11/08/2017 504633827

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4680545

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| SUSAN H. HARDIN | 01/06/2004 |
| JAMES M. BRIGGS | 01/06/2004 |
| SHIAO-CHUN TU | 01/06/2004 |
| XIAOLIAN GAO | 01/07/2004 |
| RICHARD WILLSON | 01/06/2004 |

RECEIVING PARTY DATA

| Name: | VISIGEN BIOTECHNOLOGIES, INC. | |
|-------------------|-------------------------------|--|
| Street Address: | 2575 WEST BELLFORT | |
| Internal Address: | SUITE 250 | |
| City: | HOUSTON | |
| State/Country: | TEXAS | |
| Postal Code: | 77054 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14977167 |

CORRESPONDENCE DATA

Fax Number: (760)476-6048

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: 650-266-5805

lsgdocketing@thermofisher.com Email:

LIFE TECHNOLOGIES CORPORATION **Correspondent Name:**

Address Line 1: **5823 NEWTON DRIVE** Address Line 2: IP DEPARTMENT

Address Line 4: CARLSBAD, CALIFORNIA 92008

| ATTORNEY DOCKET NUMBER: | IVGN1014.10CON |
|-------------------------|-----------------|
| NAME OF SUBMITTER: | MILA T. KASAN |
| SIGNATURE: | /Mila T. Kasan/ |
| DATE SIGNED: | 11/08/2017 |

Total Attachments: 7 source=IVGN 1014 Inventors to Visigen Assignment#page1.tif source=IVGN 1014 Inventors to Visigen Assignment#page2.tif source=IVGN 1014 Inventors to Visigen Assignment#page3.tif source=IVGN 1014 Inventors to Visigen Assignment#page4.tif source=IVGN 1014 Inventors to Visigen Assignment#page5.tif source=IVGN 1014 Inventors to Visigen Assignment#page6.tif source=IVGN 1014 Inventors to Visigen Assignment#page7.tif

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: HARDIN, SUSAN, ET.AL.

SERIAL NO: 10/007621

FILED: December 3, 2001

§ EXAMINER:

GROUP ART UNIT:

§ DOCKET: 00007/02UTL

FOR: Enzymatic Nucleic Acid Synthesis: Compositions §

and Methods for Altering Monomer Incorporation

Fidelity

§

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, Susan H. Hardin, James M. Briggs, Shiso-Chun Tu, Xiaolian Gao, and Richard Willson (the "Undersigned") do hereby: SELL, ASSIGN AND TRANSFER to VisiGen Biotechnologies, Inc. (the "Assignee"), a Texas corporation having a place of business at 2575 West Bellfort, Suite 250, Houston, Texas 77054, its successors, trustees, devisees and assigns, the entire right, title and interest for the United States and all foreign countries in and to:

- Any and all improvements which are disclosed in the application for United States Letters Patent under 35 U.S.C. §§ 111(a) or (b), which has been executed by the Undersigned concurrently herewith and is entitled Enzymatic Nucleic Acid Synthesis; Compositions and Methods for Altering Monomer Incorporation Fidelity;
- b. Any and all applications for patent or like protection on said improvements that have now been or may in the future be made by me or my legal representatives, whether in the United States of America or any other country or place anywhere in the world;
- c. Any and all patents and like protection that have now been or may in the future be granted on said improvements to me or my legal representatives, whether in the United States of America or in any other country or place anywhere in the world:
- d. Any and all substitutions, divisions, continuations, continuations-in-part, renewals, releasues, reexaminations, extensions, and the like of said applications and/or patents or like grants, including, without limitation, those obtained or permissible under past, present and/or future law and statutes;
- e. The express right to file foreign applications under the provisions of any convention or treaty and claim priority based on any and all application filed

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PATENT REEL: 014941 FRAME: 0854

in the United States of America based on said improvements;

- f. All rights of action on account of past, present and/or future authorized or unauthorized use of said improvements and for misappropriate of said improvement and/or infringement of said patents derived from said improvements and like protection;
- g. The right of Assignee to file in its name applications for patents and like protection for said improvements in any country and countries foreign to the United States of America; and
- h. All international rights of priority associated with said improvements, applications, patents and like protection;

(hereinafter "Rights").

