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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 March 2002 (14.03.2002)

PCT

(10) International Publication Number
WO 02/019963 A3

(51) International Patent Classification[7]: A61K 38/00, C07K 1/00, 14/505

(21) International Application Number: PCT/US01/21928

(22) International Filing Date: 12 July 2001 (12.07.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/231,339 8 September 2000 (08.09.2000) US
60/236,377 29 September 2000 (29.09.2000) US

(71) Applicant *(for all designated States except US)*: **GRYPHON SCIENCES** [US/US]; 250 East Grand Avenue, South San Francisco, CA 94080-4824 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **KOCHENDOERFER, Gerd** [DE/US]; 683 66th Street, Oakland, CA 94609 (US). **BOTTI, Paolo** [IT/IT]; Via Vittorio Veneto 18, 29100 Piacewza (IT). **BRADBURNE, James, A.** [US/US]; 137 Myrtle Street, Redwood City, CA 94062 (US). **CHEN, Shiah-yun** [—/US]; 3836 Appian Street, Pleasanton, CA 94588 (US). **CRESSMAN, Sonya** [CA/US]; 365 Talbot Avenue, Apt. D6, Pacifica, CA 94044 (US). **HUNTER, Christie, L.** [CA/US]; 3223 Glendora Drive, #4, San Mateo, CA 94403 (US). **KENT, Stephen, B.H.** [US/US]; 273 Hartford Avenue, San Francisco, CA 94114 (US). **LOW, Donald, W.** [US/US]; 1404 Floribunda Avenue #201, Burlingame, CA 94010 (US).

(74) Agent: **AUERBACH, Jeffrey, I.**; Liniak, Berenato, Longacre, & White, Suite 240, 6550 Rock Spring Drive, Bethesda, MD 20817 (US).

(81) Designated States *(national)*: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW.

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

Published:
— *with international search report*

(88) Date of publication of the international search report:
6 February 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.

WO 02/019963 A3

(54) Title: SYNTHETIC ERYTHROPOIESIS STIMULATING PROTEINS

(57) Abstract: Synthetic erythropoiesis stimulating proteins are provided. Also provided are methods for synthesizing the proteins. The invention further relates to derivatives of such synthetic erythropoiesis stimulating proteins that are polymer-modified in a defined manner. Methods and uses for such proteins and derivatized proteins are also provided.