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| PATENT ASSIGNMENT COVER SHEET |
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Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5786389

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | CORRECT AN ERROR IN A COVER SHEET PREVIOUSLY RECORDED AT 050798/0558 (APPLICATION 10415098 AND PATENT 7105178 NOT CONVEYED). |

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| NICOLA DIMAIUTA | 05/30/2016 |
| KONRAD EGLI | 05/28/2016 |
| JOACHIM GLAUBITZ | 05/25/2016 |
| SIMON URWYLER | 05/26/2016 |

RECEIVING PARTY DATA

| | |
|------------------------|-----------------------|
| Name: | OMYA INTERNATIONAL AG |
| Street Address: | BASLERSTRASSE 42 |
| City: | OFTRINGEN - SUISSE |
| State/Country: | SWITZERLAND |
| Postal Code: | CH-4665 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|--------------------|--------------|
| PCT Number: | EP2014073768 |

CORRESPONDENCE DATA

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Email: lynn.comproski@hrfmlaw.com, teige.sheehan@hrfmlaw.com
Correspondent Name: HESLIN ROTHENBERG FARLEY & MESITI P.C.
Address Line 1: 5 COLUMBIA CIRCLE
Address Line 4: ALBANY, NEW YORK 12203

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| ATTORNEY DOCKET NUMBER: | 5757.001 |
| NAME OF SUBMITTER: | TEIGE SHEEHAN |
| SIGNATURE: | /Teige Sheehan/ |
| DATE SIGNED: | 10/24/2019 |

Total Attachments: 5
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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5783010

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| NICOLA DIMAIUTA | 05/30/2016 |
| KONRAD EGLI | 05/28/2016 |
| JOACHIM GLAUBITZ | 05/25/2016 |
| SIMON URWYLER | 05/26/2016 |
| RECEIVING PARTY DATA | |
| Name: | OMYA INTERNATIONAL AG |
| Street Address: | BASLERSTRASSE 42 |
| City: | OFTRINGEN - SUISSE |
| State/Country: | SWITZERLAND |
| Postal Code: | CH-4665 |
| PROPERTY NUMBERS Total: 2 | |
| Property Type | Number |
| PCT Number: | EP2014073768 |
| Application Number: | 10415098 |
| CORRESPONDENCE DATA | |
| Fax Number: | (518)452-5579 |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> | |
| Phone: | (518) 452-5600 |
| Email: | lynn.comproski@hrfmlaw.com |
| Correspondent Name: | HESLIN ROTHENBERG FARLEY & MESITI P.C. |
| Address Line 1: | 5 COLUMBIA CIRCLE |
| Address Line 4: | ALBANY, NEW YORK 12203 |
| ATTORNEY DOCKET NUMBER: | 5757.001 |
| NAME OF SUBMITTER: | TEIGE P. SHEEHAN |
| SIGNATURE: | /Teige Sheehan/ |
| DATE SIGNED: | 10/23/2019 |
| Total Attachments: 4 source=H1593971#page1.tif | |

COMBINED DECLARATION and ASSIGNMENT for US PATENT APPLICATION

*(US rights only - all US rights assigned by inventors to a single assignee)
(Earliest US or PCT application filing date must be on or after September 16, 2012)*

DECLARATION

As the below named inventor(s), I hereby declare that:

This declaration is directed to:

- The attached application.
 US or PCT International Application No. PCT/EP2014/073768 filed on
November 05, 2014

The TITLE of Invention is: "Nucleic acids and methods for detecting pathogens and beneficial microorganisms"

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than (5) years, or both.

Further, I hereby state that I have reviewed and understand the contents of the above-identified application; and I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

ASSIGNMENT

WHEREAS, the below named inventor(s), (hereinafter referred to as the "ASSIGNOR") has/have invented certain new and useful improvements in the application as noted above,

And WHEREAS, OMYA INTERNATIONAL AG

whose Post Office Address is Baslerstrasse 42 CH-4665 Oftringen - SUISSE

(hereinafter referred to as the "ASSIGNEE") is desirous of acquiring the entire right, title and interest in and to said application and the invention(s) and improvement(s) therein disclosed, for the United States of America, and any Letters Patent which may issue therefor in the United States and all divisions, continuations, reissues, renewals and/or extensions thereof.


NOW THEREFORE in consideration of the sum of ten U.S. dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the ASSIGNOR does hereby assign, sell, transfer and set over unto the ASSIGNEE the entire right, title and interest in and to said application and the invention(s) and improvement(s) therein disclosed, for the United States of America, and any Letters Patent which may issue therefor in the United States and all divisions, continuations, reissues, renewals and/or extensions thereof, said ASSIGNEE to have and to hold the interests herein assigned to the full ends of the terms of said Letters Patent and any and all divisions, continuations, reissues, renewals and/or extensions thereof, respectively, as fully and entirely as the same would have been held and enjoyed by the ASSIGNOR had this assignment not been made.

And for the consideration aforesaid, ASSIGNOR agrees that ASSIGNOR will communicate to said ASSIGNEE or the representatives thereof any facts known to ASSIGNOR respecting the invention(s) and improvement(s) of the said United States application, and will, upon request, but without expense to ASSIGNOR, testify in any legal proceedings, sign all lawful papers, execute all divisional, reissue, continuation, renewal and/or extension applications, make all rightful oaths, and generally do all other and further lawful acts, deemed necessary or expedient by said ASSIGNEE or by counsel for said ASSIGNEE, to assist or enable said ASSIGNEE to obtain and enforce full benefits from the rights and interests herein assigned.

