

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 July 2009 (09.07.2009)

(10) International Publication Number
WO 2009/086296 A3

PCT

(51) International Patent Classification:

A61K 9/08 (2006.01) *A61K 47/26* (2006.01)
A61K 47/12 (2006.01) *A61K 38/00* (2006.01)
A61K 47/18 (2006.01) *B01D 29/00* (2006.01)

(21) International Application Number:

PCT/US2008/088005

(22) International Filing Date:

22 December 2008 (22.12.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/017,418 28 December 2007 (28.12.2007) US

(71) Applicants (for all designated States except US): **BAXTER INTERNATIONAL INC.** [US/US]; One Baxter Parkway, Deerfield, IL 60015 (US). **BAXTER HEALTHCARE S.A.** [CH/CH]; Hertistrasse 2, CH-8304 Wallisellen (CH).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NIKOLIC, Nebojsa** [AT/AT]; Prechtlgasse 2a/8, A-1090 Vienna (AT). **FREY, Michaela** [AT/AT]; Tokiostrasse 3/3/7, A-1220 Vienna (AT). **GRABMAYER, Wolfgang** [AT/AT]; Floetzersteig 132, A-1140 Vienna (AT). **JANCIK, Thomas** [AT/AT]; Carl-Appel-Strasse 7/17.2, A-1100 Vienna (AT). **FRIED, Matthias** [AT/AT]; Oberduernbach 62, A-3721 Limberg (AT). **TSCHETSCHKOWITSCH, Klaus** [AT/AT]; Malfattigasse 45/43, A-1120 Vienna (AT). **SCHNECKER, Kurt** [AT/AT]; Promenadeweg 6, A-1170 Vienna (AT). **RIEGLER, Barbara** [AT/AT]; Klosterneuburger Strasse 102/12, A-1200 Vienna (AT). **KASAPOVIC, Alma** [AT/AT]; Leystrasse 80/4/20, A-1200 Vienna (AT).

(74) Agent: **PATEL, Sandip, H.**; Marshall, Gerstein & Borun LLP, 233 S. Wacker Drive, Suite 6300, Sears Tower, Chicago, IL 60606-6357 (US).

(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, 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, 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, MT, NL, NO, 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 (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

27 August 2009

(54) Title: COUNTER-PRESSURE FILTRATION OF PROTEINS

(57) Abstract: A method is disclosed for filtering a protein in a liquid mixture in a manner that does not substantially damage or otherwise limit the recovery of the protein in the filtration filtrate. The method generally includes passing a liquid mixture containing a protein (e.g., an aqueous vWF mixture) through a filter while applying a counter pressure to the liquid mixture filtrate to accurately reduce and control the pressure differential across the filter. The disclosed method has the advantage that relatively high filtration flow rates can be achieved at relatively low pressure differentials, in contrast to high pressure differentials, which actually reduce the filtration flow rate of protein liquid mixtures. Further, the method can recover substantially all of the protein that is initially present in the liquid mixture.



WO 2009/086296 A3