| FORM PTO-1595 (modified) | U.S. DEPARTMENT OF COMMERCE |
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| | N FORM COVER SHEET Palent and Tradamark Office |
| PAT | ENTS ONLY |
| To the Director of the United States Patent and Trademar | k Office: Please record the attached original documents or copies thereof. |
| Name of conveying party(ies): | Name and address of receiving party(ies): |
| Chad A. Mirkin (02/22/2005) Jung-Hyurk Lim (03/14/2005) | Northwestern University 1880 Oak Avenue, Suite 100 Evanston, IL 60201 |
| Additional conveying party(ies) NO 3. Nature of conveyance: ASSIGNMENT | |
| Execution Date: See above | Additional name(s) & address(es) attached? NO |
| Application number(s) or patent number(s): | |
| If this is being filed together with a new application, | the execution date of the application is: |
| A. Patent Application Number(s): | B. Patent Number(s): |
| 10/442,188 | |
| Additions | a) numbers attached? NO |
| Name and address of party to whom correspondent concerning document should be faxed: | |
| Steven Rutt FOLEY & LARDNER LLP Washington Harbour 3000 K Street NW, Suite 500 Fax No.: 202-672-5399 | Check Enclosed X Authorized to be charged to credit card Authorized to be charged to deposit account 8. Payment Information a. Credit Card Last 4 Numbers 3447 Expiration Date 11/30/2008 b. Deposit account number 19-0741 Authorized User Name |
| DO N | OT USE THIS SPACE |
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| 9. Statement and signature: To the best of my knowledge and belief, the focopy of the original document. The Commissioner is his period in this matter to the above-identified depose. | regoing information is true and correct and any attached copy is a true ereby authorized to charge any additional recordation fees which may it account. |
| Steven Rutt | And Lutt 4/20, 2006 |
| Name of person signing | Signature Date |
| Total numbe | r of pages including cover sheet, attachments, and document: 9 |

PATENT

REEL: 017978 FRAME: 0931

ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

Northwestern University 1880 Oak Avenue, Suite 100 Evanston, IL 60201

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions, and all foreign countries in and to this invention relating to

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| 32 201 form in mis Omice Blates I ment Approxime. | | | |
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| check one | [[[X |] executed concurrently herewith] executed on | |

as ant forth in this United States Datent Application.

which claims priority to provisional patent application serial no. 60/382,596 filed May 21, 2002; as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the International Convention or otherwise.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

Page 1 of 3

002.1341048.1

PATENT REEL: 017978 FRAME: 0932

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of Foley & Lardner LLP the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Foley & Lardner LLP do not personally represent ASSIGNOR OR ASSIGNOR's legal interests; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

| Executed this 24 day of February | 2005 |
|---|---|
| • | Oll an |
| | CHAD A. MIRKIN |
| State of LL)as. | |
| On this 24 day or Falamery 20,05 t | pefore me, a notary public in and for said county, appeared CHAD A. to name is subscribed to the foregoing instrument, and he/she |
| MIRKIN, who is personally known to me to be the same person whos acknowledged that he/she signed, sealed, and delivered the said instruteroin set forth. | iment as his/her free and vojuntary act to the data and parjunt |
| | Notary Public |
| OFFICIAL SEAL | My Commission Expires: 5-16-2606 |
| GARANNE F. AUBURN GARBIANY FUBLIC, STATE OF ILLENOIS MY COMMISSION EXPIRES 5-16-2006 | |
| | |
| Executed this day of | , 20 |
| | |
| | JUNG-HYURK LIM |
| State of)as. | • |
| County of | TIME. |
| On this day of 20 HYURK LIM, who is personally known to me to be the same person | before me, a notary public in and for said county, appeared JUNG- whose name is subscribed to the foregoing instrument, and he/she |
| HYURK LIM, who is personally known to me to be the same person acknowledged that he/she signed, scaled, and delivered the said insta therein set forth. | rument as his/her free and voluntary act for the case and purposes |
| | |
| | Notary Public |
| | My Commission Expires: |
| (Scal) | |

[제 41호 서식]

Registered No. 2005 - 1074

RECEIVED

OFFICE OF THE MIDS AN ESIDENT FOR RESEARCH

NOTARIAL CERTIFICATE

JUNGWON LAW AND NOTARY OFFICE INC.

3F 720-21 KYOUHYEON 2 DONG, CHUNGJU-SHI, CHUNGBUK, KOREA

TEL:(043)851-8891, 848-8891 FAX:(043)854-5902

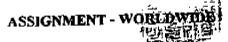
충우시 교현2등 720-21 3등 권화 : (043) 851-8991, 848-891 FAX : (043) 854-5902

23230-05311일 90. 11. **2**6 중인

중국 중원종합법무법인

PATENT

REEL: 017978 FRAME: 0935



For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

Northwestern University 1880 Oak Avenue, Suite 100 Evanston, IL 60201

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| check one | [] executed concurrently herewith, |
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| • | executed on |
| | [X] Serial No. 10/442,188 Filed 05/21/2003 |

as set forth in this United States Patent Application

which claims priority to provisional patent application serial no. 60/382,596 filed May 21, 2002; as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

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Page 1 of 3

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| Executed this day of | , 20 (<u>Edentifie</u> |
|---|---|
| State of | CHAD A. MIRKIN |
| County of | before me, a notary public in and for said county, appeared CHAD A. whose name is subscribed to the foregoing instrument, and havibe acknowledged when the and purposes therein set forth. |
| | Notery Public |
| (Scal) | Му Commission Едрігея: |
| Executed this 14 day of Marc | <u>h</u> , 20 <u>05</u> . |
| State of Chungbuk, Republic of Ka County of March 20 | JUNG-HYURK LIM JUNG-HYURK LIM |
| | JUNGWON LAW AND NOTARY OFFICE INC. |
| (Scal) | My Commission Expires: |

[제 42호 서식]

1074 호 년 봉부 2005

Registered No. 2005 -1074

중 ÓJ.

Notarial Certificate

서 의 동 정 에 기재된

본지의 면전에서 위 사서중서에 명 날인한 것입을 자기가 서 자인하였다.

JUNG-HYURK, LIM personally appeared before me and admitted his(her) subscription to the attached

ASSIGNMENT - WORLDWIDE

년 3 원 14 원 이 사무소에서 뭐 인중한다.

This is hereby attested on this 14 day of MAR . 2005 at this office.

공중인가 중원종합범무법인 우 소 : 충추시 교현 2동 720-21 3**충** JUNGWON LAW AND NOTARY OFFICE INC.

3F 720-21 KYOUHYEON 2 DONG CHUNGJU SHI, CHUNGBUK, KOREA

3 8 3

His office has been authorized the Minister of Justice, the Republic of Korea, to act as Ple Notary Public since

MAR, 14 , 2005 . under

Law No. Cho Song Ju

23230-054113 90, 11, 26 중인 🐝 중원종합법무법인

충추시 교(현2등 720-21 3층 전화 : (043) R51-8891, 848-8891 FAX : (043) R54-5902

PATENT

REEL: 017978 FRAME: 0939

RECORDED: 07/20/2006