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| To the Director of the P.S. Pa |

06-01-2004



SHEET

U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

2.24,04

| To the Director of the 106. Pa 102754852 1. Name of controlling party(ies): | ord the attached original documents or copy thereof. | | |
|--|---|--|--|
| Samuel Jotham Reich | Name and address of receiving party(ies): | | |
| Enrico Maria Surace Michael J. Tolentino | The Trustees of the University of Pennsylvania | | |
| Wichael 3. Tolentino | Suite 200 3160 Chestnut Street | | |
| Additional name(s) of conveying party(ies) attached? | Philadelphia, PA 19104-6283 | | |
| 3. Nature of Conveyance: | | | |
| | } | | |
| ☐ Security Agreement ☐ Change of Name | | | |
| Other: | - Additional name(s) & addresses attached? ☐ Yes 区 No | | |
| Execution Date(s): 04/16/04; 03/23/04; 04/27/04 | | | |
| 4. Application number(s) or patent number(s): | | | |
| If this document is being filed together with a new application | , the execution date of the application is: 04/16/04 | | |
| A. Patent Application No.(s) | B. Patent No.(s) | | |
| 10/699,557 | | | |
| Additional num | l bers attached? □ Yes ৷⊠ No | | |
| 5. Name and address of party to whom correspondence | 6. Total number of applications and patents involved: 1 | | |
| concerning document should be mailed: | | | |
| GEORGE A. FRANK, Esq. | 7. Total fee (37 CFR 3.41) \$40.00 | | |
| Drinker Biddle & Reath LLP One Logan Square | 図 Enclosed | | |
| 18 th & Cherry Streets | ☐ authorized to be charged to deposit account | | |
| Philadelphia, PA 19103-6996 | 8. Deposit Account Number: 50-0573 | | |
| Attorney Docket No.: 43826-0002 US1 | <u> </u> | | |
| DO NOT USE THIS SPACE | | | |
| 9. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true | | | |
| copy of the original document. | | | |
| $V_{\bullet} = A_{\bullet} / Q_{\bullet}$ | | | |
| GEORGE A. FRANK Name of Person Signing | May 18, 2004 Date | | |
| Λ . | of pages including cover sheet, attachments, and document: 10 | | |
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#378246 v1-assignment recordation cover sheet 2196-259 DI1 (157476)

PATENT REEL: 015369 FRAME: 0918

ASSIGNMENT

WHEREAS, we, Samuel Jotham Reich, a citizen of the United States of America; Enrico Maria Surace, a citizen of Italy; and Michael J. Tolentino, a citizen of the United States of America, with respective post office addresses of 312 Kent Road, Bala Cynwyd, Pennsylvania 19004, U.S.A.; Largo Della, Crocetta 2, Milan 20122, Italy; and 474 South Ithan Avenue, Villanova, Pennsylvania 19085, U.S.A., hereinafter generally referred to as "ASSIGNORS", have invented a certain new and useful

COMPOSITIONS AND METHODS FOR sirna inhibition of hif-1 Alpha

for which we have filed application Serial No. 10/699,557 for Letters Patent of the United States on October 31, 2003, and

WHEREAS, The Trustees of the University of Pennsylvania, a Pennsylvania corporation having a place of business at Suite 200, 3160 Chestnut Street, Philadelphia, Pennsylvania 19104-6283, U.S.A., hereinafter generally referred to as "ASSIGNEE", is desirous of acquiring said invention and said application for Letters Patent,

WHEREAS, now and at the time the invention was made, said invention was subject to an obligation by ASSIGNORS to assign their entire right, title and interest therein to ASSIGNEE.

NOW, THEREFORE, in consideration of the sum of One Dollar and other good and valuable executed consideration, the full receipt and sufficiency of all of which are hereby acknowledged, and intending to be legally bound hereby, we, the undersigned ASSIGNORS, hereby agree to sell, assign, transfer and convey and by these presents do sell, assign, transfer and convey unto the above-named ASSIGNEE, the whole and entire right, title and interest

in and to said invention as described in the above application for Letters Patent, for the territory of the United States and its possessions and territories and all foreign countries, and

in and to the above application for Letters Patent, including any continuing and/or divisional applications therefor, any provisional applications identified in the above application, and any and all United States Letters Patent which may be granted on said application(s) including reissues and reexaminations, and all foreign Letters Patent which may be granted on said invention, including reissues, extensions, renewals and reexaminations of such Letters Patent;

