

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



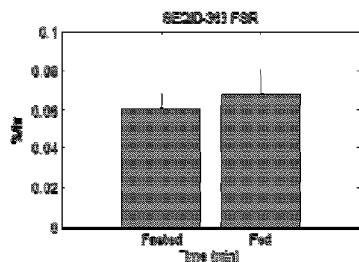
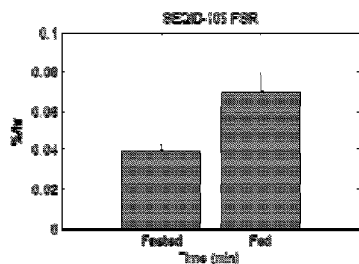
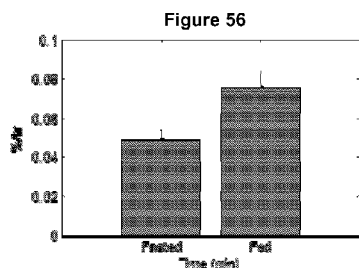
(10) International Publication Number
WO 2015/048342 A8

(43) International Publication Date
2 April 2015 (02.04.2015)

(51) International Patent Classification:		61/882,254	25 September 2013 (25.09.2013)	US
<i>A23L 1/305</i> (2006.01)	<i>A61K 38/00</i> (2006.01)	61/882,212	25 September 2013 (25.09.2013)	US
<i>A23L 1/29</i> (2006.01)	<i>A61K 31/198</i> (2006.01)	61/882,214	25 September 2013 (25.09.2013)	US
(21) International Application Number:		61/882,267	25 September 2013 (25.09.2013)	US
PCT/US2014/057537		61/882,189	25 September 2013 (25.09.2013)	US
(22) International Filing Date:		61/882,129	25 September 2013 (25.09.2013)	US
25 September 2014 (25.09.2014)		61/882,295	25 September 2013 (25.09.2013)	US
(25) Filing Language:		61/882,225	25 September 2013 (25.09.2013)	US
(26) Publication Language:		61/882,220	25 September 2013 (25.09.2013)	US
(30) Priority Data:		61/882,264	25 September 2013 (25.09.2013)	US
61/882,300	25 September 2013 (25.09.2013)	US	61/882,219	25 September 2013 (25.09.2013)
61/882,235	25 September 2013 (25.09.2013)	US	61/882,243	25 September 2013 (25.09.2013)
61/882,232	25 September 2013 (25.09.2013)	US	61/882,211	25 September 2013 (25.09.2013)
61/882,198	25 September 2013 (25.09.2013)	US	61/882,246	25 September 2013 (25.09.2013)
61/882,222	25 September 2013 (25.09.2013)	US	61/882,234	25 September 2013 (25.09.2013)
61/882,274	25 September 2013 (25.09.2013)	US	61/882,240	25 September 2013 (25.09.2013)
61/882,180	25 September 2013 (25.09.2013)	US	61/882,305	25 September 2013 (25.09.2013)
			61/882,250	25 September 2013 (25.09.2013)
			61/882,229	25 September 2013 (25.09.2013)
			61/882,271	25 September 2013 (25.09.2013)

[Continued on next page]

(54) Title: COMPOSITIONS AND FORMULATIONS FOR MAINTAINING AND INCREASING MUSCLE MASS, STRENGTH, AND PERFORMANCE AND METHODS OF PRODUCTION AND USE THEREOF



(57) Abstract: Nutritive polypeptides are provided herein. Also provided are various other embodiments including nucleic acids encoding the polypeptides, recombinant microorganisms that make the polypeptides, vectors for expressing the polypeptides, methods of making the polypeptides using recombinant microorganisms, compositions and formulations that comprise the polypeptides, and methods of using the polypeptides, compositions and formulations.



61/882,260 25 September 2013 (25.09.2013) US
 61/906,862 20 November 2013 (20.11.2013) US

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.

(71) **Applicant: PRONUTRIA, INC.** [US/US]; 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US).

(72) **Inventors: SILVER, Nathaniel, W.;** Pronutria, Inc., 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US). **CHEN, Ying-ja;** Pronutria, Inc., 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US). **BERRY, David, A.;** Pronutria, Inc., 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US). **HAMILL, Michael, J.;** Pronutria, Inc., 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US). **BASU, Subhayu;** Pronutria, Inc., 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US). **HAMM, Luke;** Pronutria, Inc., 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US). **WILLIAMS, Alison;** Pronutria, Inc., 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US). **ERBE, David;** Pronutria, Inc., 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US). **VON MALTZAHN, Geoffrey;** Pronutria, Inc., 840 Memorial Drive, Third Floor, Cambridge, MA 02139 (US).

(74) **Agents: KABLER, Kevin et al.;** Fenwick & West LLP, Silicon Valley Center, 801 California Street, Mountain View, CA 94041 (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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,

(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:

— *of inventorship (Rule 4.17(iv))*

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))*

— *with sequence listing part of description (Rule 5.2(a))*

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

6 August 2015

(48) **Date of publication of this corrected version:**

27 August 2015

(15) **Information about Correction:**

see Notice of 27 August 2015