

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
07 October 2021 (07.10.2021)



(10) International Publication Number  
**WO 2021/202994 A1**

(51) International Patent Classification:

A01N 25/04 (2006.01) A01P 3/00 (2006.01)  
A01N 25/30 (2006.01)

search BV, Kernhemseweg 2, 6718 ZB Ede (NL), **VAN DE VELDE, Freddie**; c/o NIZO Food Research BV, Kernhemseweg 2, 6718 ZB Ede (NL).

(21) International Application Number:

PCT/US2021/025572

(74) Agent: **CHOING, Stephanie**; Morrison & Foerster LLP, 425 Market Street, San Francisco, California 94105 (US).

(22) International Filing Date:

02 April 2021 (02.04.2021)

(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, 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.

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/004,780 03 April 2020 (03.04.2020) US  
63/004,785 03 April 2020 (03.04.2020) US  
63/004,792 03 April 2020 (03.04.2020) US

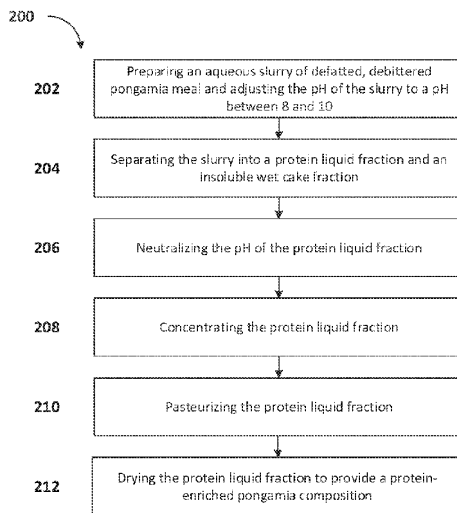
(71) Applicant: **TERVIVA, INC.** [US/US]; 436 14th Street, Suite 1405, Oakland, California 94612 (US).

(72) Inventors: **ASTWOOD, James D.**; c/o TERVIVA, INC., 436 14th Street, Suite 1405, Oakland, California 94612 (US). **VADLAMANI, Keswara Rao**; c/o TerViva, Inc., 436 14th street, Suite 1405, Oakland, California 94612 (US). **MELUH, Pamela Bernadette**; c/o TerViva, Inc., 436 14th street, Suite 1405, Oakland, California 94612 (US). **JANSSEN, Renske Hermine**; c/o NIZO Food Re-

(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,

(54) Title: PONGAMIA PROTEIN PRODUCTS, AND METHODS FOR PRODUCING AND USING THEREOF



(57) Abstract: Provided herein are protein-enriched pongamia compositions, including pongamia protein concentrates and isolates, suitable for animal consumption, in particular human consumption. Provided herein are also various food and beverage products that can be fortified with such protein-enriched pongamia compositions. Provided herein are also methods of producing the protein-enriched pongamia compositions, as well as methods of producing such protein-enriched pongamia compositions from pongamia beans or various forms of pongamia meal.

FIG. 2A

[Continued on next page]

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))*