PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Martin Dimitroff	02/20/2008
Bridget R. Miller	02/27/2008
Brady S. Stillwell	04/22/2008
David A. Siesel	02/13/2008
Tyson Swiftney	04/01/2008
Brian Diaz	02/26/2008
Danlin Gu	03/25/2008
Jonathan P. Van Dyck	02/13/2008
David Ryckman	03/12/2008
Daniel J. Poon	02/25/2008
Teresa E. Pick	03/21/2008

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Patent Number:	7767820

CORRESPONDENCE DATA

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PATENT REEL: 024946 FRAME: 0398

501282976

	Four Main Street, Suite 100 Los Altos, CALIFORNIA 94022		
ATTORNEY DOCKET NUMBER:	356000-3004		

Lorna L. Tanner

Total Attachments: 92 source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif source=Assignment#page5.tif

NAME OF SUBMITTER:

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ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

- 1. Martin DIMITROFF, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of Canada
- 2. Bridget R. MILLER, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 3. Brady S. STILLWELL, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
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 - 8. Jonathan P. VAN DYCK, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
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 - 10. Daniel J. POON, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
 - 11. Teresa E. PICK, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA

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 (Novartis AG hereinafter referred to collectively as the "ASSIGNEES") in and to (1) all of our inventions and discoveries described in the patent application(s) titled

SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION

and filed in the United States Patent and Trademark Application Number	entified in (1), (3) all national stage applications in all countries and application filed in the United State of Application Number 60/713,106 and Application Number 60/774,68 and Application Number 60/774,68 and Application Number 60/774,68 and Control of Industrial Profess, Designs, and Industrial Models is now is or hereafter becomes a second of the provisional patent application, united States and Industrial Models is now is or hereafter becomes a second of the polication of Industrial Models is now is or hereafter becomes a second of the polication, united States and Industrial Models is now is or hereafter becomes a second of the polication, united States and Industrial Models is now is or hereafter becomes a second of the polication of the policatio	les of any international regions claiming the es Patent and and an
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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 continuations and continuations of divisions), ((2)-(4) and (6) hereinafter referred to collectively as "patent 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 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.

Page 3	Patent Case 51673
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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 (Novartis AG hereinafter referred to collectively as the "ASSIGNEES") in and to (1) all of our inventions and discoveries described in the patent application(s) titled

SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION

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60/731,591 and on 17 February 2006 and accorded Application Num	nber 60/774,684 (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	of Industrial Property, the Inter-
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Patent Case 51673 (joint) 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 continuations and continuations of divisions), ((2)-(4) and (6) hereinafter referred to collectively as "patent 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.

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Martin DIMITROFF	1	L.S.	
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ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

- 1. Martin DIMITROFF, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of Canada
- 2. Bridget R. MILLER, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 3. Brady S. STILLWELL, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 4. David A. SIESEL, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 5. Tyson SWIFTNEY, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 6. Brian DIAZ, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 7. Danlin GU, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 8. Jonathan P. VAN DYCK, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 9. David RYCKMAN, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 10. Daniel J. POON, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 11. Teresa E. PICK, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA

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 (Novartis AG hereinafter referred to collectively as the "ASSIGNEES") in and to (1) all of our inventions and discoveries described in the patent application(s) titled

SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION

and filed in the United States Patent and Trademark	k Office on	and accorded
Application Number	* International Application No. I	PCT/US2006/034112,
filed 30 August 2006 (2) the patent application(s) ide	entified in (1), (3) all national stag	ges of any international
patent application identified in (1), (4) all other pater	nt applications in all countries and	d regions claiming the
priority of the provisional or non-provisional patent a	application filed in the United Stat	tes Patent and
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and accorded Application Number 60/712,539 on 2	7 October 2005 and accorded A	Application Number
course sot and on 17 February 2006 and accorde	ed Application Number 60/774,68	4 (5) for all patent
applications, all rights of priority based upon the Un	ited States patent application ide	ntified in (4) in all
countries and regions under the Paris Convention for	or the Protection of Industrial Pro	perty, the Inter-
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PATENT

(joint) Patent Case 51673

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 continuations and continuations of divisions), ((2)-(4) and (6) hereinafter referred to collectively as "patent 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 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.

PATENT

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<u>PAIENI</u>

Page 4 (ight) Patent Case 51673
(joint) Patent Case 51673 Executed this 22 day of Apr., 20 08.
Brady Systillwell
ACKNOWLEDGEMENT
State of Connecticut) s.s.: Linton County of New London) s.s.:
On this 22nd day of 12008, personally appeared before me 2008 to me known and known by me to be the same person described in and who executed the foregoing Assignment and acknowledged that (s)he executed the same of his (her) own free will for the purpose set forth.
(Seal)
Piane L. Moshier Diane L. Moshier
Diane L. Moshier
Executed this day of, 20 My comm. expires 8/31/2010
L.S.
David A. SIESEL
ACKNOWLEDGEMENT
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On this day of, 20, personally appeared before me to me known and known by me to be the same person described in and who
executed the foregoing Assignment and acknowledged that (s)he executed the same of his (her) own free will for the purpose set forth.
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PATENT

Case 51673

I hereby certify that the attached is a true copy of the original Assignment from the inventors to NOVARTIS AG, of a patent application entitled, SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION said Assignment having been executed by Brady S. STILLWELL on April 22, 2008.

