

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
12 August 2021 (12.08.2021)



(10) International Publication Number
WO 2021/158831 A1

(51) International Patent Classification:

C12N 5/071 (2010.01) A23L 13/30 (2016.01)
C12N 5/077 (2010.01) A23L 35/00 (2016.01)
C12N 5/00 (2006.01) A23J 1/00 (2006.01)

(21) International Application Number:

PCT/US2021/016681

(22) International Filing Date:

04 February 2021 (04.02.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/970,109 04 February 2020 (04.02.2020) US
17/033,635 25 September 2020 (25.09.2020) US

(71) Applicant: **UPSIDE FOODS, INC.** [US/US]; 804 Heinz Avenue, Berkeley, California 94710 (US).

(72) Inventors: **KAYSER, Kevin J.**; c/o Memphis Meats, Inc., 804 Heinz Avenue, Berkeley, California 94710 (US).

REASE, Morgan Laurence; c/o Memphis Meats, Inc., 804 Heinz Avenue, Berkeley, California 94710 (US). **JUHAS, Mark E.**; c/o Memphis Meats, Inc., 804 Heinz Avenue, Berkeley, California 94710 (US). **JOSLIN, Jessica M.**; c/o Memphis Meats, Inc., 804 Heinz Avenue, Berkeley, California 94710 (US). **VALETI, Uma S.**; c/o Memphis Meats, Inc., 804 Heinz Avenue, Berkeley, California 94710 (US). **SCHULZE, Eric N.**; c/o Memphis Meats, Inc., 804 Heinz Avenue, Berkeley, California 94710 (US).

(74) Agent: **CHRISTIANSEN, William T.** et al.; Cooley LLP, 1299 Pennsylvania Ave., Suite 700, Washington, District of Columbia 20004 (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, IT, 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,

(54) Title: CHARACTERISTICS OF MEAT PRODUCTS

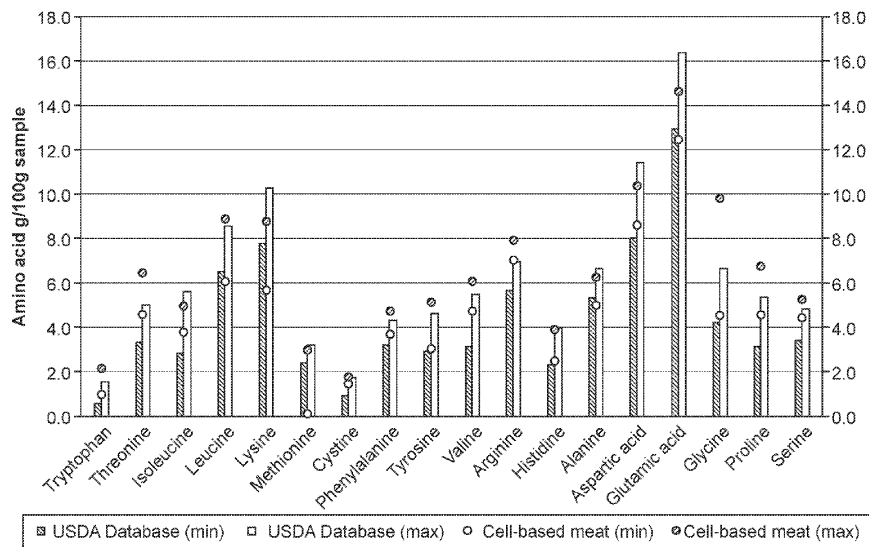


FIG. 1

(57) Abstract: The present disclosure provides methods and compositions useful for the production of slaughter-free meat products, and the characterizations of the same. The slaughter-free meat products contain several points of distinction when compared to conventional meat procured by harvesting the tissue of a dead animal. Such points of distinction include, but are not limited to, significantly reduced or substantially no: steroid hormones, antibiotics, or microbial contamination; lower fat content; no vasculature; and extended shelf life both at room temperature and when refrigerated.

[Continued on next page]

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))*

Published:

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