



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁶ : C12N 15/12, C07K 14/47, A61K 38/16, C07K 16/18, G01N 33/53	A3	(11) International Publication Number: WO 99/07739 (43) International Publication Date: 18 February 1999 (18.02.99)
(21) International Application Number: PCT/US98/16375 (22) International Filing Date: 6 August 1998 (06.08.98) (30) Priority Data: 08/906,865 6 August 1997 (06.08.97) US Not furnished 5 August 1998 (05.08.98) US (71) Applicant: THE ROCKEFELLER UNIVERSITY [US/US]; 1230 York Avenue, New York, NY 10021-6399 (US). (72) Inventors: GREENHARD, Paul; 362 East 69th Street, New York, NY 10021-6399 (US). PORTON, Barbara; Apart- ment 31R, 504 East 63rd Street, New York, NY 10021 (US). KAO, Hung-Teh; Apartment 31R, New York, NY 10021 (US). (74) Agents: COPPOLA, William, C. et al.; Klauber & Jackson, 411 Hackensack Avenue, Hackensack, NJ 07601 (US).	(81) Designated States: AU, CA, JP, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> (88) Date of publication of the international search report: 14 May 1999 (14.05.99)	
(54) Title: DNA ENCODING THE HUMAN SYNAPSIN III GENE AND USES THEREOF (57) Abstract <p>A new synapsin protein, designated synapsin III, its amino acid sequence, and its human gene have been isolated and characterized. Furthermore, isoforms of synapsin III, e.g., synapsin IIIa, IIIb and IIIc, and have been isolated and characterized, and cDNA encoding these isoforms has also been isolated and characterized. The synapsin III gene is located on human chromosome 22, in the vicinity of a region previously identified as a susceptibility locus for schizophrenia. The information and experimental tools provided by this discovery can be used to generate new therapeutic agents or diagnostic assays for this new protein, its associated mRNA or its associated genomic DNA. Due to its role in neurotransmission and synaptogenesis, isoforms of synapsin III are associated with the symptoms of psychiatric diseases, especially schizophrenia.</p>		

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INTERNATIONAL SEARCH REPORT

Internat'l Application No
PCT/US 98/16375

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/12 C07K14/47 A61K38/16 C07K16/18 G01N33/53

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 6 C07K A61K

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 practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	KAO H.T. ET AL.: "A third member of the synapsin gene family" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, vol. 95, no. 8, 14 April 1998, pages 4667-4672, XP002093410 WASHINGTON US see the whole document ---	1-11, 14-20, 28, 36-38, 40,41, 44-46,48
X,P	HOSAKA M. , SÜDHOF T. : "Synapsin III, a novel synapsin with an unusual regulation by Ca ²⁺ " JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 273, no. 22, 29 May 1998, pages 13371-3374, XP002093411 MD US see the whole document ---	1-11, 14-20, 28, 36-38, 40-48

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

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- "O" document referring to an oral disclosure, use, exhibition or other means
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Date of the actual completion of the international search <p style="text-align: center; font-weight: bold;">15 February 1999</p>	Date of mailing of the international search report <p style="text-align: center; font-weight: bold;">09/03/1999</p>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer <p style="text-align: center; font-weight: bold;">Panzica, G</p>

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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	WO 95 17426 A (RAGGIO ITALGENE SPA) 29 June 1995 see the whole document ---	1-39
A	SÜDHOF T. ET AL.: "Synapsins: mosaics of shared and individual domains in a family of synaptic vesicle phosphoproteins" SCIENCE, vol. 245, no. 4925, 29 September 1989, pages 1474-1480, XP002093412 LANCASTER, PA US see the whole document -----	1-39

INTERNATIONAL SEARCH REPORT

national application No.

PCT/US 98/ 16375

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.: 31-34
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 31-34
are directed to a method of treatment of the human/animal
body, the search has been carried out and based on the alleged
effects of the compound/composition.
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 II Observations where unity of invention is lacking (Continuation of item 2 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
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Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 98/16375

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9517426 A	29-06-1995	IT 1264084 B	10-09-1996
		AU 1279895 A	10-07-1995
