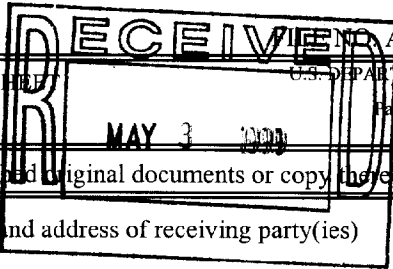


05-19-1999



101035762



32040 PCT USA-A

U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks

1. Name of conveying party(ies): Philip Spencer Rudland, Barry Roger Barraclough, Ian Charles Kilty, Barry Robert Davies and Guenter Schmidt

Additional name(s) of conveying party(ies) attached?

[] Yes [x] No

2. Name and address of receiving party(ies)

Name: TCS BIOLOGICALS LIMITED

Address: Botolph Claydon, Buckingham MK18 2LR Great Britain

City: _ State: _ Zip: _

Additional name(s) and address(es) attached?

[] Yes [X] No

3. Nature of conveyance:

[X] Assignment [] Merger [] Security Agreement [] Change of Name

[] Other _____

Execution Date: March 2, 1999; April 14, 1999; April 22, 1999; April 12, 1999

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 _____

A. Patent Application No.(s)

S/N 09/173,821

B. Patent No.(s)

Additional numbers attached?

[] Yes [X] No

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

Name: Ronald B. Hildreth

BAKER & BOTTS, L.L.P.

Address: 30 Rockefeller Plaza - 44 Fl.

City: New York State: NY Zip: 10122

6. Total number of applications and patents involved: 1

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

[] Enclosed

[X] Authorized to be charged to deposit account

8. Deposit account number:

02-4377

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

01 FC:581

40.00 CH

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9. Statement and signature

To the best of my knowledge and belief, the foregoing instrumentation is true and correct and any attached copy is a true copy of the original document.

Ronald B. Hildreth, PTO#19,498

Name of Person Signing

Signature

April 29, 1999

Date

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

13

A S S I G N M E N T

WHEREAS, WE, PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, citizens of Great Britain, respectively, residing in Great Britain whose post office addresses are Department of Biological Sciences, The University of Liverpool, Liverpool L69 3BX, England; Addenbrooks Hospital, P.O. Box 238, Cambridge CB2 2QQ, England and 13 Station Road, Cambridge CB1 2JB, England, respectively, have made an invention entitled "CONDITIONALLY IMMORTALISED CELL LINES DERIVED FROM TRANSGENIC ANIMALS" as set forth and described in application for Letters Patent of the United States, Serial No. 09/173,821, filed October 16, 1998; and

WHEREAS, TCS BIOLOGICALS LIMITED, a corporation organized and existing under the laws of Great Britain, and having an office for the transaction of business at Botolph Claydon, Buckingham MK18 2LR, Great Britain, is desirous of acquiring the entire right, title and interest in and to said invention and any improvements thereon, and in and to the said application for Letters Patent therefor, and any Letters Patent which may be obtained therefor;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that WE, the said PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, for and in consideration of the sum of One Dollar (\$1.00), lawful money of the United States, to us in hand paid by said TCS BIOLOGICALS LIMITED, and other valuable considerations unto us moving from said TCS BIOLOGICALS LIMITED, at or before the ensembling and delivery of these presents, the receipt of which is hereby acknowledged, have sold, assigned, transferred and conveyed and by these presents do sell, assign, transfer and convey, unto said TCS BIOLOGICALS LIMITED, its successors and assigns, the entire right, title and interest in and to the said invention entitled "CONDITIONALLY IMMORTALISED CELL LINES DERIVED FROM TRANSGENIC ANIMALS" as set forth and described in application for Letters Patent of the United States, Serial No. 09/173,821, filed October 16, 1998, and any and all improvements thereon, and in and to said application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or

improvements including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, TO HAVE AND TO HOLD THE SAME to the full end of the term or terms for which any and all said Letters Patent may be granted;

AND WE, the said PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, do hereby authorize and request the Commissioner of Patents and Trademarks to issue the said Letters Patent of the United States to said TCS BIOLOGICALS LIMITED, as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said TCS BIOLOGICALS LIMITED, its successors and assigns;

AND WE, the said PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, for the considerations aforesaid, do hereby covenant and agree to and with said TCS BIOLOGICALS LIMITED, its successors and assigns, that we have the full power to make this assignment, and that the rights assigned are not encumbered by any grant, license or right heretofore given, and that we, our executors or administrators, shall and will do all lawful acts and things and make, execute and deliver without further compensation, any and all other instruments in writing, further applications, papers, affidavits, powers of attorney, assignments, and other documents which, in the opinion of counsel for said TCS BIOLOGICALS LIMITED, its successors and assigns, may be required or necessary more effectively to secure to and vest in said TCS BIOLOGICALS LIMITED, its successors and assigns, the entire right, title and interest in and to said invention and improvements, applications, Letters Patent, rights, titles, benefits, privileges, and advantages hereby sold, assigned, transferred and conveyed, and that we will sign any applications for reissue which may be desired by the owner of the patent or patents which may be issued for the said invention or improvements.

