

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2636369

SUBMISSION TYPE:	NEW ASSIGNMENT																
NATURE OF CONVEYANCE:	ASSIGNMENT																
CONVEYING PARTY DATA																	
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>JOHN M POLO</td> <td>06/08/2000</td> </tr> <tr> <td>THOMAS W DUBENSKY JR</td> <td>06/21/2000</td> </tr> <tr> <td>ILYA FROLOV</td> <td>10/06/2000</td> </tr> <tr> <td>JASON GARDNER</td> <td>07/13/2000</td> </tr> <tr> <td>GILLIS OTTEN</td> <td>05/30/2000</td> </tr> <tr> <td>SUSAN W BARNETT</td> <td>05/30/2000</td> </tr> <tr> <td>DAVID A DRIVER</td> <td>04/11/2000</td> </tr> </tbody> </table>		Name	Execution Date	JOHN M POLO	06/08/2000	THOMAS W DUBENSKY JR	06/21/2000	ILYA FROLOV	10/06/2000	JASON GARDNER	07/13/2000	GILLIS OTTEN	05/30/2000	SUSAN W BARNETT	05/30/2000	DAVID A DRIVER	04/11/2000
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RECEIVING PARTY DATA																	
<table border="1"> <tr> <td>Name:</td> <td>CHRION CORPORATION</td> </tr> <tr> <td>Street Address:</td> <td>4560 HORTON STREET</td> </tr> <tr> <td>City:</td> <td>EMERYVILLE</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>94608-2916</td> </tr> </table>		Name:	CHRION CORPORATION	Street Address:	4560 HORTON STREET	City:	EMERYVILLE	State/Country:	CALIFORNIA	Postal Code:	94608-2916						
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PROPERTY NUMBERS Total: 1																	
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12825722</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12825722												
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CORRESPONDENCE DATA																	
<p>Fax Number:</p> <p>Email: christy.snyder@novartis.com</p> <p><i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i></p> <p>Correspondent Name: NOVARTIS VACCINES AND DIAGNOSTICS, INC.</p> <p>Address Line 1: ONE HEALTH PLAZA</p> <p>Address Line 2: IP SERVICES, BLDG. 433 257</p> <p>Address Line 4: EAST HANOVER, NEW JERSEY 07936-1080</p>																	
ATTORNEY DOCKET NUMBER:	PAT052447-US-CNT02																

CH \$40.00 12825722

NAME OF SUBMITTER:	REGINA BAUTISTA
Signature:	/Regina Bautista/
Date:	12/04/2013
<b>Total Attachments: 10</b> source=PAT052447USCNT02ASSIGNInvtoChiron#page1.tif source=PAT052447USCNT02ASSIGNInvtoChiron#page2.tif source=PAT052447USCNT02ASSIGNInvtoChiron#page3.tif source=PAT052447USCNT02ASSIGNInvtoChiron#page4.tif source=PAT052447USCNT02ASSIGNInvtoChiron#page5.tif source=PAT052447USCNT02ASSIGNInvtoChiron#page6.tif source=PAT052447USCNT02ASSIGNInvtoChiron#page7.tif source=PAT052447USCNT02ASSIGNInvtoChiron#page8.tif source=PAT052447USCNT02ASSIGNInvtoChiron#page9.tif source=PAT052447USCNT02ASSIGNInvtoChiron#page10.tif	

*ASSIGNMENT*

*WHEREAS*, We, John M. Polo, Thomas W. Dubensky, Jr., Ilya Frolov, Jason Gardner, Gillis Otten, Susan Barnett, and David A. Driver, hereinafter referred to as *ASSIGNORS*, have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: COMPOSITIONS AND METHODS FOR GENERATING AN IMMUNE RESPONSE UTILIZING ALPHAVIRUS-BASED VECTOR SYSTEMS

Date(s) of Execution: 04/11/00, 05/30/00, Filing Date: August 9, 1999  
06/08/00, 06/21/00, and 07/13/00