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said invention, application and Letters Patent to be held and enjoyed by the above-named ASSIGNEE, for ASSIGNEE's own use and behoof, and for ASSIGNEE's legal representatives and assigns to the full end of the term or terms for which said Letters Patent may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNORS had this assignment and sale not been made; and for the aforesaid consideration ASSIGNORS hereby covenant, agree and undertake to execute, whenever requested by the above-named ASSIGNEE, all patent applications, assignments, lawful oaths and any other papers which ASSIGNEE may deem necessary or desirable for securing to ASSIGNEE or for maintaining for ASSIGNEE all the Letters Patent hereby assigned or agreed to be assigned; all without further compensation to the undersigned ASSIGNORS.

WE HEREBY authorize the above-mentioned ASSIGNEE or its legal representative to insert in this document the filing date and/or serial number of our aforesaid application or any other information that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

| SAMUEL JOTHAM REICH |
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| personally appeared Samuel Jotham Reich, aving first executed the foregoing instrument duly sworn, did acknowledge the foregoing ealed and delivered by him for the purpose thereby and intending that said instrument be Notary Public |
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| DATE: | |
|---|---|
| | Enrico Maria Surace |
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| (WITNESS) | |
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| | $m \sim$ |
| | MICHAEL J. TOLENTINO (L.S.) |
| monwealthy | |
| nmonwealth of State of Rennsylvania: County of Philadelphia: | s |
| County of Philadelphia: | J |
| | Commonweith |
| day of | and for the State and County aforesaid, on this a 2004 personally appeared Michael J. Tolentino, |
| who being to me personally known, and who | having first executed the foregoing instrument |
| who being to me personally known, and who in my presence and having been by me fire | having first executed the foregoing instrument st duly sworn, did acknowledge the foregoing |
| who being to me personally known, and who in my presence and having been by me fir- instrument as his free deed and act, signed, therein stated and intending to be legally bour | having first executed the foregoing instrument |
| who being to me personally known, and who in my presence and having been by me fir instrument as his free deed and act, signed, | o having first executed the foregoing instrument st duly sworn, did acknowledge the foregoing sealed and delivered by him for the purpose and thereby and intending that said instrument be |
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| who being to me personally known, and who in my presence and having been by me fir- instrument as his free deed and act, signed, therein stated and intending to be legally bour | o having first executed the foregoing instrument st duly sworn, did acknowledge the foregoing sealed and delivered by him for the purpose and thereby and intending that said instrument be |

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ASSIGNMENT

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COMPOSITIONS AND METHODS FOR siRNA INHIBITION OF HIF-1 ALPHA

for which we have filed application Serial No. 10/699,557 for Letters Patent of the United States on October 31, 2003, and

WHEREAS, The Trustees of the University of Pennsylvania, a Pennsylvania corporation having a place of business at Suite 200, 3160 Chestnut Street, Philadelphia, Pennsylvania 19104-6283, U.S.A., hereinafter generally referred to as "ASSIGNEE", is desirous of acquiring said invention and said application for Letters Patent,

WHEREAS, now and at the time the invention was made, said invention was subject to an obligation by ASSIGNORS to assign their entire right, title and interest therein to ASSIGNEE.

NOW, THEREFORE, in consideration of the sum of One Dollar and other good and valuable executed consideration, the full receipt and sufficiency of all of which are hereby acknowledged, and intending to be legally bound hereby, we, the undersigned ASSIGNORS, hereby agree to sell, assign, transfer and convey and by these presents do sell, assign, transfer and convey unto the above-named ASSIGNEE, the whole and entire right, title and interest

in and to said invention as described in the above application for Letters Patent, for the territory of the United States and its possessions and territories and all foreign countries, and

in and to the above application for Letters Patent, including any continuing and/or divisional applications therefor, any provisional applications identified in the above application, and any and all United States Letters Patent which may be granted on said application(s) including reissues and reexaminations, and all foreign Letters Patent which may be granted on said invention, including reissues, extensions, renewals and reexaminations of such Letters Patent:

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said invention, application and Letters Patent to be held and enjoyed by the above-named ASSIGNEE, for ASSIGNEE's own use and behoof, and for ASSIGNEE's legal representatives and assigns to the full end of the term or terms for which said Letters Patent may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNORS had this assignment and sale not been made; and for the aforesaid consideration ASSIGNORS hereby covenant, agree and undertake to execute, whenever requested by the above-named ASSIGNEE, all patent applications, assignments, lawful oaths and any other papers which ASSIGNEE may deem necessary or desirable for securing to ASSIGNEE or for maintaining for ASSIGNEE all the Letters Patent hereby assigned or agreed to be assigned; all without further compensation to the undersigned ASSIGNORS.

