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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 11-177469- -00002-0000

Fecha: 2012-03-21 16:24:40 Dep. 2020 DIR.NUEVASCR
Tra. 11 PATENTEIYII Eve: 378 FASENACIONALI
Act. 444 RESPUESTAREQUE Folios: 20

Señor Director
DIRECCION DE NUEVAS CREACIONES
Superintendencia de Industria y Comercio
E. S. D.

Trámite : 011
Evento : 378
Actuación : 444

Referencia : Expediente No. 11.177.469
Asunto : Solicitud de patente para **PROCEDIMIENTO PARA LA FABRICACION DE PRODUCTOS INTERMEDIOS DE DRONEDARONA**
Solicitante : **SANOFI**
Clase : C07D 307/080
Fecha de solicitud : 23 de diciembre de 2011

CONTESTACION OFICIO No. 1989

1. Yo, Luz Clemencia de PÁEZ, obrando como apoderada del solicitante en el asunto de la referencia, doy respuesta al Oficio No. **1989**, notificado por fijación en lista de fecha 10 de febrero de 2012.

2. Mediante el Oficio No. **1989** se puso en conocimiento del solicitante el resultado del examen de forma realizado por ese Despacho, requiriéndole para completar el siguiente requisito:

2.1. **Documento de cesión de derechos de los inventores:** Acompañó con este escrito un (1) documento en que consta la cesión de derechos de los cuatro (4) inventores a favor de la sociedad solicitante, debidamente notarizado, legalizado por Apostilla y traducido al español.

3. Adicionalmente presento copia del Informe Preliminar Internacional sobre patentabilidad expedido en el trámite de la solicitud internacional PCT/EP2010/057272, correspondiente a la presente fase nacional.

Solicito a ese Despacho tener en cuenta que el examen efectuado por la Administración encargada fue favorable, esto es que la invención es novedosa, tiene nivel inventivo y aplicación industrial.

4. Puesto que se han atendido a cabalidad las observaciones hechas por ese Despacho sobre la presente solicitud de patente, atentamente solicito que se continúe su tramitación.

Señor Director,


LUZ CLEMENCIA DE PÁEZ
C.C. No. 35.456.344 de Usaquén
T.P.A. 23.555

COLO-00751-841-032-4
SDC\JGG\ID-213294\WPCL0751
No. M-2012-213294\SDC

ASSIGNMENT AND AGREEMENT

For value received and intending to be legally bound, I/we, the undersigned joint inventor(s) (Assignor(s)), sell, assign and transfer to **SANOFI** (Assignee), **174 avenue de France, 75013 Paris, France** and its successors, assigns and legal representatives, the entire right, title and interest in and to my/our invention and any improvements thereon for all countries of the world, relating in and to the application for United States Letters Patent therefore, assigned Attorney Docket No. **DE2009/068**, entitled

Process for the production of Dronedarone intermediates

And for all patent applications which claim priority to or are derived from said priority applications:

European Patent (EP): **EP Application Filing Date:** **May 27, 2009**
 EP Application Filing No.: **09290394.7**

USA (US): **US Application Filing Date:** **September 22, 2009**
 US Application Filing No.: **61/244547**

and all the rights and privileges, including any and all benefits under the International Convention for the Protection of Industrial Property, including the right to claim priority based on said application(s), and under any and all Letters Patent which may be granted therefore, and all right, title and interest in and to every patent application filed or to be filed on said invention in any other country or patent organization, including continuations, divisions, renewals, revivals, and any substitute applications of said United States application, and any and all patents which may issue thereon, and any reissues, pipelines and extensions, and governmental exclusivity rights of the same.

I/we authorize and request competent authorities to grant and issue any and all patents on said invention to said assignee or its successor, assigns and legal representatives, or to such nominees as said assignee may designate.

I/we agree that, when requested, I/we will, without charge to said assignee but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient for securing and maintaining patents for said invention in any and all countries and for vesting title thereto in said assignee, its successors, assigns, legal representatives or nominees.

I/we covenant with said assignee, its successors, assigns and legal representatives, that the rights and property herein conveyed are free and clear of any encumbrance, and that I/we have full right to convey the same as herein expressed.

