

(51) International Patent Classification:
C07K 14/505 (2006.01)(21) International Application Number:
PCT/EP2009/006783(22) International Filing Date:
21 September 2009 (21.09.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
08016678.8 23 September 2008 (23.09.2008) EP(71) Applicant (for all designated States except US): **F. HOFFMANN-LA ROCHE AG** [CH/CH]; Grenzacherstrasse 124, CH-4070 Basel (CH).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SCHMALZ, Christian** [DE/DE]; Steingadenerstrasse 9A, 82362 Weilheim (DE). **SCHMELZER, Antje** [DE/DE]; Fennstrasse 12a, 12439 Berlin (DE).(74) Agent: **BURGER, Alexander**; Roche Diagnostics GmbH, Patent Department (TR-E), Postfach 11 52, 82372 Penzberg (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

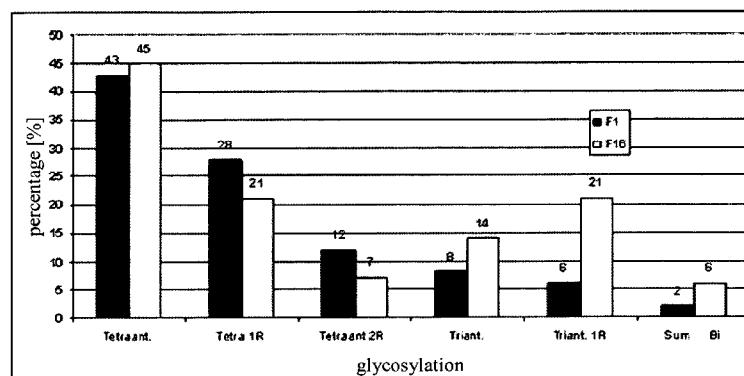
Published:

— with international search report (Art. 21(3))

— with sequence listing part of description (Rule 5.2(a))

(54) Title: PURIFICATION OF ERYTHROPOIETIN

Fig. 10



(57) Abstract: In the present invention a method for purifying erythropoietin comprising at least one chromatography step using a stationary phase containing hydroxyapatite is reported. The method comprises the following steps i) the erythropoietin in a solution containing Calcium-ions is brought into contact with a stationary phase containing hydroxyapatite equilibrated with a solution containing Calcium-ions and namely under conditions under which the erythropoietin binds to the stationary phase containing hydroxyapatite, ii) a solution is passed over the stationary phase containing hydroxyapatite from i) which contains less Calcium-ions than the previous solution and the erythropoietin is not detached from stationary phase containing hydroxyapatite, and iii) a further solution which contains less than 0.5 mM Calcium-ions is passed over the stationary phase containing hydroxyapatite from ii) whereby the erythropoietin is detached from the stationary phase containing hydroxyapatite.