Serial No: 60/148,086

*WHEREAS*, CHIRON CORPORATION, 4560 Horton Street, Emeryville, California 94608-2916, a corporation of the State of Delaware, hereinafter referred to as *ASSIGNEE*, is desirous of acquiring the entire right, title and interest in the above invention and application and in any Letters Patent which may be granted on the same;

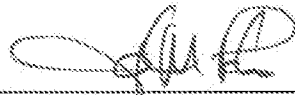
*NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN*: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to *ASSIGNORS* by *ASSIGNEE*, receipt of which is hereby acknowledged, *ASSIGNORS* have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said *ASSIGNEE*, and *ASSIGNEE'S* successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions (including conversions claiming priority under 35 U.S.C. §119(e)), reissues, prolongations or extensions thereof, the said interest to be held and enjoyed by said *ASSIGNEE* as fully and exclusively as it would have been held and enjoyed by said *ASSIGNORS* had this assignment and transfer not been made, to the full end and term of any Letters Patent.

*ASSIGNORS* also agree that the U.S. application number may be entered above by *ASSIGNEE* or its agents upon designation of the application number by the U.S. Patent and Trademark Office.

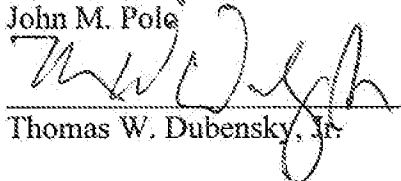
*ASSIGNORS* further agree that they will, without charge to said *ASSIGNEE*, but at *ASSIGNEE'S* expense, cooperate with *ASSIGNEE* in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as *ASSIGNEE* lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said *ASSIGNEE*, or *ASSIGNEE'S* successors and assigns.

*IN TESTIMONY WHEREOF*, *ASSIGNORS* have hereunto signed their names to this assignment on the dates indicated below.

DATE 6/9/00

  
\_\_\_\_\_  
John M. Pole


DATE 6-21-00

  
\_\_\_\_\_  
Thomas W. Dubensky, Jr.


DATE \_\_\_\_\_

\_\_\_\_\_  
Ilya Frolov

DATE 7/17/00

  
\_\_\_\_\_  
Jason Gardner

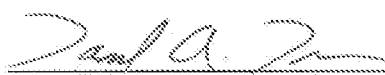
DATE 5/30/00

  
\_\_\_\_\_  
Gillis Otten

DATE 5/30/00

  
\_\_\_\_\_  
Susan Barnett

DATE 4/11/00

  
\_\_\_\_\_  
David A. Driver

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

State of California

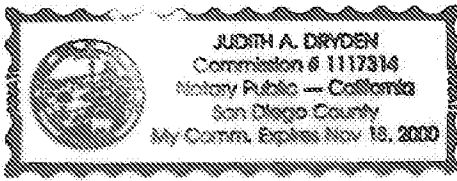
County of San Diego

On April 11, 2005 before me, Judith A. Dryden, Notary  
Date Name and Title of Officer (e.g., Jane Doe, Notary Public)

personally appeared David A. Dewes  
Name(s) of Signer(s)

- personally known to me
- proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Judith A. Dryden  
Signature of Notary Public

**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: Patent Assignment # 1593.002

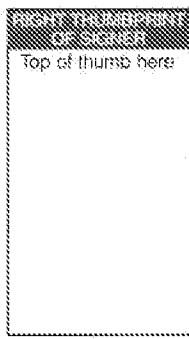
Document Date: 8-9-99 Number of Pages: 2

Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: \_\_\_\_\_

- Individual
- Corporate Officer  
Title(s): \_\_\_\_\_
- Partner —  Limited  General
- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_

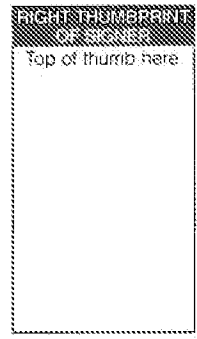


Signer Is Representing: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Signer's Name: \_\_\_\_\_

