PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------------|----------------|
| Megan L. Shaw | 11/04/2010 |
| Hans-Heinrich Hoffmann | 01/05/2010 |
| Adolfo Garcia-Sastre | 11/10/2010 |
| Peter Palese | 12/09/2010 |

RECEIVING PARTY DATA

| Name: | Mount Sinai School of Medicine of New York University | |
|-------------------|-------------------------------------------------------|--|
| Street Address: | One Gustave L. Levy Place | |
| Internal Address: | Box 1675 | |
| City: | New York | |
| State/Country: | NEW YORK | |
| Postal Code: | 10029 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12921077 |

CORRESPONDENCE DATA

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

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| ATTORNEY DOCKET NUMBER: | 6923-146-999 |
|-------------------------|------------------|
| NAME OF SUBMITTER: | Laura A. Coruzzi |

PATENT REEL: 025474 FRAME: 0566 00 074

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Total Attachments: 4

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PATENT REEL: 025474 FRAME: 0567

ASSIGNMENT

| Africa, Germany, Spain and the United States, r Street, Apt. 6B, New York, NY 10128; 16 Earespectively, are the inventors of the invention | ans-Heinrich Hoffmann, Adolfo Garcia-Sastre, and Peter Palese, ASSIGNarespectively, and residing at 710 West End Avenue, Apt. 5F, New York, N st 96 th Street, Apt. 3G, New York, NY 10128 and 414 Highwood Avenue in COMPOUNDS THAT MODULATE NEGATIVE-SENSE, SINGLAF for which we have executed an application for a Patent of the United States | Y 10025; 53 East 96th ue, Leonia, NJ 07605, LE-STRANDED RNA | |
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| ☐ which is executed on ☐ even dat | te herewith or | | |
| | | | |
| which was filed on September 3, 2010, as I Application No. PCT/US09/01474, filed M We hereby authorize and request attorney | U.S. application Serial No. 12/921,077, which is a national stage application | | |
| and WHEREAS, Mount Sinai School of Medi | licine of New York University, ASSIGNEE, and having a place of busine is desirous of obtaining our entire right, title and interest in, to and under | | |
| the receipt of which is hereby acknowledged, w hereby sell, assign, transfer and set over, unto interest in, to and under the said invention, and Patents of the United States which may be gran protection, including, without limitation, all app in any country or countries foreign to the Unite priority rights derived from said United States Protection of Industrial Property, or any other in as may be applicable; and all forms of industrial | n of the sum of One Dollar (\$1.00) to us in hand paid, and other good and we, the said ASSIGNORS, have sold, assigned, transferred and set over, an the said ASSIGNEE, its successors, legal representatives and assigns, out the said United States application and all divisions, renewals and continuinted thereon and all reissues and extensions thereof; and all applications oblications for patents, utility models, and designs which may hereafter be fed States, together with the right to file such applications and the right to a sapplication under the Patent Laws of the United States, the Internation international agreement or the domestic laws of the country in which any sull property protection, including, without limitation, patents, utility models, ention in any country or countries foreign to the United States and all extending in the United States and all extendin | d by these presents do r entire right, title and lations thereof, and all for industrial property iled for said invention claim for the same the al Convention for the ch application is filed, inventors' certificates | |
| United States, whose duty it is to issue patents of | equest the Commissioner for Patents and any Official of any country or coor other evidence or forms of industrial property protection on applications legal representatives and assigns, in accordance with the terms of this instru | s as aforesaid, to issue | |
| AND WE HEREBY covenant and ag executed, and will not execute, any agreement in | gree that we have full right to convey the entire interest herein assigned, a conflict herewith. | and that we have not | |
| AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries. | | | |
| IN TESTIMONY WHEREOF, We her | reunto set our hands and seals the day and year set opposite our respective s | signatures. | |
| Date $11/4$, | 2010 Megan I Shaw | L.S. | |
| Date | 2010 Hans-Heinrich Hoffmann | L.S. | |
| Date 11/16 , 2 | 2010 Adolf A Garcia Ractre | L.S. | |
| Date, 2 | Peter Palese | L.S. | |
| State of New York) SS.: County of New York) | DIANA SOTO LOPE Notary Public, State of Ne No. 01 S06204841 Qualified in New York C Commission Expires April | outhy 27, 2018 | |
| Shaw personally known the within instrument and acknowledged to m | pefore me, Diana Soto - Copez, Notary Public, personally appears to me on the basis of satisfactory evidence to be the person(s) whose name that he/she/they executed the same in his/her/their authorized capacerson(s), or the entity upon behalf of which the person(s) acted, executed the | ne(s) is subscribed to ity(ies), and that by | |

