

**PATENT ASSIGNMENT**

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MICHELE PALLAORO	10/19/2010
RINO RAPPUOLI	10/07/2010
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NOVARTIS VACCINES AND DIAGNOSTICS SRL
<b>Street Address:</b>	Via Fiorentina 1
<b>City:</b>	Siena
<b>State/Country:</b>	ITALY
<b>Postal Code:</b>	I-53100
<b>PROPERTY NUMBERS Total: 2</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	12870708
<b>Application Number:</b>	61237595
<b>CORRESPONDENCE DATA</b>	
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<b>Correspondent Name:</b>	NOVARTIS VACCINES AND DIAGNOSTICS INC.
<b>Address Line 1:</b>	INTELLECTUAL PROPERTY- X100B
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<b>ATTORNEY DOCKET NUMBER:</b>	PAT053754-US-NP
<b>NAME OF SUBMITTER:</b>	Kara Shure

Total Attachments: 3  
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**PATENT**  
**REEL: 025360 FRAME: 0146**

**CH \$80.00 12870708**

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**ASSIGNMENT**

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

(1) Michele Pallaoro and (2) Rino Rappuoli

do hereby sell, assign and transfer to **Novartis Vaccines and Diagnostics S.R.L.**, with a place of business at Via Fiorentina 1, I-53100, Siena, Italy, (hereinafter referred to as the "**ASSIGNEE**") and its successors, assigns and legal representatives, all of my right, title and interest for all countries of the world in and to (1) all of our inventions and discoveries described in the patent application(s) titled

**ADJUVANT COMPRISING ALUMINUM, OLIGONUCLEOTIDE AND POLYCATION**

and filed in the United States Patent and Trademark Office on August 27, 2010 and accorded Application Number 12/870,708\* 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 August 27, 2009 and accorded Application Number 61/237,595 (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 **ASSIGNEE** 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 **ASSIGNEE** 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 **ASSIGNEE** 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 **ASSIGNEE** 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 **ASSIGNEE** 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 **ASSIGNEE** 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 **PATENT** all lawful

acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE or their successors, assigns or legal representatives.

This Assignment is effective as from the earliest priority date as stated above.

Executed this 19<sup>th</sup> day of October, 2010

Michele Pallaoro L.S.  
Michele Pallaoro

ACKNOWLEDGEMENT

Sp. G. G. G.  
WITNESS

Rogave paguulo  
WITNESS

Executed this 7<sup>th</sup> day of October, 2010

Rino Rappuoli L.S.  
Rino Rappuoli

ACKNOWLEDGEMENT

Sp. G. G. G.  
WITNESS

Rogave paguulo  
WITNESS