506071460 05/21/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6118175

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

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| Eric E. Swayze | 04/27/2015 |

RECEIVING PARTY DATA

| Name: | ISIS PHARMACEUTICALS, INC. |
|-----------------|----------------------------|
| Street Address: | 2855 GAZELLE COURT |
| City: | CARLSBAD |
| State/Country: | CALIFORNIA |
| Postal Code: | 92010 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16849583 |

CORRESPONDENCE DATA

Fax Number: (877)769-7945

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.

Phone: (617) 542-5070 Email: apsi@fr.com

Correspondent Name: JOSEPH J. KOIPALLY Address Line 1: FISH & RICHARDSON P.C.

Address Line 2: P.O.BOX 1022

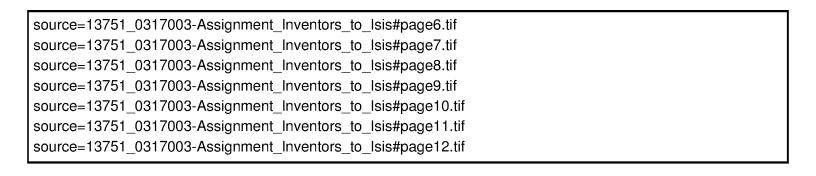
Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

| ATTORNEY DOCKET NUMBER: | 13751-0317003 |
|-------------------------|-----------------|
| NAME OF SUBMITTER: | CAROL TYRRELL |
| SIGNATURE: | /Carol Tyrrell/ |
| DATE SIGNED: | 05/21/2020 |

Total Attachments: 12

source=13751 0317003-Assignment_Inventors_to_Isis#page1.tif source=13751 0317003-Assignment Inventors to Isis#page2.tif source=13751 0317003-Assignment Inventors to Isis#page3.tif source=13751 0317003-Assignment Inventors to Isis#page4.tif source=13751 0317003-Assignment Inventors to Isis#page5.tif

PATENT REEL: 052727 FRAME: 0805 506071460



PATENT REEL: 052727 FRAME: 0806

ASSIGNMENT

WHEREAS, I/we, Eric E. Swayze, of Encinitas, CA, Tracy Cole, of Encinitas, CA, Holly Kordasiewicz, of San Diego, CA, Susan M. Freier, of San Diego, CA, Thomas P. Condon, of Singapore, Edward Wancewicz, of Poway, CA, Trisha Lockhart, of Seattle, WA, Timothy Vickers, of Oceanside, CA, and Priyam Singh, of Brisbane, CA (the "assignors"), has/have invented a certain invention entitled COMPOSITIONS FOR MODULATING SOD-1 EXPRESSION, for which I/we have made an application for letters patent of the United States and foreign jurisdictions through the Patent Cooperation Treaty, said application having been filed April 1, 2015 and assigned application no. PCT/US2015/023934 (the "Application"); and

WHEREAS, Isis Pharmaceuticals, Inc. hereinafter referred to as the assignee, of 2855 Gazelle Court, Carlsbad CA, a corporation of Delaware, is desirous of acquiring my/our entire right, title and interest in and to the said invention and improvements therein (the "Invention") and in and to the said Application, and in, to and under any and all letters patent or patents which may be granted on or as a result thereof or otherwise relate to the Invention in any and all countries:

NOW, THEREFORE, for and in consideration of the sum of one dollar (\$1.00) to each of us in hand paid by said assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said assignors, have sold, assigned, transferred and set over, or by these presents do hereby sell, assign, transfer and set over to said assignee, the entire right, title and interest in and to said Invention and said Application (including the right to apply for any letters patent or patents for any countries in relation to the Invention and all priority rights) and any and all continuations, continuations-in-part, divisions, rights of priority under International Conventions including the Paris Convention, and renewals of and substitutes for said Application, and in, to and under any and all letters patent or patents which may be granted on or as a result thereof or otherwise relate to the Invention in the United States and any and all other countries, and any reissue or reissues or extension or extensions or supplementary protection certificates in relation to any of said letters patent or patents, and assign to and

ASSIGNMENT - Page 1 of 12

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authorize said assignee to file in our names applications for letters patent or patents in all

countries, the same to be held and enjoyed by said assignee, its successors, assigns, nominees or

legal representatives, to the full end of the term or terms for which said letters patent or patents

respectively may be granted, reissued, extended or supplemented, as fully and entirely as the

same would have been held and enjoyed by us had this assignment, sale and transfer not been

made.

AND we hereby covenant that we have full right to convey the entire interest herein

assigned, and that we have not executed and will not execute any agreement in conflict herewith,

and we further covenant and agree that we will each time request is made and without undue

delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to

said Invention, said Application and said letters patent or patents to said assignce, its successors,

assigns, nominees, or legal representatives, and each of us agrees to communicate to said

assignee or to its nominee all known facts respecting said Invention, said Application and said

letters patent or patents, to testify in any legal proceedings, to sign all lawful papers to execute

all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful

oaths, and generally to do everything possible to aid said assignee, its successors, assigns,

nominees and legal representatives to obtain and enforce for its or their own benefit proper

patent protection for said inventions or improvements in any and all countries.

AND we hereby sell, assign, transfer, and convey to assignee all claims for damages and

all remedies arising out of any violation of the rights assigned hereby that may have accrued

prior to the date of assignment to said assignee, or may accrue hereafter, including, but not

limited to, the right to sue for, collect, and retain damages for past infringements of said letters

patent or patents before or after issuance.

