



## (51) International Patent Classification:

*C07K 16/26* (2006.01) *C07K 16/44* (2006.01)  
*G01N 33/53* (2006.01)

## (21) International Application Number:

PCT/IB2015/058976

## (22) International Filing Date:

19 November 2015 (19.11.2015)

## (25) Filing Language:

English

## (26) Publication Language:

English

## (30) Priority Data:

62/082,047 19 November 2014 (19.11.2014) US

(71) Applicant: NESTEC S.A. [CH/CH]; Avenue Nestlé 55,  
CH-1800 Vevey (CH).(72) Inventors: SELVARAJ, Fabiyola; 9704 Wren Bluff  
Drive, San Diego, California 92127 (US). PRINCEN,  
Fred; 610 Kirkwood Place, La Jolla, California 92037  
(US). SINGH, Sharat; 8171 Top of the Morning Way,  
Rancho Santa Fe, California 92067 (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, 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.

(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))
- 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 (an) indication(s) in relation to deposited biological  
material furnished under Rule 13bis separately from the  
description (Rules 13bis.4(d)(i) and 48.2(a)(viii))

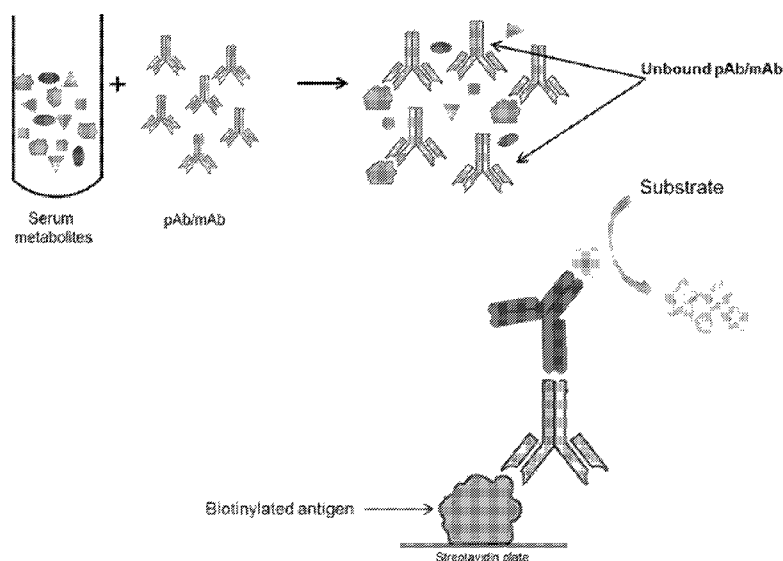
(54) Title: ANTIBODIES AGAINST SEROTONIN, TRYPTOPHAN AND KYNURENINE METABOLITES AND USES THERE-  
OF

FIG. 2

(57) **Abstract:** The present invention provides antibodies and methods for preparing antibodies to metabolites in the serotonin, tryptophan and kynurenine pathways, such as 5- hydroxyindole-3-acetic acid (5-HIAA), melatonin (MT) and kynurenic acid (KYNA). The specific metabolite antibodies have low cross-reactivity to structurally related metabolites, and are useful reagents for specific and sensitive immunoassays. The present invention also provides methods for using such antibodies to measure the levels of 5-HIAA, melatonin, or kynurenic acid in biological samples from human patients.