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61/030,089 20 February 2008 (20.02.2008) US(71) Applicant (for all designated States except US): **NEW YORK UNIVERSITY** [US/US]; 70 Washington Square, New York, NY 10012 (US).

(72) Inventors; and

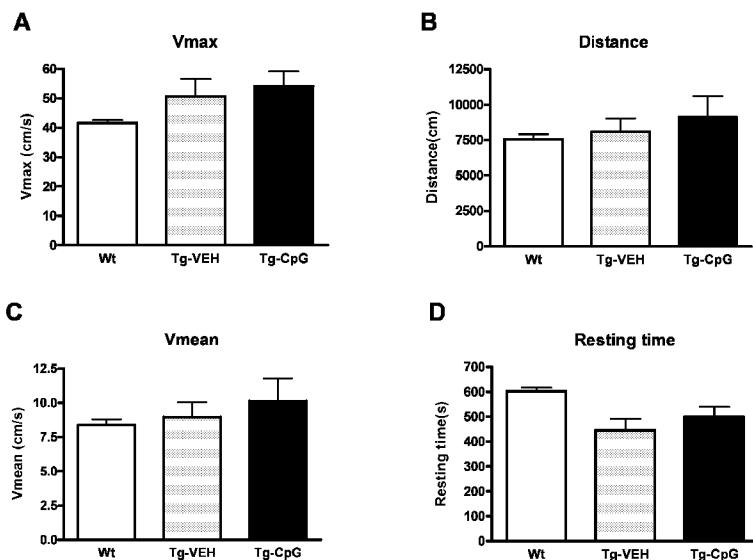
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[Continued on next page]

(54) Title: PREVENTING AND TREATING AMYLOID-BETA DEPOSITION BY STIMULATION OF INNATE IMMUNITY



Figures 1A-D

(57) Abstract: The present invention is directed to a method of preventing or reducing amyloid deposition in a subject. This method involves selecting a subject with amyloid deposits and stimulating the innate immune system of the selected subject under conditions effective to reduce the amyloid deposits. Also disclosed is a method of preventing or treating cerebral amyloidosis and Alzheimer's Disease in a subject by administering to the selected subject an agent that stimulates the innate immune system. In addition, a composition useful for the stimulation of the innate immune system of a subject exhibiting symptoms associated with amyloid deposition is disclosed.



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))

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/034677**A. CLASSIFICATION OF SUBJECT MATTER****A61K 31/7088(2006.01)i, A61P 25/28(2006.01)i**

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)

IPC 8 as above

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

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

eKOMPASS(KIPO internal), PubMed, NCBI, Esp@snet, PAJ, USPTO, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2006/134423 A2 (COLEY PHARMACEUTICAL CROUP, LTD., et al.) 21 December 2006 See the abstract, page 8 line 19–page 13 line 24, page 40 lines 23–25, claims	16-22
X / A	SHNEH SETHI, et al., Postexposure prophylaxis against prion disease with a stimulator of innate immunity. The Lancet. 20 July 2002, 360(9328), pp.229-230 See the whole documents.	18-22 / 16-17
A	WO 00/62800 A2 (SMITHKLINE BEECHAM BIOLOGICALS SA) 26 October 2000 See the whole documents.	16-22
A	PABLO IRIBARREN, et al., CpG-containing oligodeoxynucleotide promotes microglial cell uptake of amyloid beta 1-42 peptide by up-regulating the expression of the G-protein-coupled receptor mFPR2. The FASEB Journal. December 2005, 19(14), pp.2032-2034 See the whole documents.	16-22
A	DARYL S. SPINNER, et al., CpG oligodeoxynucleotide-enhanced humoral immune response and production of antibodies to prion protein PrP ^{Sc} in mice immunized with 139A scrapie-associated fibrils. Journal of Leukocyte Biology. June 2007, 81(6), pp.1374-1385 See the whole documents.	16-22



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

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Date of mailing of the international search report

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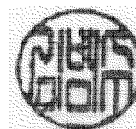
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	M.J. MCCLUSKIE, et al., Enhancement of infectious disease vaccine through TLR9-dependent recognition of CpG DNA. Current Topics in Microbiology and Immunology. 2006, 311, pp.155-178 See the whole documents.	16-22
A	MIRIAM LOTZ., et al., Amyloid beta peptide 1-40 enhances the action of Toll-like receptor-2 and -4 agonists but antagonizes Toll-like receptor-9-induced inflammation in primary mouse microglial cell cultures. Journal of Neurochemistry. July 2005, 94(2), pp.289-298 See the whole documents.	16-22

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2009/034677**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 1-15
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 1-15 pertain to methods for treatment of the human or animal body by therapy, as well as diagnostic methods, and thus relate to a subject matter which this International Searching Authority is not required, under Article 17(2)(a)(i) of the PCT and Rule 39.1(iv) of the Regulations under the PCT, to search.
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/034677

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