Subscribed and executed at _____
(Place)

on _____
(Date)

PHILIP SPENCER RUDLAND

Witness: _____
(Type Name)

Witness: _____
(Type Name)

Subscribed and executed at _____
(Place)

on _____
(Date)

BARRY ROGER BARRACLOUGH

Witness: _____
(Type Name)

Witness: _____
(Type Name)

Subscribed and executed at SANDWICH, ENGLAND
(Place)

on 14/4/99
(Date)

Iain Charles Kilty
IAIN CHARLES KILTY

Witness: Michelle Ronald McDonald
(Type Name)

Witness: Rebecca Miles RT Miles
(Type Name)

A32040-PCT-USA-A-072876.0102

Subscribed and executed at _____
(Place)

on _____
(Date)


BARRY ROBERT DAVIES

Witness: _____
(Type Name)

Witness: _____
(Type Name)

Subscribed and executed at Houghton
(Place)

on 22.4.99
(Date)



GUENTER SCHMIDT

Witness: S. Scholes
(Type Name)

Witness: S. SCHOLLES
(Type Name)

ASSIGNMENT

WHEREAS, WE, PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, citizens of Great Britain, respectively, residing in Great Britain whose post office addresses are Department of Biological Sciences, The University of Liverpool, Liverpool L69 3BX, England; Addenbrooks Hospital, P.O. Box 238, Cambridge CB2 2QQ, England and 13 Station Road, Cambridge CB1 2JB, England, respectively, have made an invention entitled "CONDITIONALLY IMMORTALISED CELL LINES DERIVED FROM TRANSGENIC ANIMALS" as set forth and described in application for Letters Patent of the United States, Serial No. 09/173,821, filed October 16, 1998; and

WHEREAS, TCS BIOLOGICALS LIMITED, a corporation organized and existing under the laws of Great Britain, and having an office for the transaction of business at Botolph Claydon, Buckingham MK18 2LR, Great Britain, is desirous of acquiring the entire right, title and interest in and to said invention and any improvements thereon, and in and to the said application for Letters Patent therefor, and any Letters Patent which may be obtained therefor;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that WE, the said PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, for and in consideration of the sum of One Dollar (\$1.00), lawful money of the United States, to us in hand paid by said TCS BIOLOGICALS LIMITED, and other valuable considerations unto us moving from said TCS BIOLOGICALS LIMITED, at or before the ensealing and delivery of these presents, the receipt of which is hereby acknowledged, have sold, assigned, transferred and conveyed and by these presents do sell, assign, transfer and convey, unto said TCS BIOLOGICALS LIMITED, its successors and assigns, the entire right, title and interest in and to the said invention entitled "CONDITIONALLY IMMORTALISED CELL LINES DERIVED FROM TRANSGENIC ANIMALS" as set forth and described in application for Letters Patent of the United States, Serial No. 09/173,821, filed October 16, 1998, and any and all improvements thereon, and in and to said application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or

improvements including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, TO HAVE AND TO HOLD THE SAME to the full end of the term or terms for which any and all said Letters Patent may be granted;

AND WE, the said PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, do hereby authorize and request the Commissioner of Patents and Trademarks to issue the said Letters Patent of the United States to said TCS BIOLOGICALS LIMITED, as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said TCS BIOLOGICALS LIMITED, its successors and assigns;

AND WE, the said PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, for the considerations aforesaid, do hereby covenant and agree to and with said TCS BIOLOGICALS LIMITED, its successors and assigns, that we have the full power to make this assignment, and that the rights assigned are not encumbered by any grant, license or right heretofore given, and that we, our executors or administrators, shall and will do all lawful acts and things and make, execute and deliver without further compensation, any and all other instruments in writing, further applications, papers, affidavits, powers of attorney, assignments, and other documents which, in the opinion of counsel for said TCS BIOLOGICALS LIMITED, its successors and assigns, may be required or necessary more effectively to secure to and vest in said TCS BIOLOGICALS LIMITED, its successors and assigns, the entire right, title and interest in and to said invention and improvements, applications, Letters Patent, rights, titles, benefits, privileges, and advantages hereby sold, assigned, transferred and conveyed, and that we will sign any applications for reissue which may be desired by the owner of the patent or patents which may be issued for the said invention or improvements.

