

PCT/PTO 2-28-02

03-21-2002



Express Mail No.: EL 913299509 US

FORM PTO-1595  
(Rev. 6-93)

102025537  
PATENTS ONLY

U.S. DEPT. OF COMMERCE  
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): George E. Seidel and Tae Kwang Suh

Additional name(s) of conveying party(ies) attached?  Yes  No

MRD 2-28-02

2. Name and address of receiving party(ies)

Name: Colorado State University through its agent, Colorado State University Research Foundation.

Internal Address:

Street Address: 601 South Howes, Room 410

City: Fort Collins State: Colorado Zip: 80522

Additional name(s) & address attached?  Yes  No

3. Nature of conveyance:  Assignment  Merger

Security Agreement  Change of Name

Other \_\_\_\_\_

Execution Date(s): 28 November 2001

4. Application number(s) or patent number(s): Pursuant to 37 CFR 3.21, the attorney for the applicants has been authorized to insert the filing date and application number of said application when known and hereby submits that information as received in the filing receipt for the PCT application. International Application Number: PCT/US01/45023, International Filing Date: 29 November 2001, entitled "System To Separate Frozen-Thawed Spermatozoa Into X-Chromosome Bearing And Y-Chromosome Bearing Populations".

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s):

B. Patent No.(s):

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Craig R. Miles

Internal Address: Santangelo Law Offices, P.C.

Street Address: 125 South Howes, 3rd Floor

City: Fort Collins State: Colorado Zip: 80521

6. Total number of applications and patents involved: ONE

7. Total fee (37 CFR 3.41) .....\$40.00

Enclosed

Authorized to be charged to deposit account

8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

03/13/2002 UEDUVIJE 00000041 PCT/US01/45023  
01 FC:581

40.00 DP

9. Statement and signature.

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.

Craig R. Miles, 45.954  
Name of Person Signing

*Craig R. Miles*  
Signature

02-28-02  
Date

Total number of pages including cover sheet, attachments, and document:

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademark, Box Assignments  
Washington, DC 20231

PATENT  
REEL: 012688 FRAME: 0680

-----  
IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE  
PCT BRANCH  
-----

In Re the Application of: XY, Inc. and Colorado State University through its agent  
Colorado State University Research Foundation

International Application Number: PCT/US01/45023

International Filing Date: 29 November 2001

US Application Nos: 60/253,785 and 60/253,787

Priority Date: 29 November 2000

For: System To Separate Frozen-Thawed Spermatozoa Into  
X-Chromosome Bearing And Y-Chromosome Bearing  
Populations

Receiving Office: RO/US

-----

**ASSIGNMENT OF PATENT RIGHTS**

THIS ASSIGNMENT document is between and among George E. Seidel, whose address is: 3101 Arrowhead Road, LaPorte, CO 80535 and Tae Kwang Suh, whose address is: 2044 Glenmoor Drive, Fort Collins, CO 80521, (individually and collectively the "Assignor" or "Assignors") and Colorado State University through its agent, Colorado State University Research Foundation, having its principal office at: 601 South Howes, Room 410, Fort Collins, CO 80522, (the "Assignee").

WHEREAS, the Assignors have each contributed to some degree in conceiving or developing technology relating to a producing mammals of predetermined sex using frozen-thawed spermatozoa separated into x-chromosome bearing and y-chromosome bearing populations, including, but not limited to, the technology described or indicated in the application identified by the caption listed above, and also including for the purpose of this assignment those improvements which are related to the subject matter of such technology to the extent conceived or developed during the time serving as a consultant or employee of the Assignee, and improvements related to such technology which are identified, developed, or conceived using trade secret or confidential information of the Assignee or

which are likely to cause disclosure of such trade secret or confidential information (the "Invention");

WHEREAS, each Assignor, either by himself or in conjunction with other individuals, may be an inventor of the Invention;

WHEREAS, each Assignor acknowledges his/her obligation to assign all right, title and interest in the Invention to Assignee;

WHEREAS, each Assignor desires to formalize his obligation for assignment of all right, title and interest to the Invention to Assignee to the extent he/she has any such rights worldwide; and

WHEREAS, each Assignor acknowledges his obligation to assign all right, title and interest in any and all patent rights and any other proprietary rights related to the business of the Assignee, and in particular the Invention, to Assignee;

NOW, THEREFORE, for US \$10.00 or other good and valuable consideration, receipt of which is hereby acknowledged, each of the undersigned hereby agree as follows:

1. Each Assignor warrants that:

a. he has the authority to assign all right, title, and interest originated now or hereafter by him involving the Invention;

b. he has conveyed no right, title, or interest in the Invention to any party other than the Assignee;

c. to the extent each individual Assignor conducted any efforts relevant to the ownership of all rights to the Invention under, on behalf of, or through any entity or assumed name, he has the authority to act as agent for such an entity and to fully transfer such rights; and

d. at the time of signing of this Assignment, he neither knows nor has reason to know of any outstanding right, title, or interest in the Invention inconsistent with a full assignment of rights to the Assignee other than any right, title, or interest which may exist as a result of any coinventorship.