PATENT REEL: 025474 FRAME: 0568^{A,J} I.

DIANA SOTO LOPEZ
Notary Public, State of New York
No. 01 SOB204841
Qualified in New York County
Commission Express April 27, 2018

| State of New York) SS.: | Qualified in New York Course Commission Expires April 27, 2018 |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| County of New Wil) | |
| Hoffmann , personally kno subscribed to the within instrument and acknowledged to | e, <u>Diana Soto Loc2</u> . Notary Public, personally appeared <u>Haus-Heinrich</u> own to me on the basis of satisfactory evidence to be the person(s) whose name(s) is me that he/she/they executed the same in his/her/their authorized capacity(ies), and that (s), or the entity upon behalf of which the person(s) acted, executed the instrument. |
| WITNESS my hand and official seal | |
| Mana Sato- har | |
| State of NewYork) Sounty of NewYork) SS.: | |
| County of New york) SS.: | |
| Sastre, personally known to me the within instrument and acknowledged to me that | e, NINA L. KUSCSIW, Notary Public, personally appeared Adolfo Garcia- on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to he/she/they executed the same in his/her/their authorized capacity(ies), and that by or the entity upon behalf of which the person(s) acted, executed the instrument. |
| WITNESS my hand and official seal | NINA L. KUSCSIK Notary Public, State Of New York No.4602348 Guellfled in Suffolk County |
| State of) | Commission Expires <u>(IARVARY 31, 201)</u> |
| County of) SS.: | and the second of the second |
| On, 2010, before me | , Notary Public, personally appeared Peter Palese |
| the within instrument and acknowledged to me that I | on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to he/she/they executed the same in his/her/their authorized capacity(ies), and that by or the entity upon behalf of which the person(s) acted, executed the instrument. |
| WITNESS my hand and official seal | |
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PATENT REEL: 025474 FRAME: 0569