Maureen McGee

ACKNOWLEDGEMENT

State of New Jersey)
County of Morris) s.s.:)
On this 23rd day of	Аргіі , 2008, personally appeared before me
Maureen McGee	to me known, and known by me to be the same
	xecuted the foregoing instrument, and acknowledged that f his (her) own free will for the purpose set forth.
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(Seal)

KELLY ANN STRITENBERGER A Notary Public of New Jersey My Commission Expires January 26, 2012

PATENT

ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

- 1. Martin DIMITROFF, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of Canada
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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 (Novartis AG hereinafter referred to collectively as the "ASSIGNEES") in and to (1) all of our inventions and discoveries described in the patent application(s) titled

SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION

Application Number filed 30 August 2006 (2) the parameter application identified in priority of the provisional or not accorded Application Number 60/731,591 and on 17 February applications, all rights of prioric countries and regions under the American Convention relating international agreements to we	Patent and Trademark Office on * International Application (s) identified in (1), (3) all not (1), (4) all other patent applications in all comprovisional patent application filed in the 1st 2005 and accorded Application Number 60/712,539 on 27 October 2005 and 1st 2006 and accorded Application Number ty based upon the United States patent application for the Protection of International Patents, Designs, and Industrial Indus	ational stages of any international stages of any international puntries and regions claiming the United States Patent and 60/713,108, on 30 August 2005 accorded Application Number of 60/774,684 (5) for all patent olication identified in (4) in all dustrial Property, the International Models and all other perfection, under 35 USC 119(e)
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Patent Case 51673

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 continuations and continuations of divisions), ((2)-(4) and (6) hereinafter referred to collectively as "patent 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.

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		Page 3		Patent	Case 51673
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Martin DIMITROFF		L.S.			
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Brady S. STILLWELL	L.S.	
ACKNOWLEDGEMENT		
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ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

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- 11. Teresa E. PICK, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA

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SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION

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(joint) Patent Case 51673

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(joint) Patent Case 51673

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Brian DIAZ		L.S.		
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Danlin	L.S.		
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On this 25th day of March, 2	nown-by-m	e to be the same p	erson described in and who
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Jonathan P. VAN DYCK	L.S.		
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ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

- 1. Martin DIMITROFF, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of Canada
- 2. Bridget R. MILLER, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 3. Brady S. STILLWELL, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 4. David A. SIESEL, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 5. Tyson SWIFTNEY, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 6. Brian DIAZ, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
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- 9. David RYCKMAN, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 10. Daniel J. POON, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 11. Teresa E. PICK, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA

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 (Novartis AG hereinafter referred to collectively as the "ASSIGNEES") in and to (1) all of our inventions and discoveries described in the patent application(s) titled

SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION

and filed in the United States Patent and Trademark Office on* International Application No. Facilities and accorded Application identified in (1), (4) all other patent applications in all countries and priority of the provisional or non-provisional patent application filed in the United State Trademark Office on 30 August 2005 and accorded Application Number 60/713,100 and accorded Application Number 60/712,539 on 27 October 2005 and accorded Application Number 60/714,680 applications, all rights of priority based upon the United States patent application idea countries and regions under the Paris Convention for the Protection of Industrial Productional Application agreements to which the United States now is or hereafter becomes a sufficient of the patent application, united States patent application, united States patent application identified in (4) is a provisional patent application, unificiently to file patent applications on said inventions and discoveries in the	les of any international is regions claiming the es Patent and and an
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(joint) Patent Case 51673

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 continuations and continuations of divisions), ((2)-(4) and (6) hereinafter referred to collectively as "patent 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 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.

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ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

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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 (Novartis AG hereinafter referred to collectively as the "ASSIGNEES") in and to (1) all of our inventions and discoveries described in the patent application(s) titled

SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION

and filed in the United States Patent and Trademark	Office on	and accorded
Application Number*	International Application No. PC7	r/US2006/034112,
filed 30 August 2006 (2) the patent application(s) idea	ntified in (1), (3) all national stages	of any international
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priority of the provisional or non-provisional patent ap		
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applications, all rights of priority based upon the Unite		
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American Convention relating to Inventions, Patents,	Designs, and Industrial Models an	d all other
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(including the right to file patent applications on said i	inventions and discoveries in the n	ames of

Page 2

(joint) Patent Case 51673

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 continuations and continuations of divisions), ((2)-(4) and (6) hereinafter referred to collectively as "patent 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.

