



(51) International Patent Classification:

G01N 30/74 (2006.01) G01N 30/32 (2006.01)
B01D 15/14 (2006.01) B01D 15/16 (2006.01)
C07K 1/16 (2006.01)

(21) International Application Number:

PCT/US2022/030699

(22) International Filing Date:

24 May 2022 (24.05.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/192,642 25 May 2021 (25.05.2021) US

(71) Applicant: **BOEHRINGER INGELHEIM INTERNATIONAL GMBH** [DE/DE]; Binger Strasse 173, 55216 Ingelheim am Rhein (DE).

(72) Inventors; and

(71) Applicants (for US only): **CREASY, Arch David** [US/US]; Pfizer Inc., 235 East 42nd Street, New York, New York 10017 (US). **KWONG, Aaron Thomas** [US/US]; c/o VP, IP Legal, Boehringer Ingelheim USA Corp., 900 Ridgebury Rd., P.O. Box 368, Ridgefield, Connecticut 06877-0368 (US). **KYSER, Zachary Ryan** [US/US]; c/o VP, IP Legal, Boehringer Ingelheim USA Corp., 900 Ridgebury Rd., P.O. Box 368, Ridgefield, Connecticut 06877-0368 (US). **OROZCO, Raquel** [US/US]; c/o VP, IP Legal, Boehringer Ingelheim USA Corp., 900 Ridgebury Rd., P.O. Box 368, Ridgefield, Connecticut 06877-0368 (US).

(US). **STORK, Matthew Joseph** [US/US]; Pfizer Inc., 235 East 42nd Street, New York, New York 10017 (US).

(74) Agent: **LOCKENOUR, Andrea** et al.; Boehringer Ingelheim USA Corp., 900 Ridgebury Road, P.O. Box 368, Ridgefield, Connecticut 06877-368 (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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

(54) Title: TITER METHOD USING UV MEASUREMENT FOR CONTINUOUS BIOLOGICAL PRODUCTION

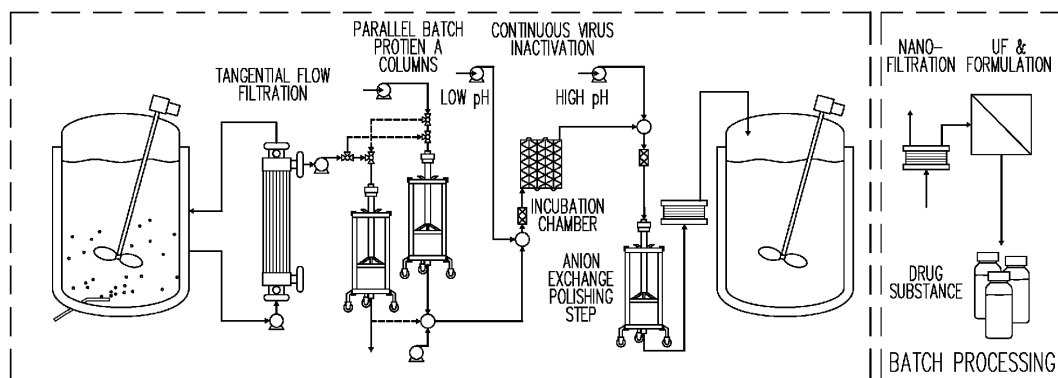


FIG. 1

(57) Abstract: Disclosed herein are methods of determining load volumes for capture chromatography in system and methods for continuous manufacture of a biological product.

Published:

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