Signed at _____ on this 1.11. day of _____, 2011
 (City and Nation)

Signature:

Inventor's Name:

Gernard Kretzschmar

Residential Address:

c/o Sanofi-Aventis Deutschland GmbH, 65926 Frankfurt am Main, Germany

Witnessed by:

[Signature]

[Signature]

Signed at Frankfurt on this 1.11.11 day of _____, 2011
(City and Nation)

Signature: [Signature]

Inventor's Name: **Volker Kraft**

Residential Address: **c/o Sanofi-Aventis Deutschland GmbH, 65926 Frankfurt am Main, Germany**

Witnessed by: [Signature] [Signature]

Signed at Frankfurt on this 1 day of Nov, 2011
(City and Nation)

Signature: [Signature]

Inventor's Name: **Kai Rossen**

Residential Address: **c/o Sanofi-Aventis Deutschland GmbH, 65926 Frankfurt am Main, Germany**

Witnessed by: [Signature] [Signature]

Signed at FRANKFURT, GERMANY on this 01 day of NOVEMBER, 2011
(City and Nation)

Signature: [Signature]

Inventor's Name: **Joachim Graeser**

Residential Address: **c/o Sanofi-Aventis Deutschland GmbH, 65926 Frankfurt am Main, Germany**

Witnessed by: [Signature] [Signature]

No. 458 of the Roll of Deeds for 2011

I, the undersigned Dr. Michael Baumgartl, Notary in Frankfurt am Main (Federal Republic of Germany) hereby certify that

1. Dr. Gerhard Manfred Kretzschmar, date of birth: June 24, 1954, having his business address at: Industriepark Höchst, Building K 801, 65926 Frankfurt am Main (Germany), who identified himself by submission of his German identity card No. 414443360,

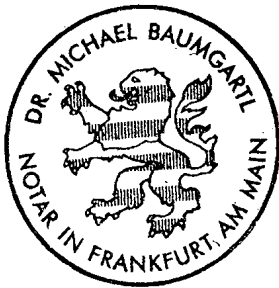
has subscribed the signature on the first page of the annexed document in my presence and

2. Volker Kraft, date of birth: January 12, 1978, having his business address at: Industriepark Höchst, Building K 801, 65926 Frankfurt am Main (Germany), who identified himself by submission of his German identity card No. 411625555,
3. Dr. Kai Rossen, date of birth: December 16, 1958, having his business address at: Industriepark Höchst, Building K 801, 65926 Frankfurt am Main (Germany), who identified himself by submission of his German identity card No. 412475417,
4. Joachim Gräser, date of birth: April 22, 1967, having his business address at: Industriepark Höchst, Building K 801, 65926 Frankfurt am Main (Germany), who identified himself by submission of his German identity card No. 408624908,

have subscribed the signatures on the second page of the annexes document in my presence.

The Notary has informed the persons appearing about the provision of Section 3, Subsection 1, No. 7 of the Recording Act (Beurkundungsgesetz). The persons appearing thereupon have stated that the Notary is not prevented from recording under such provision.

Frankfurt am Main, November 1, 2011




Michael Baumgartl
Notary

Statement of Fees

Value: EUR 38,000.00 pursuant to § 30 I KostO

Fee pursuant to §§ 141, 32, 45 I S. 1 KostO	EUR	27.00
Fee pursuant to §§ 141, 32, 58 I KostO	EUR	27.00
Flat fee for copies pursuant to §§ 141, 136 I No. 1, No. 2, II KostO	EUR	1.50
Postage pursuant to § 152 II Nr. 1 a) KostO	EUR	1.45
Subtotal	EUR	56.95
VAT 19 % pursuant to § 151a KostO	EUR	10.82
Total	EUR	67.77


Michael Baumgartl
Notary

Die wörtliche Übereinstimmung der vorstehenden Abschrift mit der mir vorliegenden Urschrift beglaubige ich hiermit.