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ACKNOWLEDGMENT

State of California County of SAN DIEGO)
On MARCH 12, 2008 before me, LENE ALICEA, NOTARY PUBLIC (insert name and title of the officer)
personally appeared
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal. WITNESS my hand and official seal.
Signature duce (Seal)

REEL: 024946 FRAME: 0474

ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

- 1. Martin DIMITROFF, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of Canada
- 2. Bridget R. MILLER, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
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- 10. Daniel J. POON, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA
- 11. Teresa E. PICK, Novartis Vaccines and Diagnostics Inc., P.O. Box 8097, Emeryville, California 94662-8097 USA, citizen of USA

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 (Novartis AG hereinafter referred to collectively as the "ASSIGNEES") in and to (1) all of our inventions and discoveries described in the patent application(s) titled

SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION

and filed in the United States Patent and Trademark C	Office on	and accorded
Application Number*	International Application No. PC	1/052006/034112,
filed 30 August 2006 (2) the patent application(s) iden	itified in (1), (3) all national stages	or any international
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applications, all rights of priority based upon the Unite	ed States patent application identif	ied in (4) in all
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(including the right to file patent applications on said in	nventions and discoveries in the r	names of

Page 2

(joint) Patent Case 51673

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 continuations and continuations of divisions), ((2)-(4) and (6) hereinafter referred to collectively as "patent 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 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.

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CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT State of California California County of _____ On ______O2/25/08 ____ before me, ____Elissa M. Nash, Notary Public Here Insert Name and Title of the Officer Daniel Poon----personally appeared ___ Name(s) of Signer(s) who proved to me on the basis of satisfactory evidence to be the person (s) whose name (s) is a subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his he/their authorized capacity(jes), and that by his harther signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument. ELISSA M. NASH Commission # 1553873 I certify under PENALTY OF PERJURY under the laws Notary Public - California of the State of California that the foregoing paragraph is Alameda County My Comm. Expires Feb 19, 2009 true and correct. WITNESS my hand and official seal. Signature Wilbo Place Notary Seal Above - OPTIONAL · Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document. **Description of Attached Document** Title or Type of Document: _____ Number of Pages: _____ Document Date: _____ Signer(s) Other Than Named Above: Capacity(ies) Claimed by Signer(s) Signer's Name: ___ Signer's Name:_____ □ Individual □ Individual ☐ Corporate Unice ☐ Partner — ☐ Limited ☐ General OF SIGNER RIGHT THUMBPRINT OF SIGNER ☐ Corporate Officer — Title(s): _ ☐ Corporate Officer — Title(s): ___ ☐ Partner — ☐ Limited ☐ General ☐ Attorney in Fact Top of thumb here Top of thumb here ☐ Trustee □ Trustee ☐ Guardian or Conservator ☐ Guardian or Conservator □ Other:____ Signer Is Representing: ____ Signer Is Representing:____

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ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

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SUBSTITUTED BENZIMIDAZOLES AND METHODS OF PREPARATION

and filed in the United States Patent and Trademark Office on	ges of any international diregions claiming the des Patent and 8, on 30 August 2005 application Number 4 (5) for all patent antified in (4) in all apperty, the Intersional all other signatory and, if the ander 35 USC 119(e)
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Patent Case 51673 (ioint) 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 continuations and continuations of divisions), ((2)-(4) and (6) hereinafter referred to collectively as "patent 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.

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CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT State of California County of Alameda March 21, 2008 before me, Elissa M. Nash, Notary Public Here Insert Name and Title of the Officer personally appeared _____ Teresa Pick ----who proved to me on the basis of satisfactory evidence to be the person whose name by subscribed to the within instrument and acknowledged to me that the she had executed the same in his neither authorized capacity(ibe), and that by the heir signature (6) on the ELISSA M. NASH instrument the person or the entity upon behalf of Commission # 1553873 Notary Public - California which the person(s) acted, executed the instrument. Alameda County My Comm. Expires Feb 19, 2009 I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal. Signature. Place Notary Seal Above - OPTIONAL · Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document. **Description of Attached Document** Title or Type of Document: _____ Number of Pages: _____ Document Date: _____ Signer(s) Other Than Named Above: __ Capacity(ies) Claimed by Signer(s) Signer's Name:____ Signer's Name: ____ ☐ Individual ☐ Individual ☐ Corporate Officer — Title(s): ___ ☐ Corporate Unice: ☐ Partner — ☐ Limited ☐ General ☐ General ☐ General ☐ FIGHT THUMBPRINT OF SIGNER OF SIGNER □ Corporate Officer — Title(s): __ ☐ Partner — ☐ Limited ☐ General ☐ Attorney in Fact Top of thumb here ☐ Trustee □ Trustee ☐ Guardian or Conservator ☐ Guardian or Conservator Other: □ Other: ______

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