES THAT BIND TO THE ERYTHROPOIETIN RECEPTOR

(57) Abstract: The present invention relates to peptide compounds that are agonists of the erythropoietin receptor (EPO-R). The invention also relates to therapeutic methods using such peptide compounds to treat disorders associated with insufficient or defective red blood cell production. Pharmaceutical compositions, which comprise the peptide compounds of the invention, are also provided.

WO 2004/101606 A3