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24 July 2008

(54) Title: USE OF ESCITALOPRAM FOR IMPROVING COGNITION

(57) Abstract: The present invention relates to the use of the compound escitalopram (INN-name), i.e. (S)-1-[3-(dimethylamino)propyl]-1-(4-fluorophenyl)-1,3-dihydro-5- isobenzofurancarboxitrile, or a pharmaceutically acceptable salt thereof for the preparation of a medicament for improving cognition in a condition where the cognitive processes are diminished.



WO 2007/124757 A3

**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/DK2007/050050

**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. A61K31/343 A61P25/28 A61P25/16 A61P25/22 A61P25/24  
 A61P25/30

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)  
 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)  
 EPO-Internal, WPI Data, EMBASE, BIOSIS, CHEM ABS Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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X	WO 2004/010932 A (MIGALY PETER [US]) 5 February 2004 (2004-02-05) claims 3,13,14,49 claims 4-6	1-57

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	*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
*E* earlier document but published on or after the international filing date	*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
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*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.
*O* document referring to an oral disclosure, use, exhibition or other means	*Z* document member of the same patent family
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  23 May 2008	Date of mailing of the international search report  02/06/2008
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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  Langer, Oliver
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X	WO 2004/056791 A (LUNDBECK & CO AS H [DK]) 8 July 2004 (2004-07-08)  claims 1,5	1-16, 46-57, 63-67
X	WO 2005/023243 A (LUNDBECK & CO AS H [DK]; CREMERS THOMAS IVO FRANCISCUS [NL]; WILLIGERS) 17 March 2005 (2005-03-17) claims 1-3,11,12 page 18, line 3 - line 9	1-67
X	WO 02/076461 A (DURSUN SERDAR MURAT [CA]; DEVARAJAN SIVAKUMARAN [CA]) 3 October 2002 (2002-10-03) claims 12,13	58-67
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International application No  
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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>&amp; JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS, 301(3), 1097-1102 CODEN: JPETAB; ISSN: 0022-3565, 2002,</p> <p>-----</p> <p>ANGELONE S M ET AL: "Effects of fluvoxamine and citalopram in maintaining abstinence in a sample of Italian detoxified alcoholics." ALCOHOL AND ALCOHOLISM (OXFORD, OXFORDSHIRE) 1998 MAR-APR, vol. 33, no. 2, March 1998 (1998-03), pages 151-156, XPO02481209 ISSN: 0735-0414 abstract page 152, right-hand column, paragraph 2 table 1 page 154, right-hand column, last paragraph - page 155, left-hand column, paragraph 1</p>	68-72
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International application No  
PCT/DK2007/050050

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE MEDLINE [Online] US NATIONAL LIBRARY OF MEDICINE (NLM), BETHESDA, MD, US; December 1999 (1999-12), CALANDRA C ET AL: "The use of citalopram in an integrated approach to the treatment of eating disorders: an open study." XP002481215 Database accession no. NLM10728184 abstract &amp; EATING AND WEIGHT DISORDERS : EWD DEC 1999, vol. 4, no. 4, December 1999 (1999-12), pages 207-210, ISSN: 1124-4909</p>	68-72
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International application No  
PCT/DK2007/050050

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	DATABASE BIOSIS [Online] BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; June 2005 (2005-06), FRIEDMAN JOSEPH I ET AL: "The effect of citalopram adjunctive treatment added to atypical antipsychotic medications for cognitive performance in patients with schizophrenia" XP002481217 Database accession no. PREV200510070715 cited in the application abstract & JOURNAL OF CLINICAL PSYCHOPHARMACOLOGY, vol. 25, no. 3, June 2005 (2005-06), pages 237-242, ISSN: 0271-0749	58-62

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## INTERNATIONAL SEARCH REPORT

International application No

PCT/DK2007/050050

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	<p>MONTGOMERY S A ET AL: "ECNP consensus meeting. Negative, depressive and cognitive symptoms of schizophrenia. Nice, March 2004."</p> <p>EUROPEAN NEUROPSYCHOPHARMACOLOGY : THE JOURNAL OF THE EUROPEAN COLLEGE OF NEUROPSYCHOPHARMACOLOGY JAN 2007, vol. 17, no. 1, January 2007 (2007-01), pages 70-77, XP002481211 ISSN: 0924-977X the whole document</p> <p>-----</p>	58-62

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/DK2007/050050

## 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.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
Although claims 46-57 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 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:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16, 46-57

Use of escitalopram or a pharmaceutically acceptable salt thereof for improving cognition; a method for improving cognition comprising administering escitalopram or a pharmaceutically acceptable salt thereof.

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2. claims: 17-45

Use of escitalopram or a pharmaceutically acceptable salt thereof in combination with one or more antipsychotic compounds, or for an adjunct treatment with an antipsychotic agent for improving cognition; a pharmaceutical composition comprising escitalopram or a pharmaceutically acceptable salt thereof and one or more antipsychotic compounds.

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3. claims: 58-62

Use of escitalopram for the preparation of a medicament for the treatment of schizophrenia wherein the negative and cognitive symptoms are improved.

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4. claims: 63-67

Use of escitalopram for the preparation of a medicament for the treatment of attention deficit hyperactivity disorder (ADHD).

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5. claims: 68-72

Use of escitalopram for the preparation of a medicament useful in facilitating psychotherapy, cognitive behavioural therapy and exposure-based therapy.

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/DK2007/050050

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Information on patent family members

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