

03-17-2005

VPI/01-12 CON

Form PTO-1595 (Rev. 06/04)  
OMB No. 0651-0027 (exp. 6/30/2005)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office



102960996

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies)/Execution Date(s):**

Graham Cheetham; Ronald Knegtel; Lovorka Swenson;  
Joyce T. Coll; Suzanne Renwick; Peter Weber

Execution Date(s) 4/16/2003; 4/16/2003; 4/15/2003;  
4/30/2003; 4/16/2003; 4/16/2003

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

**3. Nature of conveyance:**

- Assignment  Merger
- Security Agreement  Change of Name
- Government Interest Assignment
- Executive Order 9424, Confirmatory License
- Other \_\_\_\_\_

**2. Name and address of receiving party(ies)**

Name: Vertex Pharmaceuticals Incorporated

Internal Address: \_\_\_\_\_

Street Address: 130 Waverly Street

City: Cambridge

State: MA

Country: USA Zip: 02139-4242

Additional name(s) & address(es) attached?  Yes  No

**4. Application or patent number(s):**

This document is being filed together with a new application.

A. Patent Application No.(s)

10/979,375

B. Patent No.(s)

Additional numbers attached?  Yes  No

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

Name: James F. Haley

Internal Address: Fish & Neave IP Group  
Ropes & Gray LLP

Street Address: 1251 Avenue of the Americas

City: New York

State: NY Zip: 10020

Phone Number: 212-596-9000

Fax Number: 212-596-9090

Email Address: michele.kercher@ropesgray.com

**6. Total number of applications and patents involved:**

1

**7. Total fee (37 CFR 1.21 (h) & 3.41) \$ 40.00**

- Authorized to be charged by credit card
- Authorized to be charged to deposit account
- Enclosed
- None required (government interest not affecting title)

**8. Payment Information**

a. Credit Card Last 4 Numbers \_\_\_\_\_

Expiration Date \_\_\_\_\_

b. Deposit Account Number 06-1075

Authorized User Name \_\_\_\_\_

9. Signature: Michele A. Kercher

March 10, 2005

Signature

Date

03/15/2005 DBYRNE 00000015 10972375

01 FC:0021

Michele A. Kercher (Reg. No. 51,869)

Name of Person Signing

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

17

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American LegalNet, Inc.  
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**PATENT**  
**REEL: 016356 FRAME: 0452**

PCT  
ASSIGNMENT

I/We,

- (1) Graham Cheetham,
- (2) Ronald Knegtel,
- (3) Lovorka Swenson,
- (4) Joyce T. Coll,
- (5) Suzanne Renwick,
- (6) Peter Weber,

residing, respectively, at

- (1) 75 Hamble Drive  
Abingdon OX14 3TF, United Kingdom,
- (2) 92 Andersey Way  
Abingdon OX14 5NW, United Kingdom,
- (3) 5 Davis Road  
Belmont, Massachusetts 02478, U.S.A.,
- (4) 7 Phillips Street  
Westborough, Massachusetts 01581, U.S.A.,
- (5) 41 Loudwater Close, Sunbury on Thames  
Middlesex TW16 6DD, United Kingdom,
- (6) 76 West St. Helen Street  
Abingdon OX14 5BP, United Kingdom,

for good and valuable consideration, receipt of which is hereby acknowledged, have assigned, sold and transferred to and do hereby assign, sell and transfer to VERTEX PHARMACEUTICALS INCORPORATED a corporation organized and existing under the laws of the COMMONWEALTH OF MASSACHUSETTS and having an office and a place of