AND we hereby authorize and request the Commissioner of Patents and Trademarks of

the United States and any official of any country or countries foreign to the United States whose

duty it is to issue patents on applications as aforesaid, to issue to said assignee, as assignee of the

entire right, title and interest, any and all letters patent and patents for said Invention, including

any and all letters patent of the United States which may be issued and granted on or as a result

of the Application aforesaid, in accordance with the terms of this assignment.

ASSIGNMENT - Page 2 of 12

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

| Dated: 4/27_2015 | Eric E. Swayze | YD |
|------------------|----------------|----|
|------------------|----------------|----|

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

State of <u>California</u>) ss.
County of <u>San Diago</u>

On April 21, 2015 before me, Laura L. Earnes, Notary Public, personally appeared Eric E. Swayze, who is 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.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

LAURA L. EAMES
Commission # 1972276
Notary Public - California
San Diego County
My Comm. Expires Apr 13, 2016

WITNESS my hand and official seal.

| Dated: | 10-7 | 20 L | La Cole |
|--------|------|------|-------------|
| | | | Tylacy/Cole |

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

State of <u>California</u>) ss County of <u>San Nêgo</u>

On October 7, Zors before me, Caura Earnes. Notary Public, personally appeared Tracy Cole, who is 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.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

LAURA L. EAMES
Commission # 1972276
Notary Public - California
San Diego County
My Comm. Expires Apr 13, 2016

WITNESS my hand and official seal.

Dated: 9/24 2015

Holly Kordasiewicz

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

State of <u>California</u>)

County of <u>San Diago</u>

SS.

On Sept. 29, 2015 before me, Laura L. Earnes, Notary

Public, personally appeared Holly Kordasiewicz, who is 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.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

LAURA L. EAMES
Commission # 1972276
Notary Public - California
San Diego County
My Comm. Expires Apr 13, 2016

WITNESS my hand and official seal.

| Dated: | 9/29 20/15 | Dusan M Frence |
|--------|------------|-----------------|
| | | Susan M. Freier |

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

State of <u>California</u>) ss County of <u>San Digo</u>

On 549t. 21, 2015 before me, Lawra L. Fames, Notary Public, personally appeared Susan M. Freier, who is proved to me on the basis of satisfactory evidence to be the person(s) whose name(t) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ics), and that by his/her/their signature(t) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

LAURA L. EAMES
Commission # 1972276
Notary Public - California
San Diego County
My Comm. Expires Apr 13, 2016

WITNESS my hand and official seal.

Dated: 26 Aug 201520 Thomas P Cordon

DOCKET NO.: BIOL0240WO

Thomas P. Condon

STATEMENT OF WITNESSES

I was personally present and did see **Thomas P. Condon** execute the above assignment, and he/she is personally known to me to be the person described in this document.

(1) Date: 26 AUG 2015

Name: NOORAISHA BINTE MD YVGOPF

(2) Paris U. Cullen Date: 26 August 2015
Name: Paris M. Cullen

Dated: 21 September 2015

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

State of California

County of San Dugo

On September 21, 2015 before me, aural Eames. Public, personally appeared Edward Wancewicz, who is proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/ere 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.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

LAURA L. EAMES Commission # 1972276 Notary Public - California San Diego County My Comm. Expires Apr 13, 2016 WITNESS my hand and official seal.

Dated: <u>Sept. 28,7</u> 20<u>15</u>

Trisha Lockhart

STATEMENT OF WITNESSES

I was personally present and did see Trisha Lockhart execute the above assignment, and he/she is personally known to me to be the person described in this document.

Name:

ASSIGNMENT - Page 9 of 12

| Dated: $\frac{9/23}{20/5}$ 20/5 Timothy Vickers |
|---|
|---|

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

State of <u>California</u>)

State of <u>California</u>)

State of <u>California</u>)

ss

On <u>Sept. 23, 2015</u> before me, <u>Lawal Eames</u>, Notary Public, personally appeared **Timothy Vickers**, who is 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.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

LAURA L. EAMES
Commission # 1972276
Notary Public - California
San Diego County
My Comm. Expires Apr 13, 2016

WITNESS my hand and official seal.

| Dated: | 8/12/16 20_ | Luyas |
|--------|-------------|--------------|
| | | Priyam Singh |

STATEMENT OF WITNESSES

I was personally present and did see Priyam Singh execute the above assignment, and he/she is personally known to me to be the person described in this document.

| (1) | 0 | | ile. | |
|------|------|----|------|--|
| Nama | Aire | 11 | 500 | |

Date: Aug 22, 20/6

| (2) | EL " | (| |
|-------|-------|------|--|
| Name: | Elisa | 7500 | |

Date: 8/22/16

ISIS PHARMACEUTICALS, INC.

By: Chrama

Dated: 8/75 20/6

Name: Clifford E. Ford

Title: Vice President, Patents and Senior Patent Counsel

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

State of <u>California</u>)
County of San Duign

SS.

On August 25, 2016 before me, Laural Eames, Notary Public, personally appeared Clifford E. Ford, who is proved to me on the basis of satisfactory

Public, personally appeared Clifford E. Ford, who is 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.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

LAURA L. EAMES
Commission # 2146406
Notary Public - California
San Diego County
My Comm. Expires Apr 13, 2020

WITNESS my hand and official seal.

Signature of Notary

ASSIGNMENT - Page 12 of 12

PATENT REEL: 052727 FRAME: 0818

RECORDED: 05/21/2020