PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5493786

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

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------|----------------|
| EPISONA, INC. | 02/18/2019 |

RECEIVING PARTY DATA

| Name: | UNIVERSITY OF UTAH RESEARCH FOUNDATION | | | |
|-------------------|--|--|--|--|
| Street Address: | 615 ARAPEEN DRIVE | | | |
| Internal Address: | SUITE #310 | | | |
| City: | SALT LAKE CITY | | | |
| State/Country: | UTAH | | | |
| Postal Code: | 84108 | | | |

PROPERTY NUMBERS Total: 2

| Property Type | Number |
|---------------------|----------|
| Application Number: | 62201907 |
| Application Number: | 15750715 |

CORRESPONDENCE DATA

Fax Number: (312)222-0818

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.

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Correspondent Name: MICHAEL R. LANGER Address Line 1: 444 W. LAKE STREET

Address Line 2: SUITE 3200

Address Line 4: CHICAGO, ILLINOIS 60606

| ATTORNEY DOCKET NUMBER: 026389-9245-US02 | |
|--|---------------------|
| NAME OF SUBMITTER: | MICHAEL R. LANGER |
| SIGNATURE: | /Michael R. Langer/ |
| DATE SIGNED: | 04/25/2019 |

Total Attachments: 4

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PATENT REEL: 049001 FRAME: 0956

ASSIGNMENT OF PATENTS AND PATENT APPLICATIONS

WHEREAS, EPISONA, INC., having a place of business at 69 N. Catalina Avenue, Pasadena, California 91106, United States of America ("ASSIGNOR") owns the right, title and interest assigned to ASSIGNOR by inventors Alan Horsager and Philip James Uren in and to the patents and patent applications listed on Schedule A attached hereto and made a part hereof and to the inventions described and claimed in the aforesaid patents and patent applications; and

WHEREAS, the UNIVERSITY OF UTAH RESEARCH FOUNDATION, having a place of business at 615 Arapeen Drive, Suite #310, Salt Lake City, Utah 84108, United States of America ("ASSIGNEE"), desires to acquire all of ASSIGNOR's right, title, and interest to the patents and patent applications listed on Schedule A and to the inventions described and claimed in the aforesaid patents and patent applications.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and to further said ASSIGNOR's efforts to wind up its business, ASSIGNOR has sold, transferred, and assigned and by these presents does hereby sell, transfer, and assign to ASSIGNEE, their successors, assigns and legal representatives, all of the right, title, and interest in and to said patents and patent applications listed on Schedule A attached hereto, including without limitation, the worldwide rights to the inventions described and claimed therein, any reissues, reexaminations, divisions, continuations, renewals, extensions and continuations-in-part therefor throughout the world, together with all rights under the International Convention for the Protection of Industrial Property and any similar treaties or agreements, the same to be held and enjoyed by ASSIGNEE for their own use and benefit and the use and benefit of their successors, assigns and legal representatives, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR, had this Assignment not been made, together with all income, royalties, damages or payments resulting from or attributable to activity or conduct after the effective date of this Assignment, and the right to sue and collect for all future, present and past infringements thereof, including infringements which may have occurred prior to the execution of this Assignment.

ASSIGNOR agrees: (a) to execute (i) all necessary papers throughout the world to be used in connection with the patents and patent applications listed on attached Schedule A as ASSIGNEE may deem necessary or expedient, (ii) all papers in connection with any interference, legal or other proceedings throughout the world to maintain, protect or enforce, or otherwise relating to, the patents and patent applications listed on attached Schedule A, and (iii) all papers and documents which may be necessary throughout the world in connection with the preparation and filing of any foreign applications for the patents and patent

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PATENT REEL: 049001 FRAME: 0957 applications listed on attached Schedule A; (b) to cooperate with ASSIGNEE at ASSIGNEE's expense in every way reasonably possible in obtaining evidence and going forward in any such proceedings throughout the world; and (c) at ASSIGNEE's expense to perform all other affirmative acts which in ASSIGNEE's reasonable discretion may be necessary or desirable throughout the world to maintain, protect or enforce the patents and patent applications listed on attached Schedule A. These obligations of assistance by ASSIGNOR shall continue for so long as ASSIGNEE may require such assistance from ASSIGNOR.

This assignment may be executed in counterparts.

Agreed to by:

| EPISONA. | 1883 | 1342 | ASSIGN | <u>រក</u> ាន |
|---------------|----------|-------|-----------------|--------------|
| C. Production | REVENUE. | (2.33 | 37 63 72 E 32 E | & 672 L |

By Date: 18-Feb-2019
Name: Alan Horsader. Ph.D.

Title: President & CEO

Agreed to by:

The UNIVERSITY OF UTAH RESEARCH FOUNDATION, as ASSIGNEE

By Date: 2/1//2
Name: 1/L Control
Title: piventy, contracts

SCHEDULE A

| Application No. | Patent No. | Filing Date | Issue/Grant Date | Inventor(s) | Title |
|-------------------|---------------|---------------------|---------------------|--|---|
| US 52/201 907 | v | August 6, 2015 | ÷ | Douglas T Carrell, Bradley Cairns, Kenneth I. Aston, Timothy Jenkins, Andrew David Smith, and Philip James Uren | METHODS OF IDENTIFYING MALE FERTILITY STATUS AND EMBRYO QUALITY |
| PCT/US2016/046060 | ÷ | August 8, 2016 | | Douglas T. Carrell, Bradley Cairns, Kenneth I. Aston, Timothy Jenkins, Andrew David Smith, Philip James Uren, and Alan Horsager | METHODS OF IDENTIFYING MALE FERTILITY STATUS AND EMBRYO QUALITY |
| US 15/750,715 | * | February 6, 2018 | * | Douglas T. Carrell, Bradley Cairns, Kenneth I. Aston, Timothy Jenkins, Andrew David Smith, Philip James Uren, and Alan Horsager | METHODS OF IDENTIFYING MALE FERTILITY STATUS AND EMBRYO QUALITY |
| NU 2016301189 | × | August 8, 2016 | • | Douglas T. Carrell, Bradley Cairns, Kenneth I. Aston, Timothy Jenkins, Andrew David Smith, Philip James Uren, and Alan Horsager | METHODS OF IDENTIFYING MALE FERTILITY STATUS AND EMBRYO QUALITY |
| A 2994968 | | August 8, 2016 | | Douglas T. Carrell, Bradley Cairns, Kenneth I. Aston, Timothy Jenkins, Andrew David Smith, Philip James Uren, | METHODS OF IDENTIFYING MALE FERTILITY STATUS AND EMBRYO QUALITY |

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REEL: 049001 FRAME: 0959

| | | and Alan Horsager | |
|-------------------|-------------------|---|---|
| CN 201680057796.1 | August 8, 2016 | Oougias T. Carrell, Bredley Cairns, Kenneth I. Aston, Timothy Jenkins, Andrew David Smith, Philip James Uren, and Alan Horsager | METHODS OF IDENTIFYING MALE FERTILITY STATUS AND EMBRYO QUALITY |
| EP 19834003.2 | August 8, 2018 | Douglas T. Carrell, Bradley Cairns, Kennerh I. Aston, Timothy Jenkins, Andrew David Smith, Philip James Uren, and Alan Horeager | METHODS OF IDENTIFYING MALE FERTILITY STATUS AND EMBRYO QUALITY |

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