2. Each Assignor, for good and valuable consideration, hereby sells, grants, transfers, authorizes application for, agrees to support, and assigns to the Assignee the entire right, title, and interest in and to the Invention, including, but not limited to:

a. all such worldwide rights to make, use, and sell the Invention;

- b. any applications for United States or foreign patents relating to the Invention, and specifically to the above-identified application, and to make a claim for any priority to which such applications are entitled, and to any division, substitution, continuation, or continuation-in-part, of such applications, all patents which may be granted thereon, and all reissues, and extensions thereof;
- c. the right to file applications for United States or foreign patents based upon the Invention, and to make a claim for any priority to which such applications are entitled, and to any division, substitution, continuation, or continuation-in-part, of such applications, all patents which may be granted thereon, and all reissues and extensions thereof;
- d. all related rights involving the Invention in any country such as utility-model registrations, inventor's certificates, and the like, and all rights, titles, and interests involving the Invention under any foreign government;
- e. all rights to any documents, notes, and evidence regarding any aspect of the Invention; and
- f. all rights to seek protection covering such aspects or claims as the Assignee deems appropriate, specifically, including, but not limited to: claims which seek protection for device, apparatus, method, process, business method, or other coverage; claims which seek protection for as broad a level of coverage as might be desired by the Assignee; claims which address any aspect conceived, developed, or disclosed as separate inventions; claims which address any permutations or combinations of any aspects; claims which address any aspects independent of any initial context considered as preferred embodiments; and claims which seek broad protection in general.

3. Each Assignor acknowledges a legal and equitable obligation to assign to the Assignee any and all patent rights and any other proprietary rights related to the business of the Assignee to the extent conceived or developed while he is an employee of the Company, Colorado State University through its agent Colorado State University Research Foundation and covenants that he has not and will not execute any agreement in conflict with this Assignment and will not offer any opinions, or take or assist in taking any actions which might tend to diminish the scope of protection available to the Assignee for the Invention. Further, each Assignor warrants that other than rights of the Assignee, he maintains the entire right, title, and interest in and to the Invention as may exist by virtue of his contribution and has made no conveyance of any rights whatsoever to any other person. Each Assignor also covenants that he will promptly and continuously inform the Assignee of any articles, patents, or other references, or prior art of which he becomes aware which may be material to the assessment of patentability of the Invention.

4. Each Assignor further covenants and agrees that he will communicate to the Assignee any facts known to him respecting any improvements involving or in any way related to the Invention, and will testify in any legal proceeding, sign all lawful papers, execute all division,

continuation, continuation-in-part, substitute, foreign, or reissue applications, make all rightful oaths, and generally do everything possible to aid the Assignee to obtain and enforce full protection and title in and to said Invention and to such improvements in all countries without further consideration but at the expense of the Assignee.

5. Each Assignor acknowledges that pursuant to the sale, grant, transfer, and assignment to the Assignee of the entire right, title, and interest in and to the Invention, as provided in the above paragraphs, this assignment shall be complete as to all rights owned. As such, each Assignor consents to a waiver of any and all access rights to any applications for United States or foreign patents relating to the Invention, and including but not limited to the above-identified application, and to any division, substitution, continuation, or continuation-in-part, of such applications, all related access rights involving the Invention in any country such as utility-model registrations, inventor's certificates and the like, and all access rights, titles, and interests involving the Invention under any foreign government, to the extent permissible. Access rights may particularly include: any and all rights to any files, documents, notes, or evidence regarding any aspect of the prosecution of the Invention in the United States or foreign countries; any right to obtain, view or copy in any form the files, documents, notes, or evidence related to prosecution history or status of any application for United States or foreign patents relating to the Invention; any other right to obtain information relating to prosecution history, or status of any application for United States, or foreign patents relating to the Invention.

6. Each Assignor further covenants and agrees that he will sign all lawful papers, consents, and generally do everything possible to aid the Assignee in petitioning waiver of access of each Assignor to the United States or foreign patent offices of any and all applications for United States or foreign patents relating to the invention, as provided above.

7. Each Assignor grants the firm of Santangelo Law Offices, P.C., the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office or any foreign patent office for recordation of this document, including, but not limited to, inserting the application number, the execution date, or the filing date of the above-identified United States Patent Application based upon the Invention.

8. This assignment shall be binding on all parties, their heirs, executors, administrators, successors, or assigns, and may be recorded in the United States Patent and Trademark Office or elsewhere. In the event any provision of this Agreement is found to be unenforceable or to be unreasonable in scope, such provision shall be modified to the extent necessary to make it enforceable, and as so modified, this Agreement shall remain in full force and effect.

SIGNATURES:

George E. Seidel  
George E. Seidel

Date of Assignment Signature: 11/28/01  
Date of Execution of Application: \_\_\_\_\_  
(signing the Declaration)

UNITED STATES OF AMERICA )  
STATE OF COLORADO )  
COUNTY OF LARIMER )

SUBSCRIBED AND AFFIRMED OR SWORN to before me in the County of Larimer, State of Colorado, United States of America, by George E. Seidel, this 27 day of November, in the year 2001. WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



My Commission Expires 07/15/2003

Shannon M. Nation-Kammerer  
Notary Public  
My Commission Expires: 7-15-2003

Tae Kwang Suh  
Tae Kwang Suh

Date of Assignment Signature: 11/28/01  
Date of Execution of Application: \_\_\_\_\_  
(signing the Declaration)

UNITED STATES OF AMERICA )  
STATE OF COLORADO )  
COUNTY OF LARIMER )

SUBSCRIBED AND AFFIRMED OR SWORN to before me in the County of Larimer, State of Colorado, United States of America, by Tae Kwang Suh, this 27 day of November, in the year 2001. WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



My Commission Expires 07/15/2003

Shannon M. Nation-Kammerer  
Notary Public  
My Commission Expires: 7-15-2003

xy/froz-sor/pct/assign/11/28/01