- Individual
- Corporate Officer  
Title(s): \_\_\_\_\_
- Partner —  Limited  General
- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

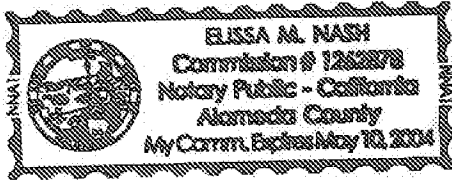
State of California

County of Alameda

On May 30, 2000 before me, Elissa M. Nash  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Gillis Otten  
Name(s) of Signer(s)

personally known to me – OR –  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/hers/their authorized capacity(ies), and that by his/hers/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Elissa M. Nash  
Signature of Notary Public

**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: Assignment document for Case No. 1593.002

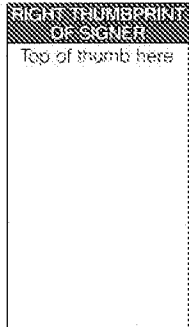
Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: \_\_\_\_\_

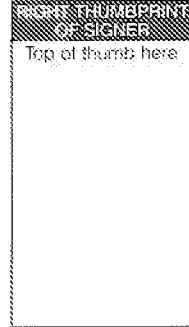
- Individual
- Corporate Officer  
Title(s): \_\_\_\_\_
- Partner —  Limited  General
- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing:  
\_\_\_\_\_  
\_\_\_\_\_

Signer's Name: \_\_\_\_\_

- Individual
- Corporate Officer  
Title(s): \_\_\_\_\_
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- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing:  
\_\_\_\_\_  
\_\_\_\_\_

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

State of California

County of Alameda

On May 30, 2000 before me, Elissa M. Nash

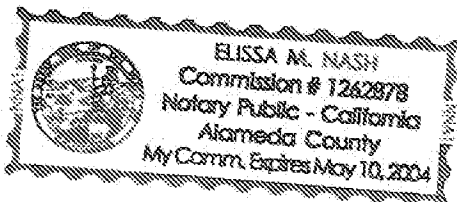
Date

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Susan Barnett

Name(s) of Signer(s)

personally known to me – OR –  proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.



WITNESS my hand and official seal.

*Elissa M. Nash*  
Signature of Notary Public

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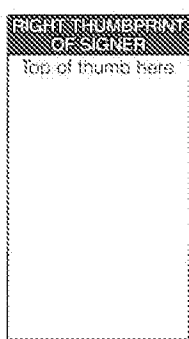
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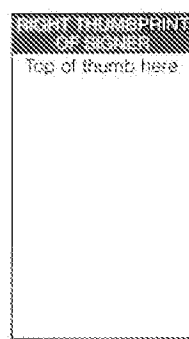
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Title(s): \_\_\_\_\_
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- Other: \_\_\_\_\_



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Signer Is Representing: \_\_\_\_\_

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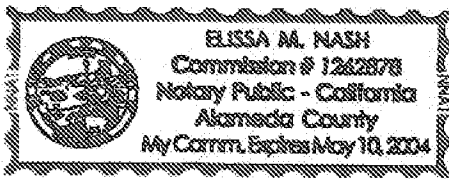
State of California

County of Alameda

On June 8, 2000 before me, Elissa M. Nash  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared John M. Polo  
Name(s) of Signer(s)

personally known to me -- OR --  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Elissa M. Nash  
Signature of Notary Public

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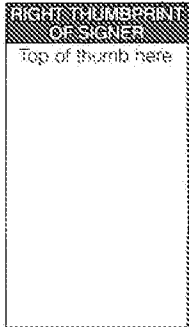
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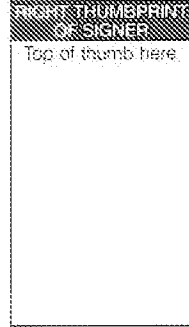
- Individual
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Title(s): \_\_\_\_\_
- Partner —  Limited  General
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- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing: \_\_\_\_\_