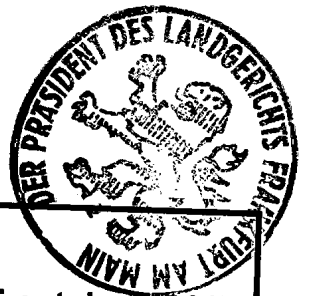
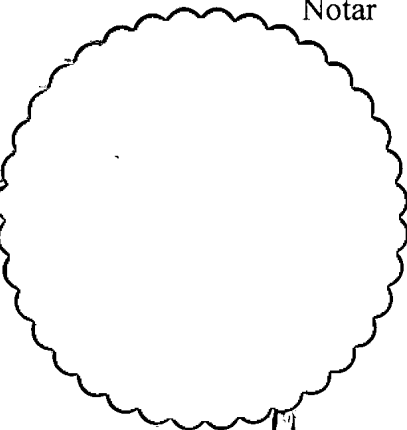
I herewith certify that the foregoing copy is a true copy of the original which has been presented to me.

Frankfurt am Main, 8. November 2011

Frankfurt am Main, November 8, 2011

Bm

Michael Baumgartl
Notar



APOSTILLE

(Convention de la Haye du 5 octobre 1961)

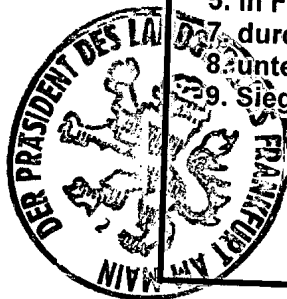
1. Land: Bundesrepublik Deutschland
Diese öffentliche Urkunde
2. ist unterschrieben von Dr. Michael Baumgartl
3. in seiner Eigenschaft als amtlich bestellter Notar
4. sie ist versehen mit dem Siegel/Stempel des(der) Notars

Bestätigt

5. in Frankfurt/Main
6. am 10.11.11
7. durch den Herrn Präsidenten des Landgerichts
8. unter Nr. 91 Ea A 10422
9. Siegel/Stempel

10. Unterschrift

Kämmerer
i.A. Kämmerer



Traducción Oficial No. 2011/804 de un documento escrito en inglés el cual para su identificación se sella con el sello del traductor al tiempo con la presente. Esta traducción ha sido preparada por Hilda Aguilera de Piedrahita, traductora oficial debidamente reconocida por el Ministerio de Relaciones Exteriores y autorizada por el Ministerio de Justicia y del Derecho por Resolución No. 323 de 1980.

Expediente sanofi-aventis No. DE2009/068

CESIÓN Y ACUERDO

Por un valor recibido y con la intención de estar legalmente obligado, yo/nosotros, los suscritos inventores conjuntos (cedentes), vendemos, cedemos y transferimos a SANOFI (Cesionario), 174 Avenue de France, 75013 Paris, Francia, y a sus sucesores, cesionarios y representantes legales, mi/nuestro completo y exclusivo derecho, título y participación en y para mi/nuestra invención y cualesquiera mejoras sobre las mismas para todos los países del mundo, en relación con la Solicitud para Certificado de Patente de los Estados Unidos sobre ella, asignada bajo el Expediente de Apoderado No. DE2009/068, y cuyo título es

Procedimiento para la fabricación de productos intermedios de Dronedarona

y para todas las solicitudes de patente que reivindiquen prioridad o se deriven de tal solicitud de prioridad:

Patente (PE)	Europea	Fecha de Presentación de la Solicitud PE: No. de Presentación de la Solicitud PE:	Mayo 27, 2009 09290394.7
E.U. (EU)		Fecha de Presentación de la Solicitud EU: No. de Presentación de la Solicitud EU:	Septiembre 22, 2009 61/244547

y todos los derechos y privilegios, incluyendo cualesquiera y todos los beneficios bajo la Convención Internacional para la Protección de la Propiedad Industrial, incluyendo el derecho de reivindicar prioridad con base en la solicitud de los Estados Unidos, y bajo cualesquiera y todos los Certificados de Patente que puedan ser otorgados en adelante, y todo derecho, título y participación en y para toda solicitud de patente presentada o que se vaya a presentar sobre la mencionada invención en cualquier otro país u organización de patentes, incluyendo, sin limitación, continuaciones, divisiones, renovaciones, resurgimientos, y cualesquiera solicitudes sustitutas de la mencionada solicitud de prioridad, y cualesquiera y todas las patentes que puedan expedirse sobre ella, y cualesquiera reexpediciones, re-exámenes, proyectos y prorrogas, y derechos de exclusividad gubernamental de las mismas.

