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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

Published:

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- 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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(54) Title: PROCESSES FOR PREPARATION OF INDIPLON AND INTERMEDIATES THEREOF

(57) Abstract: Processes for the preparation of indiplon and its polymorphic mixtures are provided.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IN2010/000161

A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

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: C07D; 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 practicable, search terms used)

WPI; EPODOC; CNPAT; CNKI; CA; REG: c13h16n2o2; c14h18n2o2; c8h7n3os; 325715-02-4; indiplon; pyrazolopyrimidin+; 96605-61-7; 96605-65-1; 96219-87-3

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN1374866A(NEUROCRINE BIOSCIENCES, INC.), 16 Oct. 2002(16.10.2002), page 4, compound 1 of the description, claims 38-45	1-4,18
X	CN1372561A(NEUROCRINE BIOSCIENCES, INC.), 02 Oct. 2002(02.10.2002), claims 1-6, and 14-18, schemes 5-6 and example	1-4
Y		5-8
X	FAN, Shiyong et al. Synthesis of A Novel Sedative-hypnotic Indiplon, Chinese Journal of Medicinal Chemistry, 2006, Vol. 16, No.6, pages 363-365, Figure 1, sections 2.3 and 2.8	1-4
Y		5-8

Further documents are listed in the continuation of Box C.

See patent family annex.

<p>* Special categories of cited documents:</p> <p>“A” document defining the general state of the art which is not considered to be of particular relevance</p> <p>“E” earlier application or patent but published on or after the international filing date</p> <p>“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)</p> <p>“O” document referring to an oral disclosure, use, exhibition or other means</p> <p>“P” document published prior to the international filing date but later than the priority date claimed</p>	<p>“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</p> <p>“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</p> <p>“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</p> <p>“&”document member of the same patent family</p>
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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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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IN2010/000161

CLASSIFICATION OF SUBJECT MATTER

C07D487/04 (2006.01) i

A61K31/519 (2006.01) i

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IN2010/000161

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.: 9-17 and 19

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: the present description does not provide any physical or chemical property parameters, i.e. no data shows that said crystal I or II has been obtained and it is not possible to make sure the scope of their content in the said mixture. So the description does not disclose the said crystal I, crystal II, their mixture or their preparation sufficiently which causes a person skilled in the art unable to carry out the invention. Therefore claims 9-17 and 19 are not fully supported by description in the sense of PCT Article 6.

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 fees, this Authority did not invite payment of 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

International application No.

PCT/IN2010/000161

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

Processes for the preparation of indiplon and its polymorphic mixtures are provided.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IN2010/000161

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN1374866A	16.10.2002	WO0115700A1	08.03.2001
		AU6949100A	26.03.2001
		US6384221B1	07.05.2002
		NO20021041A	03.04.2002
		EP1214075A1	19.06.2002
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		KR20020029917A	20.04.2002
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		US2003004346A1	02.01.2003
		JP2003506453T	18.02.2003
		EP1208102B1	26.03.2003
		NZ517155A	29.04.2003
		DE60001847E	30.04.2003
		EP1344768A2	17.09.2003

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IN2010/000161

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
		MXPA02001416A	01.08.2002
		ES2193980T	16.11.2003
		AU768783B	08.01.2004
		AU2004201419A1	29.04.2004
		EP1344768B1	06.04.2005
		DE60019350E	12.05.2005
		MX226450B	25.02.2005
		ES2240873T	16.10.2005
		CN1152033C	02.06.2004
		DE60019350T	09.03.2006
		US7034154B2	25.04.2006
		NO322014B	07.08.2006
		IL148078A	10.12.2006
		MX248827B	10.09.2007