Signer's Name: \_\_\_\_\_

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- Corporate Officer  
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Signer Is Representing: \_\_\_\_\_



**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

State of California

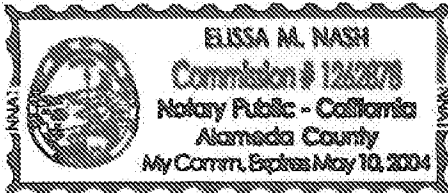
County of Alameda

On June 21, 2000 before me, Elissa M. Nash  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Thomas W. Dubensky, Jr.  
Name(s) of Signer(s)

personally known to me -- OR --  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument

and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Elissa M. Nash  
Signature of Notary Public

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Title or Type of Document: Assignment for Case No. 1593.002

Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: \_\_\_\_\_

- Individual
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Title(s): \_\_\_\_\_
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- Guardian or Conservator
- Other: \_\_\_\_\_

**RIGHT THUMBPRINT OF SIGNER**  
Top of thumb here

Signer Is Representing: \_\_\_\_\_

Signer's Name: \_\_\_\_\_

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Top of thumb here

Signer Is Representing: \_\_\_\_\_

**PATENT**

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

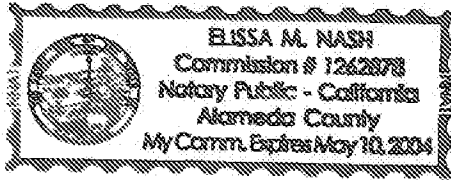
State of California

County of Alameda

On July 13, 2000 before me, Elissa M. Nash  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Jason Gardner  
Name(s) of Signer(s)

personally known to me -- OR --  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/his/their authorized capacity(ies), and that by his/his/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



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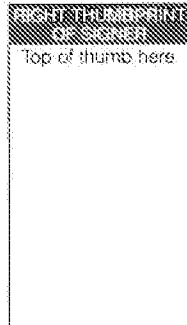
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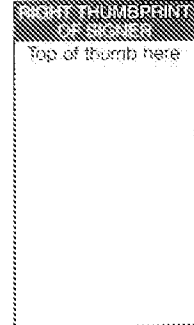
- Individual
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Title(s): \_\_\_\_\_
- Partner —  Limited  General
- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing:  
\_\_\_\_\_  
\_\_\_\_\_

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- Other: \_\_\_\_\_



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\_\_\_\_\_

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Date(s) of Execution: October 6, 2000 Filing Date: August 9, 1999

Serial No: 60/148,086

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*NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN*: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to *ASSIGNORS* by *ASSIGNEE*, receipt of which is hereby acknowledged, *ASSIGNORS* have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said *ASSIGNEE*, and *ASSIGNEE'S* successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions (including conversions claiming priority under 35 U.S.C. §119(e)), reissues, prolongations or extensions thereof, the said interest to be held and enjoyed by said *ASSIGNEE* as fully and exclusively as it would have been held and enjoyed by said *ASSIGNORS* had this assignment and transfer not been made, to the full end and term of any Letters Patent.

*ASSIGNORS* also agree that the U.S. application number may be entered above by *ASSIGNEE* or its agents upon designation of the application number by the U.S. Patent and Trademark Office.

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DATE \_\_\_\_\_

\_\_\_\_\_  
John M. Polo

DATE \_\_\_\_\_

\_\_\_\_\_  
Thomas W. Dubensky, Jr.

DATE \_\_\_\_\_

*[Signature]* 10/6/00  
\_\_\_\_\_  
Ilya Prolov

*[Signature]*  
\_\_\_\_\_  
witness signature

DATE \_\_\_\_\_

\_\_\_\_\_  
Jason Gardner

DATE \_\_\_\_\_

\_\_\_\_\_  
Gillis Otten

DATE \_\_\_\_\_

\_\_\_\_\_  
Susan Barnett

DATE \_\_\_\_\_

\_\_\_\_\_  
David A. Driver