business at 130 WAVERLY STREET, CAMBRIDGE, MASSACHUSETTS  
02139-4242 its successors and assigns: (1) the entire  
right, title and interest in all countries throughout the  
world in and to any and all my/our inventions and  
discoveries disclosed in my/our International Patent  
Application, filed under the Patent Cooperation Treaty in  
the United States Receiving Office (RO/US), entitled:  
CRYSTAL STRUCTURE OF AURORA-2 PROTEIN AND BINDING POCKETS  
THEREOF, and designating Albania (AL), Algeria (DZ),  
Antigua & Barbuda (AG), Armenia (AM), Australia (AU),  
Austria (AT), Azerbaijan (AZ), Barbados (BB), Belarus  
(BY), Belgium (BE), Belize (BZ), Benin (BJ), Bosnia and  
Herzegovina (BA), Brazil (BR), Bulgaria (BG), Burkina  
Faso (BF), Cameroon (CM), Canada (CA), Central African  
Republic (CF), Chad (TD), China (CN), Colombia (CO),  
Congo (CG), Costa Rica (CR), Côte d'Ivoire (CI), Croatia  
(HR), Cuba (CU), Cyprus (CY), Czech Republic (CZ),  
Democratic People's Republic of Korea (KP), Denmark (DK),  
Dominica (DM), Ecuador (EC), Equatorial Guinea (GQ);  
Estonia (EE), Finland (FI), France (FR), Gabon (GA),  
Gambia (GM), Georgia (GE), Germany (DE), Ghana (GH),  
Greece (GR), Grenada (GD), Guinea (GN), Guinea Bissau  
(GW), Hungary (HU), Iceland (IS), India (IN), Indonesia  
(ID), Ireland (IE), Israel (IL), Italy (IT), Japan (JP),  
Kazakstan (KZ), Kenya (KE), Kyrgyzstan (KG), Latvia (LV),  
Lesotho (LS), Liberia (LR), Liechtenstein (LI), Lithuania  
(LT), Luxembourg (LU), Madagascar (MG), former Yugoslav  
Republic of Macedonia (MK), Malawi (MW), Mali (ML),  
Mauritania (MR), Mexico (MX), Monaco (MC), Mongolia (MN),  
Morocco (MA), Mozambique (MZ), Netherlands (NL), New  
Zealand (NZ), Nicaragua (NI), Niger (NE), Norway (NO),  
Oman (OM), the Philippines (PH), Poland (PL), Portugal  
(PT), Republic of Korea (KR), Republic of Moldova (MD),

Romania (RO), Russian Federation (RU), Saint Lucia (LC),  
Saint Vincent and the Grenadines (VC), Senegal (SN),  
Seychelles (SC), Sierra Leone (SL), Singapore (SG),  
Slovakia (SK), Slovenia (SI), South Africa (ZA), Spain  
(ES), Sri Lanka (LK), Sudan (SD), Swaziland (SZ), Sweden  
(SE), Switzerland (CH), Tajikistan (TJ), Tanzania (TZ),  
Togo (TG), Trinidad and Tobago (TT), Tunisia (TN), Turkey  
(TR), Turkmenistan (TM), Uganda (UG), Ukraine (UA),  
United Arab Emirates (AE), United Kingdom (GB), United  
States of America (US), Uzbekistan (UZ), Viet Nam (VN),  
Yugoslavia (YU), Zambia (ZM) and Zimbabwe (ZW), and all  
other PCT countries, [subsequently identified as  
International Patent Application PCT/US03/13605  
filed 01.05.03\*], including any renewals, revivals,  
reissues, reexaminations, extensions, continuations and  
divisions thereof, and any substitute applications  
therefore; (2) the full and complete right to file patent  
applications in the name of VERTEX PHARMACEUTICALS  
INCORPORATED its designee, or in my/our names at VERTEX  
PHARMACEUTICALS INCORPORATED, or its designee's election,  
on the aforesaid inventions, discoveries and applications  
in all countries of the world; (3) the entire right,  
title and interest in and to any Letters Patent which may  
issue on the aforesaid inventions, discoveries and  
applications in any country of the world and any  
renewals, revivals, reissues, reexaminations and  
extensions thereof, and any patents of confirmation,  
registration and importation of the same; and (4) the

---

\* I/We hereby authorize VERTEX PHARMACEUTICALS  
INCORPORATED and its representatives to insert in this  
instrument the International Patent Application number  
and the filing date of said application when VERTEX  
PHARMACEUTICALS INCORPORATED is officially notified  
thereof.

entire right, title and interest in and to all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the following priority application(s):

<u>60/377,510</u>	<u>U.S.A.</u>	<u>1 May 2002</u>
application no.	country	filing date

and all rights of priority in any country of the world deriving from the above-identified International Patent Application.

I/We hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in any country throughout the world to VERTEX PHARMACEUTICALS INCORPORATED as the assignee of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, sale and transfer not been made.

