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(54) Title: INTRANASAL ADMINISTRATION OF AN ANTIOXIDANT COMPOUND FOR TREATING CORONAVIRUS INFECTION

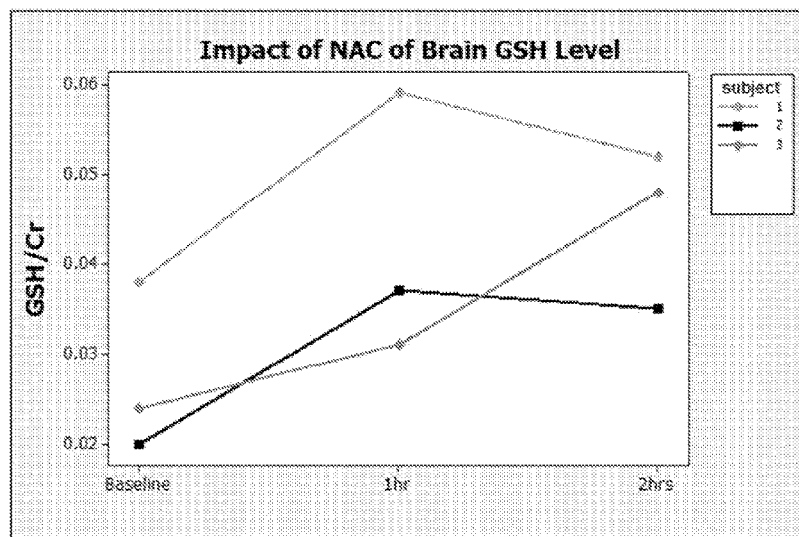


FIG. 4

(57) Abstract: Infection by SARS-CoV-2 is impacting human subjects in their respiratory system and in some cases, their central nervous system (CNS). The virus is hurting certain groups of people more than others, such as the elderly and those with other pre-existing illnesses. Both groups are believed to have lower levels of the antioxidant, glutathione. By delivery of N-acetyl cysteine (NAC) to increase glutathione levels, the present methods reduce the severity of the virus and its symptoms concentrating on the brain and the lungs. NAC may also prevent mild COVID-19 cases from becoming severe. NAC, whether delivered intranasally, inhaled through the mouth, orally or other ways may act as a therapeutic for this virus.



EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
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A. CLASSIFICATION OF SUBJECT MATTER

IPC - A61P 11/00; A61P 25/00; A61K 45/00 (2021.01)

CPC - A61P 11/00; A61P 31/14; A61K 9/0075; A61K 31/724; A61K 31/00; A61M 11/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	IN 202011016345 A (VARMA AMIT) 19 June 2020; Claims 1, 13, 14; Detailed Description: pg. 8, 9	1-32
Y	WO 1998/030228 A1 (EMORY UNIVERSITY) 16 July 1998; Claims: 2, page 1, lines 8-10; page 4, lines 10-20	1-32
Y	WO 2019/084543 A1 (BEYOND BARRIERS THERAPEUTICS, INC.) 02 May 2019; Claims 1, 2, 3, 5; paragraphs [0023], [0052], [0059]-[0061]	7, 9, 12-14-17, 27, 29-30
Y	US 2020/0038320 A1 (HALE BIOPHARMA VENTURES, LLC) 06 February 2020; paragraphs 0030, 0125, 0126, 0129, 0132, 0138, 0137	4, 8, 5, 15
Y	US 8,937,099 B2 (GOLDSTEIN GLENN A.) 20 January 2015; D Description: col. 14 line 60, col 16 line 45, col. 18 line 35	5
Y	WO 2011/127019 A2 (CELGENE CORPORATION) 13 October 2011; Claims: 1, 10, D. Description: 00227	10-11, 31-32
Y	US 7,351,739 B2 (HO CHITANG) 01 April 2008; Description: pages 22, 43-44, 65	30
A	WO 2008/005802 A2 (CYDEX PHARMACEUTICALS, INC.) 10 January 2008; Claims: 1, 40, 48	1-32

 Further documents are listed in the continuation of Box C. See patent family annex.

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