Subscribed and executed at _____
(Place)

on _____.
(Date)

PHILIP SPENCER RUDLAND

Witness: _____
(Type Name)

Witness: _____
(Type Name)

Subscribed and executed at _____
(Place)

on _____
(Date)

BARRY ROGER BARRACLOUGH

Witness: _____
(Type Name)

Witness: _____
(Type Name)

Subscribed and executed at _____
(Place)

on _____
(Date)

IAIN CHARLES KILTY

Witness: _____
(Type Name)

Witness: _____
(Type Name)

Subscribed and executed at UNIVERSITY OF NEWCASTLE
(Place)

on 12/04/99
(Date)

B.R. Davies
BARRY ROBERT DAVIES

Witness: Daniel Dzanne
(Type Name)

Witness: LUKE CAULMAN
(Type Name)

Subscribed and executed at _____
(Place)

on _____
(Date)

GUENTER SCHMIDT

Witness: _____
(Type Name)

Witness: _____
(Type Name)

A S S I G N M E N T

WHEREAS, WE, PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, citizens of Great Britain, respectively, residing in Great Britain whose post office addresses are Department of Biological Sciences, The University of Liverpool, Liverpool L69 3BX, England; Addenbrooks Hospital, P.O. Box 238, Cambridge CB2 2QQ, England and 13 Station Road, Cambridge CB1 2JB, England, respectively, have made an invention entitled "CONDITIONALLY IMMORTALISED CELL LINES DERIVED FROM TRANSGENIC ANIMALS" as set forth and described in application for Letters Patent of the United States, Serial No. 09/173,821, filed October 16, 1998; and

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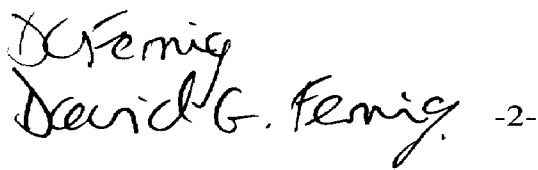
AND WE, the said PHILIP SPENCER RUDLAND, BARRY ROGER BARRACLOUGH, IAIN CHARLES KILTY, BARRY ROBERT DAVIES and GUENTER SCHMIDT, for the considerations aforesaid, do hereby covenant and agree to and with said TCS BIOLOGICALS LIMITED, its successors and assigns, that we have the full power to make this assignment, and that the rights assigned are not encumbered by any grant, license or right heretofore given, and that we, our executors or administrators, shall and will do all lawful acts and things and make, execute and deliver without further compensation, any and all other instruments in writing, further applications, papers, affidavits, powers of attorney, assignments, and other documents which, in the opinion of counsel for said TCS BIOLOGICALS LIMITED, its successors and assigns, may be required or necessary more effectively to secure to and vest in said TCS BIOLOGICALS LIMITED, its successors and assigns, the entire right, title and interest in and to said invention and improvements, applications, Letters Patent, rights, titles, benefits, privileges, and advantages hereby sold, assigned, transferred and conveyed, and that we will sign any applications for reissue which may be desired by the owner of the patent or patents which may be issued for the said invention or improvements.

Subscribed and executed at University of Liverpool
(Place)

on 3/3/99
(Date)


PHILIP SPENCER RUDLAND

Witness: DAVID G. FERNIG
(Type Name)


David G. Fernig -2-

Witness: *Jill*
(Type Name) DR. J. A. SMITH

Subscribed and executed at LIVERPOOL
(Place)

on 2/3/99
(Date)

Barry Roger Barraclough
Roger Barraclough
BARRY ROGER BARRACLOUGH

Witness: Guozheng Wang
(Type Name)

DAVID G. FERNIG

Witness: *Guozheng Wang*
(Type Name)

DC Fernig
David G. Fernig

Subscribed and executed at _____
(Place)

on _____
(Date)

IAIN CHARLES KILTY

Witness: _____
(Type Name)

Witness: _____
(Type Name)

Subscribed and executed at _____
(Place)

on _____
(Date)

BARRY ROBERT DAVIES

Witness: _____
(Type Name)

Witness: _____
(Type Name)

Subscribed and executed at _____
(Place)

on _____
(Date)

GUENTER SCHMIDT

Witness: _____
(Type Name)

Witness: _____
(Type Name)