



(51) International Patent Classification:

C07K 14/415 (2006.01) *C12P 21/00* (2006.01)
C12N 5/00 (2006.01) *C12P 21/06* (2006.01)
C12N 15/09 (2006.01)

(21) International Application Number:

PCT/US2018/040734

(22) International Filing Date:

03 July 2018 (03.07.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

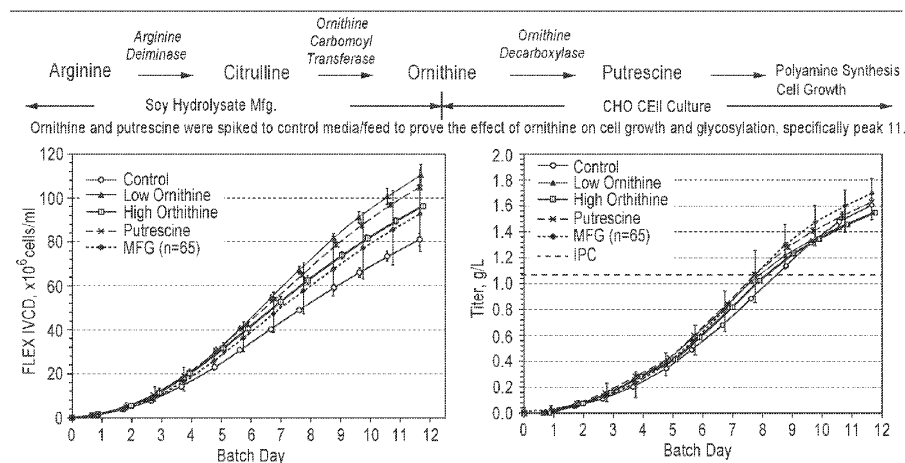
62/529,471 06 July 2017 (06.07.2017) US
 62/625,744 02 February 2018 (02.02.2018) US

(71) Applicant: **REGENERON PHARMACEUTICALS, INC.** [US/US]; 777 Old Saw Mill River Rd., Tarrytown, New York 10591 (US).

(72) Inventors: **CHEN, John**; 777 Old Saw Mill River Rd., Tarrytown, New York 10591 (US). **LAWRENCE, Shawn**; 777 Old Saw Mill River Rd., Tarrytown, New York 10591 (US). **JOHNSON, Amy**; 777 Old Saw Mill River Rd., Tarrytown, New York 10591 (US). **LONEY, Theodore**; 777 Old Saw Mill River Rd., Tarrytown, New York 10591 (US). **PANGULE, Ravindra**; 308 Hannah Way, Bridgewater, New Jersey 08807 (US). **HANG, Ta-Chun**; 31 Stacey Court, Cohoes, New York 12047 (US). **CARVER, Scott**; 777 Old Saw Mill River Rd., Tarrytown, New York 10591 (US). **SCHILLING, Bernhard**; 777 Old Saw Mill River Rd., Tarrytown, New York 10591 (US).

(54) Title: CELL CULTURE PROCESS FOR MAKING A GLYCOPROTEIN

FIGURE 6A



(57) **Abstract:** The instant application provides a method for screening batches of soy hydrolysate for a desired amount of a component thereof, such as ornithine or putrescine, and selecting only those batches of soy hydrolysate that have a desired amount of such component. The present disclosure also sets forth methods for culturing cells in media supplemented with selected batches of soy to produce more consistent, high quality lots of a protein of interest. Further, the present disclosure provides a plurality of protein preparations that have each been produced by culturing cells in media supplemented with separate batches of soy hydrolysate containing a desired amount of ornithine or putrescine, whereby each batch of protein produced exhibits improved quality of the protein of interest or amount of quality protein produced.

[Continued on next page]

(74) **Agent:** PAVAO, Matthew et al.; Cooley LLP, 1299 Pennsylvania Avenue, NW, Suite 700, Washington, District of Columbia 20004-2400 (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, IR, IS, 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, SM, ST, SV, SY, TH, 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, 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))*

Published:

— *with international search report (Art. 21(3))*
 — *with sequence listing part of description (Rule 5.2(a))*