ASSIGNMENT

| Stre | WHEREAS, WE, Megan L. Shaw, Ha ca, Germany, Spain and the United States, re et, Apt. 6B, New York, NY 10128; 16 Eas ectively, are the inventors of the inventior US REPLICATION AND USES THEREOF | espectively, and resid at 96 th Street, Apt. 3 a in COMPOUNDS | ding at 710 West Er G, New York, NY THAT MODULA | nd Avenue, Apt. 5F, New Yorl 10128 and 414 Highwood A LTE NEGATIVE-SENSE, SI | k, NY 10025; 53 East 96th venue, Leonia, NJ 07605 NGLE-STRANDED RNA |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | which is executed on cven date | e herewith or | 0 | | |
| (20) | which is identified by Jones Day docket no. | 6923-146-999 | | | |
| | which was filed on September 3, 2010, as U Application No. PCT/US09/01474, filed Ma We hereby authorize and request attorney() the filing date and application r | arch 6, 2009. s, at Jones Day, to | insert here in parer | ntheses (Application number, | |
| Lev | WHEREAS, Mount Sinai School of Medi y Place, Box 1675, New York, NY 10029, and application: | cine of New York l is desirous of obtain | Jniversity, ASSIGN ing our entire right, | IEB, and having a place of but title and interest in, to and un | isiness at One Gustave L. der the said invention and |
| hero inte Pate prot in a prio Prot as n and | NOW, THEREFORE, in consideration receipt of which is hereby acknowledged, we by sell, assign, transfer and set over, unto trest in, to and under the said invention, and ents of the United States which may be grantection, including, without limitation, all apparts to the United States foreign to the United rity rights derived from said United States ection of Industrial Property, or any other in may be applicable; and all forms of industrial designs which may be granted for said invested thereof; | e, the said ASSIGNO the said ASSIGNEE the said United Stat stated thereon and all lications for patents, d States, together wi application under ti ternational agreemen property protection | ORS, have sold, ass, its successors, leg es application and a reissues and extens utility models, and the right to file s he Patent Laws of a ror the domestic la, including, without | igned, transferred and set over al representatives and assigns all divisions, renewals and cor- ions thereof; and all application I designs which may hereafter such applications and the right the United States, the Interna- tives of the country in which and I limitation, patents, utility mos- | r, and by these presents do, our entire right, little and thinuations thereof, and all ons for industrial property be filed for said invention to claim for the same the tional Convention for the y such application is filed, dels, inventors' certificates |
| Uni the | AND WE HEREBY authorize and received States, whose duty it is to issue patents cannot be the said ASSIGNEE, its successors, AND WE HEREBY covenant and ag | or other evidence or legal representatives | forms of industrial pand assigns, in acco | property protection on applica ordance with the terms of this i | tions as aforesaid, to issue instrument. |
| exe | and WE HEREBY coverant and ag | | ii figiii to convey t | he entire interest herein assign | icu, anu mat we mive no |
| con | AND WE HEREBY further covenant assigns, any facts known to us respecting stimular, reissue and foreign applications, necessors, legal representatives and assigns, to a IN TESTIMONY WHEREOF, We here | aid invention, and to nake all rightful oat obtain and enforce p | estify in any legal p hs, and generally or roper protection for | roceeding, sign all lawful pap do everything possible to aid said invention in all countries. | ers, execute all divisional the said ASSIGNEE, its |
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| D | ite, ,2 | 2010 | L. Shaw | | L.S. |
| | | Megan | L. Shaw | | |
| D | , 2 | 2010 Hans-F | Ieinrich Hoffmann | | L.S. |
| D | ato. | 2010 | | | L.S. |
| υ | 10 16 | Adolfo | Gardia-Sastre | 10 | |
| D | ate $\frac{12}{9}$, | 2010 Peter P | ales | PAR | L.S. |
| Con Sha | of) SS.: Inty of) SS.: On, personally known within instrument and acknowledged to a her/their signature(s) on the instrument the power within the power within instrument the power within instrument and acknowledged to a her/their signature(s) on the instrument the power within the pow | ne that he/she/thev | executed the same | _, Notary Public, personally a lence to be the person(s) whos e in his/her/their authorized o ich the person(s) acted, execut | cadacityties), and mat by |
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| State of |)) SS.: | |
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| County of |) | |
| On Hoffmann subscribed to the with by his/her/their signa | hin instrument and acknowledged to me that he/she/th | basis of satisfactory evidence to be the person(s) whose name(s) is ey executed the same in his/her/their authorized capacity(ies), and that can behalf of which the person(s) acted, executed the instrument. |
| WITNESS | my hand and official seal | |
| State of County of |)) SS.:) | |
| On Sastre the within instrume his/her/their signature | nt and acknowledged to me that he/she/they execu | Notary Public, personally appeared Adolfo Garcia- isfactory evidence to be the person(s) whose name(s) is subscribed to ted the same in his/her/their authorized capacity(ies), and that by behalf of which the person(s) acted, executed the instrument. |
| WITNESS | my hand and official seal | |
| State of New County of Mas | York, ss.: | |
| on <u>Sec</u> | , personally known to me on the basis of sal | HOMPSed Notary Public, personally appeared Peter Palese is factory evidence to be the person(s) whose name(s) is subscribed to ted the same in his/her/their authorized capacity(ies), and that by behalf of which the person(s) acted, executed the instrument. |
| | my hand and official seal NOTARY | ZETTE N THOMPSON PUBLIC STATE OF NEW YORK LIC. #01TH8190993 |
| | | COMM, EXP. 8-4-2012 RISION IN NASSAU COUNTY |