Abstract:
The invention provides methods of treating binge eating disorders, obesity resulting from binge eating behavior, and depression. The invention includes methods of treating certain co-morbidities in ADHD and ADD patients: for example the invention includes methods of treating generalized anxiety disorder, obsessional and ruminative thought disorders, and obsessive/compulsive behavior in ADHD and ADD patients. The invention also includes combination methods of treatment in which an amphetamine prodrug, methylphenidate prodrug, or methylphenidate analog is administered with one or more other active agents. Packaged pharmaceutical compositions containing an amphetamine or methylphenidate prodrug, instructions for using the prodrug to treat certain disorders, and optionally one or more other active agents are provided by the invention.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K31/4015 A61P25/24 A61P3/04

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 A61P

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, EMBASE, BIOSIS, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
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</table>

Further documents are listed in the continuation of Box C

See patent family annex

Date of the actual completion of the international search
30 May 2008

Date of mailing of the international search report
16/10/2009

Name and mailing address of the ISA:
European Patent Office, P B 5818 Patentlaan 2 NL- 2280 HV RUISWijk Tel (+31-70) 340-2040, Fax (+31-70) 340-3016

Authorized officer
Herrera, Suzanne
## DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with Indication, where appropriate, of the relevant passages</th>
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<tbody>
<tr>
<td>Y</td>
<td>Example 1</td>
<td>11-15, 22-25</td>
</tr>
<tr>
<td>Y</td>
<td>SAMANI R ET AL: &quot;NEUROCHEMICAL MECHANISM OF ACTION OF ANORETIC DRUGS&quot;</td>
<td>1,3-8, 11-16, 18-26, 28,29</td>
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<td>A</td>
<td>MADAAN VISHAL ET AL: &quot;Innovations and recent trends in the treatment of ADHD.&quot;</td>
<td>1,3-8, 11-16, 18-26, 28,29</td>
</tr>
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<td>P, X</td>
<td>CORTESE SAMUELE ET AL: &quot;Attention deficit/hyperactivity disorder (ADHD) and binge eating. &quot;</td>
<td>1,3-8, 11-16, 18-26, 28,29</td>
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</tbody>
</table>

Example 1: SAMANI R ET AL: "NEUROCHEMICAL MECHANISM OF ACTION OF ANORETIC DRUGS", Pharmacology and Toxicology, Munksgaard International Publishers, Copenhagen, DK, Vol. 73, No. 2, 1 August 1993 (1993-08-01), Pages 63-68, XP001105888, ISSN: 0901-9928, Page 66, Paragraph 2,3


### 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:

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.:

   see annex

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

1. claims: 1, 8, 16, 21-26 (all completely), 3-7, 11-15, 18-20, 28-29 (all partly)

   Use of an amphetamine prodrug, a methyl phenidate prodrug or a methylphenidate analog, alone or in combination, for use in the treatment of binge eating disorder or obesity resulting therefrom.

2. claims: 2, 9-10, 17, 27 (all completely) 3-7, 11-15, 18-20, 28-29 (all partly)

   Use of an amphetamine prodrug, a methyl phenidate prodrug or a methylphenidate analog for use in the treatment of depression.
<table>
<thead>
<tr>
<th>Patent document cited in search report</th>
<th>Publication date</th>
<th>Patent family member(s)</th>
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<tr>
<td></td>
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<td>EP 1865980 A2</td>
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<td>23-08-2007</td>
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