WE HEREBY authorize the above-mentioned ASSIGNEE or its legal representative to insert in this document the filing date and/or serial number of our aforesaid application or any other information that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

SAMUEL JOSHAM REICH (L.S.)

Commonwealth
State of Censeylvania:
County of Cheledelphia:

Before me, a notary public, in and for the State and County aforesaid, on this // 2004 personally appeared Samuel Jotham Reich, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly swom, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.

Notary Public Bryan

Notarial Seal
Anne Marie Bryan, Notary Public
Philadelphia, Philadelphia County
My Commission Expires Jan. 29, 2005

Member, Pennsylvania Association of Notaries

| DATE: | |
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| | ENRICO MARIA SURACE |
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| (WITNESS) | |
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| | (L.S.) |
| | MICHAEL J. TOLENTINO |
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| State of | : \$5 |
| County of | : |
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| | n and for the State and County aforesaid, on this 2004 personally appeared Michael J. Tolentino, |
| who being to me personally known, and wh | no having first executed the foregoing instrument |
| in my presence and having been by me fi | irst duly sworn, did acknowledge the foregoing |
| | d, sealed and delivered by him for the purpose and thereby and intending that said instrument be |
| recorded. | |
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| | Notary Public |

3

ASSIGNMENT

3

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in and to said invention as described in the above application for Letters Patent, for the territory of the United States and its possessions and territories and all foreign countries, and

in and to the above application for Letters Patent, including any continuing and/or divisional applications therefor, any provisional applications identified in the above application, and any and all United States Letters Patent which may be granted on said application(s) including reissues and reexaminations, and all foreign Letters Patent which may be granted on said invention, including reissues, extensions, renewals and reexaminations of such Letters Patent;

368695.1 (43826-0002 US) - 1 -

PATENT REEL: 015369 FRAME: 0925 said invention, application and Letters Patent to be held and enjoyed by the above-named ASSIGNEE, for ASSIGNEE's own use and behoof, and for ASSIGNEE's legal representatives and assigns to the full end of the term or terms for which said Letters Patent may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNORS had this assignment and sale not been made; and for the aforesaid consideration ASSIGNORS hereby covenant, agree and undertake to execute, whenever requested by the above-named ASSIGNEE, all patent applications, assignments, lawful oaths and any other papers which ASSIGNEE may deem necessary or desirable for securing to ASSIGNEE or for maintaining for ASSIGNEE all the Letters Patent hereby assigned or agreed to be assigned; all without further compensation to the undersigned ASSIGNORS.

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| | | (T. C.) |
|------------------------------|---|---|
| | SAMI | JEL JOTHAM REICH |
| State of | ; | |
| County of | ss · | |
| County of | · | |
| | | State and County aforesaid, on this |
| who being to me personally k | | ly appeared Samuel Jotham Reich, texecuted the foregoing instrument |
| in my presence and having l | been by me first duly swo | rn, did acknowledge the foregoing |
| | _ · · · · · · · · · · · · · · · · · · · | I delivered by him for the purpose and intending that said instrument be |
| | | |
| | Notary P | ublic |

- 2 -

| DATE: Manch 23 | 2004 Enrico Maria Surace |
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| Alberto Are | <u></u> |
| (WITNESS) ALBERTO | AURICCHIO, MD |
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| | |
| | (L. MICHAEL J. TOLENTINO |
| | MICHAEL J. TOLENTINO |
| State of | : ss |
| County of | : |
| | a notary public, in and for the State and County aforesaid, on t, 2004 personally appeared Michael J. Tolenting |
| in my presence and ha instrument as his free of | , 2004 personally appeared Michael J. Tolenting y known, and who having first executed the foregoing instrument been by me first duly sworn, did acknowledge the foregoined and act, signed, sealed and delivered by him for the purpose to be legally bound thereby and intending that said instrument |
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| recorded. | |

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43826-0002 US)

PATENT REEL: 015369 FRAME: 0927

RECORDED: 05/24/2004