Yo/nosotros autorizamos y solicitamos a las autoridades competentes otorgar y expedir cualesquiera y todas las patentes sobre la mencionada invención al mencionado cesionario o a sus sucesores, cesionarios y representantes legales, a cualesquiera nominados como tal cesionario pueda designar.

Yo/nosotros acordamos que, cuando sea solicitado, yo/nosotros procederemos, sin cargo para el mencionado cesionario pero a su gasto, a firmar todos los papeles, tomar todos los juramentos debidos, testificar el procesos legales, y llevar acabo todos los actos que puedan ser necesarios, deseables o convenientes para asegurar, mantener y hacer cumplir las patentes para la mencionada

TRADUCCION OFICIAL No. 2011/804
HILDA AGUILERA DE PIEDRAHITA
INTERPRETE OFICIAL
RES. No. 323 DEL MIN. DE JUSTICIA

invención en cualesquiera y todos los países y para invertir título de la misma en el mencionado cesionario, sus sucesores, cesionarios, representantes legales o nominados.

Yo/nosotros prometemos al mencionado cesionario, sus sucesores, cesionarios y representantes legales, a que los derechos y propiedad aquí transferida están a paz y salvo de cualquier gravamen, y que yo/nosotros tenemos pleno derecho para transferir el mismo como aquí se expresa.

Firmado en _____, este día 1.11 de _____ de 2011.
(Ciudad y Nación)

Firma (Firmado)

Nombre del Inventor: Gerhard Kretzschmar

Dirección de Correspondencia: c/o
65926 Frankfurt am Main, Alemania

Da fe:

(Firmado)

Sanofi-Aventis Deutschland GmbH,

(Firmado)

Firmado en Frankfurt, este día 1.11.11 de _____ de 2011.
(Ciudad y Nación)

Firma (Firmado)

Nombre del Inventor: Volker Kraft

Dirección de Correspondencia: c/o
65926 Frankfurt am Main, Alemania

Da fe:

(Firmado)

Sanofi-Aventis Deutschland GmbH,

(Firmado)

Firmado en Frankfurt, este día 1 de Noviembre de 2011.
(Ciudad y Nación)

Firma (Firmado)

Nombre del Inventor: Kai Rossen

Dirección de Correspondencia: c/o
65926 Frankfurt am Main, Alemania

Da fe:

(Firmado)

Sanofi-Aventis Deutschland GmbH,

(Firmado)

Firmado en Frankfurt, Alemania este día 01 de Noviembre de 2011.
(Ciudad y Nación)

Firma (Firmado)

Nombre del Inventor: Joachim Graeser

Dirección de Correspondencia: c/o
65926 Frankfurt am Main, Alemania

Da fe:

(Firmado)

Sanofi-Aventis Deutschland GmbH,

(Firmado)

TRADUCCION OFICIAL No. 2011/804
HILDA AGUILERA DE PIEDRAHITA
INTERPRETE OFICIAL
RES. No. 323 DEL MIN. DE JUSTICIA

Yo, el suscrito Sr. Michael Baumgartl, Notario en Frankfurt am Main (República Federal de Alemania) por el presente certifico que

