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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
27 September 2012 (27.09.2012)

WIPO | PCT

(10) International Publication Number
WO 2012/128786 A2

(51) International Patent Classification:
A61K 9/48 (2006.01) *A61K 38/14* (2006.01)
C07K 14/00 (2006.01)

(21) International Application Number:
PCT/US2011/052022

(22) International Filing Date:
16 September 2011 (16.09.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/051,646 18 March 2011 (18.03.2011) US

(71) Applicant *(for all designated States except US)*: **ALL-TECH, INC.** [US/US]; 3031 Catnip Hill Pike, Nicholasville, Kentucky 40345 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **KWIATKOWSKI, Stefan** [US/US]; 3031 Catnip Hill Pike, Nicholasville, KY 40356 (US). **POWER, Ronan** [IE/US]; 3031 Catnip Hill Pike, Nicholasville, Kentucky 40356 (US). **MATNEY, Clayton** [US/US]; 3031 Catnip Hill Pike, Nicholasville, KY 40536 (US). **GHOROGHCHIAN, Paiman, P.** [US/US]; 816 Welsh Ayres Way, Downingtown, Pennsylvania 19335 (US). **OSTERTAG, Eric, M.** [US/US]; 350 New Street, Lexington, Kentucky 40507 (US).

(74) Agent: **SISK, Tyler, J.**; Casimir Jones S.C., 2275 Deming Way, Suite 310, Middleton, Wisconsin 53562 (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, 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, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

— *with information concerning one or more priority claims considered void (Rule 26bis.2(d))*

WO 2012/128786 A2

(54) Title: COMPOSITIONS AND METHODS FOR SEPARATING, CHARACTERIZING AND ADMINISTERING SOLUBLE SELENOGLYCOPROTEINS

(57) Abstract: The invention relates to soluble selenium compositions and methods of production, separation and purification thereof. In particular the present invention provides methods of preparing water soluble selenoglycoproteins (e.g., via extracting selenoglycoproteins from selenium enriched yeast), methods of supplementing a selenium deficient composition via admixing water soluble selenoglycoproteins with the selenium deficient composition, compositions comprising the water soluble selenoglycoproteins and methods of administering the same.