



(51) International Patent Classification:

A61K 31/136 (2006.01) A61K 31/405 (2006.01)
A61K 31/195 (2006.01)

(21) International Application Number:

PCT/US2019/015391

(22) International Filing Date:

28 January 2019 (28.01.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/623,073 29 January 2018 (29.01.2018) US
62/743,816 10 October 2018 (10.10.2018) US

(71) Applicant: **DUKE UNIVERSITY** [US/US]; 2812 Erwin Road, Suite 306, Durham, North Carolina 27705 (US).

(72) Inventors: **JACOBSEN, Jacob P.R.**; 2023 Sunset Avenue, Durham, North Carolina 27705 (US). **CARON, Marc G.**; 803 Pleasant Green Road, Hillsborough, North Carolina 27278 (US).

(74) Agent: **MURPHY, Sherry L.**; MYERS BIGEL, P.A., PO Box 37428, Raleigh, North Carolina 27627 (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, 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, 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,

(54) Title: COMPOSITIONS AND METHODS OF ENHANCING 5-HYDROXYTRYPTOPHAN BIOAVAILABILITY

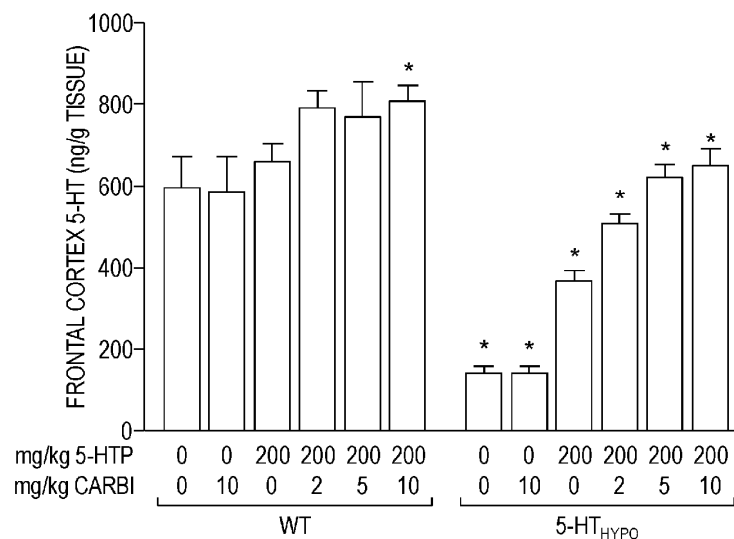


FIG. 1

(57) Abstract: Provided are methods of enhancing bioavailability of enterally administered 5-hydroxytryptophan (5-HTP) in a subject in need thereof, said method comprising enterally co-administering low-dose carbidopa with said 5-HTP, as well as pharmaceutical formulations useful for the same. In some embodiments, the 5-HTP and/or low-dose carbidopa are provided as slow-release formulation(s).

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))*