I/We agree, at any time, upon the request of VERTEX PHARMACEUTICALS INCORPORATED to execute and to deliver to VERTEX PHARMACEUTICALS INCORPORATED any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries or applications, and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

I/We further agree, at any time, upon request of VERTEX PHARMACEUTICALS INCORPORATED to execute and to deliver to VERTEX PHARMACEUTICALS INCORPORATED such additional documents, if any, as are necessary or

desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect any and all rights of VERTEX PHARMACEUTICALS INCORPORATED under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

ASSIGNORS:

<u>Graham Cheetham</u>	(1)
<u>Ronald Knegtel</u>	(2)
<u>Lovorka Swenson</u>	(3)
<u>Joyce Coll</u>	(4)
<u>Suzanne Renwick</u>	(5)
<u>Peter Weber</u>	(6)

G. Cheetham (1)  
Graham Cheetham

16.04.2003  
Date

Lynnette Kelly  
Witness Name: LYNNETTE KELLY

16.04.03  
Date

Jeanne Couch  
Witness Name: JEANNE COUCH

16.04.03  
Date

Ronald Knegetel (2)  
Ronald Knegetel

16/4/2003  
Date

Daniel O. Robinson  
Witness Name: DANIEL ROBINSON

16-4/2003  
Date

Lynette Kelly  
Witness Name: LYNNETTE KELLY

16.04.03  
Date

\_\_\_\_\_  
Lovorka Swenson (3)

\_\_\_\_\_  
Date

On this \_\_\_\_\_ day of \_\_\_\_\_, 2003,  
Lovorka Swenson (3) personally appeared before me, a  
Notary Public in and for the \_\_\_\_\_,  
and executed the foregoing Assignment and duly  
acknowledged to me that such Assignment was executed for  
the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

Joyce T. Coll (4)  
Joyce T. Coll

4/30/03  
Date

On this 30th day of April, 2003,  
Joyce T. Coll (4) personally appeared before me, a Notary  
Public in and for the COMMONWEALTH OF MASS, and  
executed the foregoing Assignment and duly acknowledged  
to me that such Assignment was executed for the uses and  
purposes therein expressed.

[Signature]  
Notary Public  
MY COMMISSION EXPIRES 8/1/09

Suzanne Renwick (5)  
Suzanne Renwick

12/4/03  
Date

[Signature]  
Witness Name: LYNNETTE KELLY

16.04.03  
Date

[Signature]  
Witness Name: JOANNE LOUCH

16.04.03  
Date

[Signature] (6)  
Peter Weber

16.4.03  
Date

[Signature]  
Witness Name: LYNNETTE KELLY

16.04.03  
Date

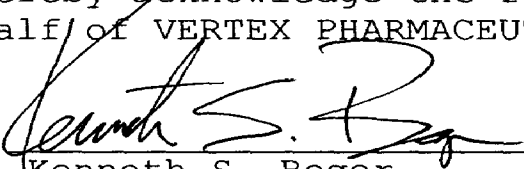
[Signature]  
Witness Name: JOANNE LOUCH

16.04.03  
Date

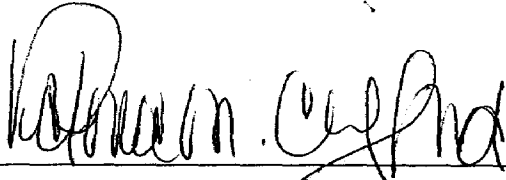


ACKNOWLEDGEMENT OF ASSIGNEE:

I hereby acknowledge the foregoing executed Assignment on behalf of VERTEX PHARMACEUTICALS INCORPORATED

By:   
Kenneth S. Boger  
Senior Vice President & General Counsel

On this 15<sup>th</sup> day of MAY, 2003,  
Kenneth S. Boger personally appeared before me, a Notary Public in and for the Commonwealth of Massachusetts, and duly acknowledged the executed Assignment on behalf of the Assignee.

  
Notary Public  
MY COMMISSION EXPIRES: 3/6/09

PCT  
ASSIGNMENT

I/We,

- (1) Graham Cheetham,
- (2) Ronald Knegtel,
- (3) Lovorka Swenson,
- (4) Joyce T. Coll,
- (5) Suzanne Renwick,
- (6) Peter Weber,

residing, respectively, at

- (1) 75 Hamble Drive  
Abingdon OX14 3TF, United Kingdom,
- (2) 92 Andersey Way  
Abingdon OX14 5NW, United Kingdom,
- (3) 5 Davis Road  
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Westborough, Massachusetts 01581, U.S.A.,
- (5) 41 Loudwater Close, Sunbury on Thames  
Middlesex TW16 6DD, United Kingdom,
- (6) 76 West St. Helen Street  
Abingdon OX14 5BP, United Kingdom,

for good and valuable consideration, receipt of which is hereby acknowledged, have assigned, sold and transferred to and do hereby assign, sell and transfer to VERTEX PHARMACEUTICALS INCORPORATED a corporation organized and existing under the laws of the COMMONWEALTH OF MASSACHUSETTS and having an office and a place of

