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PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Christopher Thomas BRAIN	06/06/2007
Gebhard THOMA	05/10/2007
Moo Je SUNG	05/14/2007

RECEIVING PARTY DATA

Name:	Novartis AG
Street Address:	Lichtstrasse 35
City:	Basel
State/Country:	SWITZERLAND
Postal Code:	4056

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	12302223	

CORRESPONDENCE DATA

Fax Number: (617)871-3392

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Email: nibr.maildata@novartis.com

Correspondent Name: Katherine Kantorski

Address Line 1: Novartis Institutes for BioMedical Resea

Address Line 2: 220 Massachusetts Avenue

Address Line 4: Cambridge, MASSACHUSETTS 02139

ATTORNEY DOCKET NUMBER:	PAT050225-US-PCT
NAME OF SUBMITTER:	Katherine Kantorski

Total Attachments: 7

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Patent Case 50225

(joint)

ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we (1) **Christopher Thomas BRAIN**, (2) **Gebhard THOMA**, and (3) **Moo Je Sung** respectively residing at

- 1. Novartis Institute for BioMedical Research, Inc., 250 Massachusetts Avenue, Cambridge, Massachusetts 02139 USA, citizen of United Kingdom
- 2. Talweg 32, 79540 Lörrach, Germany, citizen of Germany
- 3. 24 Chester Road, Belmont, Massachusetts 02478 USA, citizen of South Korea

do hereby sell, assign and transfer to Novartis AG, a company organized under the laws of the Swiss Confederation, of Lichtstrasse 35, 4056 Basel, Switzerland, and its successors, assigns and legal representatives, all of our right, title and interest for all countries of the world except Austria and to Novartis Pharma GmbH, a company organized under the laws of Austria, of Brunner Strasse 59, 1230 Vienna, Austria, and its successors, assigns and legal representatives, all of our right, title and interest for Austria (Novartis AG and Novartis Pharma GmbH hereinafter referred to collectively as the "ASSIGNEES") in and to (1) all of our inventions and discoveries described in the patent application(s) titled

PYRROLOPYRIMIDINE COMPOUNDS AND THEIR USES

and filed in the United States Patent and Trademark Office on 24 Hay , 20 07 and accorded
and filed in the United States Patent and Trademark Office on 24 May , 20 07 and accorded Application Number PCT/US07/69595 * and/or filed in the RO/ on
, 20 and accorded International Patent Application Number PCT/*, (2) the
patent application(s) identified in (1), (3) all national stages of any international patent application identified
in (1), (4) all other patent applications in all countries and regions claiming the priority of the provisional or
non-provisional patent application filed in the United States Patent and Trademark Office on 26 May 2006
and accorded Application Number 60/808,605 (5) for all patent applications, all rights of priority based upon
the United States patent application identified in (4) in all countries and regions under the Paris Convention
for the Protection of Industrial Property, the Inter-American Convention relating to Inventions, Patents,
Designs, and Industrial Models and all other international agreements to which the United States now is or
hereafter becomes a signatory and, if the United States patent application identified in (4) is a provisional
patent application, under 35 USC 119(e) (including the right to file patent applications on said inventions and
discoveries in the names of ASSIGNEES or their designees or in our names, at their election and in
accordance with applicable law in all countries and regions), (6) all continuations and divisions of any United
States patent application or international patent application designating the United States identified in (1),
any national stages of any international application identified in (1) and any patent applications within the
scope of (4) (including further continuations and divisions such as, but not limited to, continuations of
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applications"), (7) all patents that are granted on any of said patent applications, (8) all registrations and
confirmations of, and importation certificates based upon, one or more of said patents and applications for
such registrations, confirmations and importation certificates and (9) all reissues, renewals and extensions of
said patents, registrations, confirmations and importation certificates, reexamination certificates issued for
said patents and supplementary protection certificates based upon said patents and applications for such
reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the
same to be held and enjoyed by said ASSIGNEES and their successors, assigns and legal representatives
to the full ends of the terms for which said patents, registrations, confirmations, importation certificates,
reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be
granted, as fully and entirely as the same would have been held and enjoyed by us if this sale, assignment
and transfer had not been made

*We hereby authorize **ASSIGNEES** and their representatives to insert in this Assignment the filing date(s) and Application Number(s) of said patent application(s) when notified thereof.

And we hereby covenant and agree that we will, at any time, (i) upon the request, but at the expense, of **ASSIGNEES** or their successors, assigns or legal representatives execute and deliver all documents that

Page 2

(joint) Patent Case 50225

may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, patent applications, patents, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates and applications within the scope of (8) and (9) in **ASSIGNEES** or their successors, assigns or legal representatives, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of **ASSIGNEES** or their successors, assigns or legal representatives execute all additional patent applications within the scope of (3), (4) and (6) and all applications within the scope of (8) or (9) and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of **ASSIGNEES** or their successors, assigns or legal representatives.

Executed this day of	June , 20 8 7.
Christopher Thomas BRAIN	<u>Sram</u> L.S.
ACKNOWLEDGEMENT	
State of Mrs Sachuse #)
County of Milliscx) s.s.:)
Christopher Thomas BRAIN	to me known and known by me to be the same person described in and animent and acknowledged that (s)he executed the same of his (her) own Notary Public

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(joint)	Patent Case 50225
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Executed this day of	20
Excedited this day or	
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Gebhard THOMA	L.O.
Gebnard IHOMA	
ACKNOWLEDGEMENT	
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) s.s.:	
County of)	
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will for the purpose set forth.	
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(Seal)

PATENT REEL: 026579 FRAME: 0819

Notary Public



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(joint) Patent Case 50225

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Executed this day of	of
	L.S.
Christopher Thomas BRAIN	
ACKNOWLEDGEMENT	
State of)) s.s.:
County of	
Chr istopher Thomas BRAIN	, 20, personally appeared before me to me known and known by me to be the same person described in and ignment and acknowledged that (s)he executed the same of his (her) own .
(Seal)	
	Notary Public

Page 3

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Patent Case 50225

Executed this day of Tex	ر 20 C	7.
Executed this 60 day of New day of March		
Gebhard THOMA	L.G.	
ACKNOWLEDGEMENT		
State of)		
State of) State of) County of)		
On this day of Geb_hard THOMA to me known and known executed the foregoing Assignment and acknowll for the purpose set forth.	wn by me to be	personally appeared before me the same person described in and who (s)he executed the same of his (her) own free
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		Notary Public
Executed this day of	, 20	
Moo Je SUNG	L.S.	
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		Notary Public

Attestation

I, the undersigned notary public of Basel, Switzerland, certify herewith the authenticity of the signature of **Mr. Gebhard Thoma**, German citizen, residing in Lörrach, Germany.

The authenticity of the signature was established by means of comparison.

BASEL, Switzerland, this 16th (sixteenth) day of May 2007 (twothousandandseven)

M. Stereber, Noter

Leg.Prot.Nr. 883 /2007

PATENT REEL: 026579 FRAME: 0823

RECORDED: 07/12/2011