

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
18 November 2021 (18.11.2021)



(10) International Publication Number
WO 2021/231476 A1

(51) International Patent Classification:

C07K 5/093 (2006.01)

(21) International Application Number:

PCT/US2021/031842

(22) International Filing Date:

11 May 2021 (11.05.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

63/023,686 12 May 2020 (12.05.2020) US

(71) Applicant: **THE GENERAL HOSPITAL CORPORATION** [US/US]; 55 Fruit Street, Boston, Massachusetts 02114 (US).

(72) Inventors: **ICHINOSE, Fumito**; 19 Oak Street, Chestnut Hill, Massachusetts 02467 (US). **MARUTANI, Eizo**; 6 Bolton Street, Apt 1, Somerville, Massachusetts 02143 (US).

(74) Agent: **DEYOUNG, Janice Kugler** et al.; Fish & Richardson P.C., P.O. Box 1022, Minneapolis, Minnesota 55440-1022 (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, 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.

(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))

(54) Title: GLUTATHIONE TRISULFIDE (GSSSG) IN NEUROPROTECTION

(57) Abstract: Methods for the use of glutathione trisulfide (GSSSG) in neuroprotection, e.g., in neurodegenerative diseases and to reduce the risk of ischemic injury. The methods can be used, e.g., to reduce risk of injury to brain, spinal cord, and peripheral nerves from ischemia or low blood flow states possibly caused by surgery, trauma, and other conditions that decrease/impair blood flow and or oxygen delivery to the nervous system.



WO 2021/231476 A1