- 1. el Dr. Gerhard Kretzschmar, fecha de nacimiento: Junio 24 de 1954, teniendo dirección comercial en: Industriepark Höchst, Building K 801, 65926 Frankfurt am Main (Alemania), quien se identificó presentando su tarjeta de identidad alemana No. 414443360,

ha suscrito la firma en la primera página del documento anexo en mi presencia y

- 2. Volker Kraft, fecha de nacimiento: Enero 12 de 1978, teniendo dirección comercial en: Industriepark Höchst, Building K 801, 65926 Frankfurt am Main (Alemania), quien se identificó presentando su tarjeta de identidad alemana No. 411625555,
- 3. Dr. Kai Rossen, fecha de nacimiento: Diciembre 16 de 1958, teniendo dirección comercial en: Industriepark Höchst, Building K 801, 65926 Frankfurt am Main (Alemania), quien se identificó presentando su tarjeta de identidad alemana No. 412475417,
- 4. Joachim Gräser, fecha de nacimiento: Abril 22 de 1967, teniendo dirección comercial en: Industriepark Höchst, Building K 801, 65926 Frankfurt am Main (Alemania), quien se identificó presentando su tarjeta de identidad alemana No. 408624908,

Han suscrito las firmas en la segunda página del documento anexo en mi presencia.

El Notario ha informado que las personas comparecientes acerca de la disposición de la Sección 3, Sub-sección 1, No. 7 de la Ley de Registro (Beurkundungsgesetz). Las personas comparecientes han manifestado que el Notario no esta impedido de registrar bajo tal disposición.

Frankfurt am Main, Noviembre 1 de 2011.

(Firmado)
Michael Baumgartl
Notario
(Sello Notarial a tinta)

Declaración de Derechos

Valor: EUR 38,000.00 de conformidad con § 301 KostO

Derecho de conformidad con §§ 14,32,45 I S.1 KostO	EUR	27.00
Derecho de conformidad con §§ 14,32,58 I KostO	EUR	27.00
Derecho Plano para copias de acuerdo con §§ 141,136 I No. 1, No. 2, II KostO	EUR	1.50
Franqueo de conformidad con §§ 152 II Nr. 1 a) KostO	EUR	1.45
Subtotal	EUR	56.95
IVA 19% de conformidad con §§ 151 a KostO	EUR	10.82

TRADUCCION OFICIAL No. 2011/804
HILDA AGUILERA DE PIEDRAHITA
INTERPRETE OFICIAL
RES. No. 323 DEL MIN. DE JUSTICIA

Total

EUR

67.77

(Firmado)
Michael Baumgartl
Notario

Por el presente certifico que la anterior copia es una copia verdadera del original que ha sido presentado ante mí.

Frankfurt am Main, Noviembre 8 de 2011.

(Firmado)
Michael Baumgartl
Notario
(Sello)

APOSTILLA EN ALEMAN No. 91 Ea A 10422 del 10. 11.11.

ES TRADUCCIÓN FIEL Y COMPLETA de la cual se deja copia en los archivos de esta oficina para su confrontación y a la cual me remito, habiendo tenido a la vista el documento original.

Bogotá, Diciembre 26 de 2011.

MINISTERIO DE
RELACIONES EXTERIORES
2011 DIC 28 11:38
JEFE DE LEGALIZACIONES
BOGOTÁ D.C.

NO SE ASUME
RESPONSABILIDAD
DEL TEXTO
115834
Hilda Aguilera
CUIVA FIRMADA APARECE EN EL
DOCUMENTO DESEMPEÑA
LAS FUNCIONES INDICADAS

Hilda Aguilera de Piedrahita
TRADUCCIÓN OFICIAL No. 2011/804
HILDA AGUILERA DE PIEDRAHITA
INTERPRETE OFICIAL
RES. No. 323 DEL MIN. DE JUSTICIA

Traducción oficial No. 33 / 2011 al idioma español de un texto escrito en alemán, realizada por Juan Felipe Sarmiento Espinosa, traductor oficial autorizado por resolución No. 0238 del 8 de Agosto de 2007, expedida por la Universidad Nacional de Colombia y debidamente registrado ante el Ministerio de Relaciones Exteriores de Colombia. Se traduce los sellos y apostilla que se encuentran en Alemán de un documento de cesión de la invención Procedimiento para la fabricación de productos intermedios de Dronedarona el cual está escrito en Inglés, Asunto. COLO 00751 841 032 4

[Página 5]

Mediante el presente documento confirmo la correspondencia entre la presente copia y su original.
Frankfurt am Main, 8 de Noviembre de 2011

[Firma]
Michael Baumgartl
Notario

[Sello ilegible]

