

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
20 August 2020 (20.08.2020)



(10) International Publication Number
WO 2020/167796 A1

(51) International Patent Classification:

C12N 9/14 (2006.01) C12P 19/24 (2006.01)
C12N 9/90 (2006.01) C12P 19/14 (2006.01)

(21) International Application Number:

PCT/US2020/017708

(22) International Filing Date:

11 February 2020 (11.02.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/804,426 12 February 2019 (12.02.2019) US

(71) Applicant: **BONUMOSE LLC** [US/US]; 1725 Discovery Drive, Suite 220, Charlottesville, VA 22911 (US).

(72) Inventor: **WICHELECKI, Daniel, Joseph**; 1052 Bristlecone Lane, Charlottesville, VA 22911 (US).

(74) Agent: **JHAVERI, Sulay, D.**; J.A. Lindeman & Co., PLLC, 3190 Fairview Park Drive, Suite 1070, Falls Church, VA 22042 (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, 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).

Published:

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

(54) Title: ENZYMATIC PRODUCTION OF MANNOSE

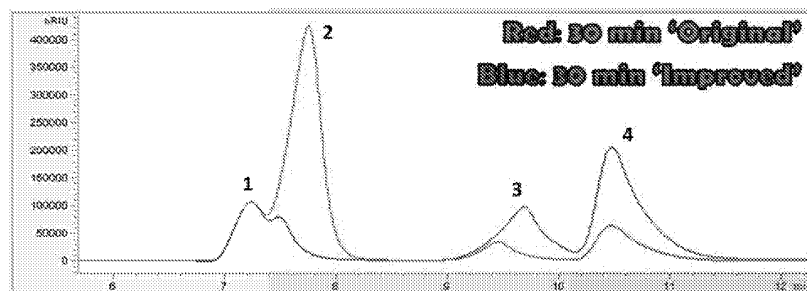


FIG. 7

(57) Abstract: Disclosed herein are improved processes for making mannose including the step of converting the M6P to mannose, catalyzed by a M6PP, using enzymes with higher activities compared to M6PPs previously used in a process to produce mannose.

WO 2020/167796 A1