This assignment shall be binding upon the ASSIGNOR's heirs, executors, administrators, successors and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors, and/or assigns, as the case may be, of the ASSIGNEE.

The Commissioner of Patents is requested to issue such Letters Patent in accordance with this assignment.

I hereby authorize and request any attorney of record in said Application or any attorney of AMSTER, ROTHSTEIN & EBENSTEIN, Customer Nos.to insert above any information concerning the identity of the parties or of said Application (including the serial no. and filing date).

| | |
|---|---------------------------------|
| LEGAL NAME OF SOLE OR FIRST INVENTOR | |
| Given Name (First and Middle [if any]) Nicola | FAMILY NAME or SURNAME DIMAIUTA |
| Full Mailing Address Amselweg 8 ZUCHWIL, 4528 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature  | Date 30.5.2016 |

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| LEGAL NAME OF ADDITIONAL JOINT INVENTOR | |
| Given Name (First and Middle [if any]) Konrad | FAMILY NAME or SURNAME EGLI |
| Full Mailing Address Hasenweid 10 OLTEN, 4600 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature _____ | Date _____ |

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| LEGAL NAME OF ADDITIONAL JOINT INVENTOR | |
| Given Name (First and Middle [if any]) Joachim | FAMILY NAME or SURNAME GLAUBITZ |
| Full Mailing Address Rossweid 7 SINS, 5643 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature _____ | Date _____ |

| | |
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| LEGAL NAME OF ADDITIONAL JOINT INVENTOR | |
| Given Name (First and Middle [if any]) Simon | FAMILY NAME or SURNAME URWYLER |
| Full Mailing Address Bruckfeldstrasse 13 BERN, 3012 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature _____ | Date _____ |

And for the consideration aforesaid, ASSIGNOR agrees that ASSIGNOR will communicate to said ASSIGNEE or the representatives thereof any facts known to ASSIGNOR respecting the invention(s) and improvement(s) of the said United States application, and will, upon request, but without expense to ASSIGNOR, testify in any legal proceedings, sign all lawful papers, execute all divisional, reissue, continuation, renewal and/or extension applications, make all rightful oaths, and generally do all other and further lawful acts, deemed necessary or expedient by said ASSIGNEE or by counsel for said ASSIGNEE, to assist or enable said ASSIGNEE to obtain and enforce full benefits from the rights and interests herein assigned.

This assignment shall be binding upon the ASSIGNOR's heirs, executors, administrators, successors and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors, and/or assigns, as the case may be, of the ASSIGNEE.

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| LEGAL NAME OF SOLE OR FIRST INVENTOR | |
| Given Name (First and Middle [if any]) Nicola | FAMILY NAME or SURNAME DIMAIUTA |
| Full Mailing Address Amselweg 8 ZUCHWIL, 4528 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature _____ | Date _____ |
| LEGAL NAME OF ADDITIONAL JOINT INVENTOR | |
| Given Name (First and Middle [if any]) Konrad | FAMILY NAME or SURNAME EGLI |
| Full Mailing Address Hasenweid 10 OLTEN, 4600 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature <i>K. Egli</i> | Date <i>2852016</i> |
| LEGAL NAME OF ADDITIONAL JOINT INVENTOR | |
| Given Name (First and Middle [if any]) Joachim | FAMILY NAME or SURNAME GLAUBITZ |
| Full Mailing Address Rossweid 7 SINS, 5643 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature _____ | Date _____ |
| LEGAL NAME OF ADDITIONAL JOINT INVENTOR | |
| Given Name (First and Middle [if any]) Simon | FAMILY NAME or SURNAME URWYLER |
| Full Mailing Address Bruckfeldstrasse 13 BERN, 3012 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature _____ | Date _____ |

39e333- W- P.L.C.

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| LEGAL NAME OF SOLE OR FIRST INVENTOR | |
| Given Name (First and Middle [if any]) Nicola | FAMILY NAME or SURNAME DIMAIUTA |
| Full Mailing Address Anselweg 8 ZUCHWIL, 4528 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature _____ | Date _____ |
| LEGAL NAME OF ADDITIONAL JOINT INVENTOR | |
| Given Name (First and Middle [if any]) Konrad | FAMILY NAME or SURNAME EGLI |
| Full Mailing Address Hasenweid 10 OLTEN, 4600 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature _____ | Date _____ |
| LEGAL NAME OF ADDITIONAL JOINT INVENTOR | |
| Given Name (First and Middle [if any]) Joachim | FAMILY NAME or SURNAME GLAUBITZ |
| Full Mailing Address Rosswald 7 SINS, 5643 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature <i>[Signature]</i> | Date 25.05.2016 |
| LEGAL NAME OF ADDITIONAL JOINT INVENTOR | |
| Given Name (First and Middle [if any]) Simon | FAMILY NAME or SURNAME URWYLER |
| Full Mailing Address Bruckfeldstrasse 13 BERN, 3012 SUISSE | |
| Residence - City, State, Country (if different from mailing address) | |
| SIGN AND DATE HERE Inventor's Signature <i>[Signature]</i> | Date 26.05.2016 |