[Sello-
El presidente del Juzgado Regional
Frankfurt am Main]

APOSTILLE

(Convention de La Haye du 5 octobre 1961)

- 1. País: República Federal Alemana
este documento público
- 2. está firmado por el Dr. Michael Baumgartl
- 3. en su calidad de notario público
- 4. y está provisto del sello del notario

Autenticado

- 5. en Frankfurt am Main 6. el 10 de Noviembre de 2011
- 7. por el sr. Presidente del Juzgado Regional
- 8. con el código 91 Ea A 10422
- 9. Sello 10. Firma
- [Sello [Firma]
- El presidente del Juzgado Regional en representación del Juzgado
Frankfurt am Main] Kämmerer

-----Fin de la traducción-----

MINISTERIO DE
RELACIONES EXTERIORES
2011. DIC 28 A M: 38
JEFE DE LEGALIZACIONES
BOGOTA D.C.

NO SE ASUME
RESPONSABILIDAD
DEL TEXTO
115834
Felipe Sarmiento
CUYA FIRMA APARECE EN EL
DOCUMENTO OSE AFEREN
LAS FUNCIONES INDICADAS.

Felipe Sarmiento Espinosa
Felipe Sarmiento Espinosa
Alemán - Español - Alemán
Certif. U. Nal. No. 0238

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference SD 41369 / GBL	FOR FURTHER ACTION		See item 4 below
International application No. PCT/EP2010/057272	International filing date (day/month/year) 26 May 2010 (26.05.2010)	Priority date (day/month/year) 27 May 2009 (27.05.2009)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant SANOFI			

1.

This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2.

This REPORT consists of a total of 8 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3.

This report contains indications relating to the following items:

☒

Box No. I

Basis of the report

☒

Box No. II

Priority

☐

Box No. III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☐

Box No. IV

Lack of unity of invention

☒

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐

Box No. VI

Certain documents cited

☒

Box No. VII

Certain defects in the international application

☒

Box No. VIII

Certain observations on the international application

4.

The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

	Date of issuance of this report 29 November 2011 (29.11.2011)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Agnès Wittmann-Regis e-mail: pt06.pct@wipo.int

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2010/057272

International filing date (day/month/year)
26.05.2010

Priority date (day/month/year)
27.05.2009

International Patent Classification (IPC) or both national classification and IPC
INV. C07D307/80

Applicant
SANOFI-AVENTIS

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:

 European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0
Fax: +49 89 2399 - 4465

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Papathoma, Sofia

Telephone No. +49 89 2399-7536



WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/EP2010/057272

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
 - a. (means)
 - ☐ on paper
 - ☐ in electronic form
 - b. (time)
 - ☐ in the international application as filed
 - ☐ together with the international application in electronic form
 - ☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. II Priority

1. ☐ The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43bis.1 and 64.1) is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:
see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2010/057272

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-12</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	<u>1-12</u>
	No: Claims	
Industrial applicability (IA)	Yes: Claims	<u>1-12</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item I

Basis of the report

This Written Opinion is based on the **following application documents:**

Description, Pages

1-23 as originally filed

Claims, Numbers

1-12 as originally filed

The present application relates to a process for the preparation of a compound of the formula I, or more precisely of the compounds Ia and Ib, which are suitable as intermediates in the synthesis of dronedarone.

Re Item II

Priority

- 1 Close inspection of the priority document has shown that the priority is not validly claimed for a great part of the present application.
- 1.1 In the priority document the step of demethylation was carried out by "*heating of the benzofuran of the formula Ia with HCl or HBr in the presence of the base B*". The wording used thus stipulated that the base used in the two steps is the same.

Now the wording of the relevant claims has been changed to "*heating of the benzofuran of the formula Ia with HCl or HBr in the presence of a base B*".