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States of America and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the Undersigned, and that the full right to convey the same as herein expressed is possessed by the Undersigned;

WARRANT AND COVENANT that the Undersigned have the right to make the assignment set forth herein;

COVENANT, when requested and at the expense of the Assignee, its successors, and/or assigns, the Undersigned will cooperate with the Assignee, its successors, and/or assigns, to carry out in good faith the intent and purpose of this assignment. Such cooperation will include, without limitation:

- (1) Prompt execution of all papers that are deemed necessary or desirable by Assignee to perfect the right, title and interest herein conveyed;
- (2) Prompt execution of all petitions, caths, specifications, declarations or other papers that are deemed necessary or desirable by Assignee for prosecuting patent applications, for filing and prosecuting substitute, divisional, continuing, or additional applications in the United States of America and/or foreign countries, for filing and prosecuting applications for reissuance or reexamination of previously granted Letters Patent, and for interference proceedings involving and covering any of the Rights, and
- (3) Prompt assistance and cooperation, including, but not limited to, execution of

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absignment EMN: <u>EL 228 554 212 US</u> Inventor's Initials SHOW STRUCKER, PLUC

PATENT REEL: 014941 FRAME: 0855

documents and testifying, in the prosecution of legal proceedings involving any of the Rights, including, but not limited to, patent prosecution, interference proceedings, infringement court actions, opposition proceedings, cancellation proceedings, priority contests, unfair competition court actions, trade secret court actions, public use proceedings, slander, license breach and royalty collection proceedings and any other legal proceedings.

TO BE BINDING on the heirs, assigns, representatives and successors of the Undersigned and inure to Assignee, its successors, trustees, devisees and assigns.

EXECUTED THIS & day of Jana

7136659901

STATE OF TEXAS

§

COUNTY OF HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared Susan H. Hardin, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed and initialed each page of the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND and seal of office this 6 day of January, 2004

NOTARY PUBLIC IN AND FOR

THE STATE OF TEXAS

Page 3 of 7

ASSIGNMENT 6MN: EL 990 554 212 US

PATENT REEL: 014941 FRAME: 0856

EXECUTED THIS 6 day of JANUAR

, 2004

James M. Briggs

STATE OF TEXAS

S S

COUNTY OF HARRIS

\$

BEFORE ME, the undersigned authority, on this day personally appeared James M. Briggs, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed and initialed each page of the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND and seal of office this 6th day of January, 2004



MOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

Page 4 of 7

ASSIGNMENT EMN: <u>EL 598 554 312 US</u> Inventor's Initialis SHANSA XG RCW

PATENT

REEL: 014941 FRAME: 0857

PATENT

REEL: 044076 FRAME: 0095

EXECUTED THIS 6 day of Jamany , 200

Shiao-Chun Fu

STATE OF TEXAS

01/07/2004 17:42

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COUNTY OF HARRIS

Ş.

BEFORE ME, the undersigned authority, on this day personally appeared Shiao-Chun Tu, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed and initialed each page of the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND and seal of office this 6th day of January. 2004



NOTARY PUBLIC IN AND FOR

THE STATE OF TEXAS

Page 5 of 7

ASSIGNMENT EMN: EL 280 354 212 113 Inventor's britishs SH 15 TROUGH, PLLC

PATENT REEL: 014941 FRAME: 0858

EXECUTED THIS T'day of January

7136659901

STATE OF TEXAS

ş ş

COUNTY OF HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared Xiaolian

Gso, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed and initialed each page of the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND and seal of office this 7th day of kinualy



NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

Page 6 of 7

ASSIGNMENT EMN: <u>\$1.990 554 212 US</u>

PATENT REEL: 014941 FRAME: 0859

EXECUTED THIS L' day of January

Richard C. Willson

STATE OF TEXAS

COUNTY OF HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared Richard Willson, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed and initialed each page of the same for the purposes and consideration therein expressed.

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GIVEN UNDER MY HAND and seal of office this 6th day of Januar



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ASSIGNMENT EMN: EL 990 554 212 US

> **PATENT** REEL: 014941 FRAME: 0860

REEL: 044076 FRAME: 0098

RECORDED: 01/30/2004

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RECORDED: 11/08/2017