Consequently, only in the case when the same base B is used for the two steps the priority is validly claimed. When a different base B is used in the cyclisation and in the demethylation step the priority is not validly claimed.
- 1.2 Further, for the demethylation step a further reagent may now be used, which was not comprised in the priority document. Therefore, when the demethylation step is carried out with HCl or HBr in an ionic liquid the priority is not validly claimed either.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1 WO 2009/044143 A (CAMBREX KARLSKOOGA AB [SE]; EKLUND LARS [SE]) 9 April 2009 (2009-04-09)
- D2 WO 2007/140989 A (CAMBREX KARLSKOOGA AB [SE]; EKLUND LARS [SE]) 13 December 2007 (2007-12-13)
- D3 FR 2 809 397 A (RHONE POULENC CHIMIE [FR]) 30 November 2001 (2001-11-30)
- D4 FR 2 833 259 A (OREAL [FR]) 13 June 2003 (2003-06-13)
- D5 CASTELLINO A J ET AL: "Synthesis of benzofurans from oxygenated phenoxyamines" JOURNAL OF ORGANIC CHEMISTRY, AMERICAN CHEMICAL SOCIETY, EASTON.; US, vol. 49, no. 23, 1 January 1984 (1984-01-01) , pages 4399-4404, XP002515078 ISSN: 0022-3263
- D6 EP 0 471 609 A (SANOFI SA [FR]; SANOFI PHARMA N V SA [BE]) 19 February 1992 (1992-02-19)
- D7 WEISSMAN S A ET AL: "Recent advances in ether dealkylation" TETRAHEDRON, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL LNKD- DOI:10.1016/J.TET.2005.05.041, vol. 61, no. 33, 15 August 2005 (2005-08-15) , pages 7833-7863, XP025384108 ISSN: 0040-4020 [retrieved on 2005-08-15]

2 Article 33(2) PCT

- 2.1 Documents D1, D2 and D6 also describe the preparation of the same compounds Ia and Ib; however, the synthetic route they use differs from the one presently claimed.
- 2.2 Documents D3, D4 and D5 describe similar cyclisation reactions; nevertheless the groups taking part in the reactions described in said documents are not the same as those presently claimed; further the final products obtained therein are not the claimed compounds Ia or Ib.

- 2.3 Document D7 is a review article describing the use of ionic liquids for cleaving alkyl ethers / in the selective demethylation.

In view of the above, the presently claimed subject-matter fulfils the requirements of Article 33(2) PCT.

3 Article 33(3) PCT

- 3.1 The compounds of the formula Ia and Ib are important intermediates for the preparation of dronedarone. The synthesis of both compounds Ia and Ib as well as of dronedarone has been described in documents D1, D2 and D6 (see in D1 examples A(1-4) and B(5, 7 and 8), in D2 examples 1-6 and in D6 example 1).

- 3.2 In view of the prior art, the technical problem underlying the present application is the provision of a further process for the preparation of the compounds of the formula Ia and Ib. As solution is claimed a process characterised by the cyclisation of the compound of the formula VII in the presence of a base and a zeolite catalyst.

- 3.3 D1 is considered as the closest prior art as it also discloses a cyclisation reaction including the simultaneous introduction of the 4-methoxy-/hydroxy-benzoyl group.

The reaction described in D1, however, involves the synthesis of an hydroxylamine intermediate.

As far as the other cited in the Search Report documents are concerned, these do neither give a hint towards the design of the presently claimed process:

- D2 and D6 are characterised by the conversion of 2-butyl-5-nitro-benzofuran,

- while in documents D3-D5, which describe cyclisation reactions leading to benzofurans, the groups taking part in the reactions are not the same as those presently claimed.

In view of the above, the claimed process is regarded to fulfil the requirements of Article 33(3) PCT.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/EP2010/057272

Re Item VII

Certain defects in the international application

According to Rule 6.4(a): *"any claim which includes all the features of one or more other claims shall do so by reference"*

Claim 8 should therefore be formulated as dependent to claim 7.

Re Item VIII

Certain observations on the international application

Claims 2-4 are formulated as dependent to claim 1. However, claim 1 relates to a process for the preparation of the compound of the formula Ia, claim 2 to a process for the preparation of the compound of the formula Ib and claims 3 and 4 to a process for the preparation of the compound of the formula I.

The dependency is therefore not correct and consequently the therein claimed subject-matter is not formulated in a clear manner.