business at 130 WAVERLY STREET, CAMBRIDGE, MASSACHUSETTS  
02139-4242 its successors and assigns: (1) the entire  
right, title and interest in all countries throughout the  
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discoveries disclosed in my/our International Patent  
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Democratic People's Republic of Korea (KP), Denmark (DK),  
Dominica (DM), Ecuador (EC), Equatorial Guinea (GQ);  
Estonia (EE), Finland (FI), France (FR), Gabon (GA),  
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Greece (GR), Grenada (GD), Guinea (GN), Guinea Bissau  
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Kazakstan (KZ), Kenya (KE), Kyrgyzstan (KG), Latvia (LV),  
Lesotho (LS), Liberia (LR), Liechtenstein (LI), Lithuania  
(LT), Luxembourg (LU), Madagascar (MG), former Yugoslav  
Republic of Macedonia (MK), Malawi (MW), Mali (ML),  
Mauritania (MR), Mexico (MX), Monaco (MC), Mongolia (MN),  
Morocco (MA), Mozambique (MZ), Netherlands (NL), New  
Zealand (NZ), Nicaragua (NI), Niger (NE), Norway (NO),  
Oman (OM), the Philippines (PH), Poland (PL), Portugal  
(PT), Republic of Korea (KR), Republic of Moldova (MD),

Romania (RO), Russian Federation (RU), Saint Lucia (LC),  
Saint Vincent and the Grenadines (VC), Senegal (SN),  
Seychelles (SC), Sierra Leone (SL), Singapore (SG),  
Slovakia (SK), Slovenia (SI), South Africa (ZA), Spain  
(ES), Sri Lanka (LK), Sudan (SD), Swaziland (SZ), Sweden  
(SE), Switzerland (CH), Tajikistan (TJ), Tanzania (TZ),  
Togo (TG), Trinidad and Tobago (TT), Tunisia (TN), Turkey  
(TR), Turkmenistan (TM), Uganda (UG), Ukraine (UA),  
United Arab Emirates (AE), United Kingdom (GB), United  
States of America (US), Uzbekistan (UZ), Viet Nam (VN),  
Yugoslavia (YU), Zambia (ZM) and Zimbabwe (ZW), and all  
other PCT countries, [subsequently identified as  
International Patent Application PCT/US03/13605,  
filed 01.05.03\*], including any renewals, revivals,  
reissues, reexaminations, extensions, continuations and  
divisions thereof, and any substitute applications  
therefore; (2) the full and complete right to file patent  
applications in the name of VERTEX PHARMACEUTICALS  
INCORPORATED its designee, or in my/our names at VERTEX  
PHARMACEUTICALS INCORPORATED, or its designee's election,  
on the aforesaid inventions, discoveries and applications  
in all countries of the world; (3) the entire right,  
title and interest in and to any Letters Patent which may  
issue on the aforesaid inventions, discoveries and  
applications in any country of the world and any  
renewals, revivals, reissues, reexaminations and  
extensions thereof, and any patents of confirmation,  
registration and importation of the same; and (4) the

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\* I/We hereby authorize VERTEX PHARMACEUTICALS  
INCORPORATED and its representatives to insert in this  
instrument the International Patent Application number  
and the filing date of said application when VERTEX  
PHARMACEUTICALS INCORPORATED is officially notified  
thereof.

entire right, title and interest in and to all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the following priority application(s):

<u>60/377,510</u>	<u>U.S.A.</u>	<u>1 May 2002</u>
application no.	country	filing date

and all rights of priority in any country of the world deriving from the above-identified International Patent Application.

I/We hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in any country throughout the world to VERTEX PHARMACEUTICALS INCORPORATED as the assignee of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, sale and transfer not been made.

I/We agree, at any time, upon the request of VERTEX PHARMACEUTICALS INCORPORATED to execute and to deliver to VERTEX PHARMACEUTICALS INCORPORATED any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries or applications, and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

I/We further agree, at any time, upon request of VERTEX PHARMACEUTICALS INCORPORATED to execute and to deliver to VERTEX PHARMACEUTICALS INCORPORATED such additional documents, if any, as are necessary or

desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect any and all rights of VERTEX PHARMACEUTICALS INCORPORATED under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

ASSIGNORS:

Graham Cheetham (1)

---

Ronald Knegtel (2)

---

Lovorka Swenson (3)

---

Joyce Coll (4)

---

Suzanne Renwick (5)

---

Peter Weber (6)

---

\_\_\_\_\_  
Graham Cheetham (1)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness Name:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness Name:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Ronald Knegtel

(2)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness Name:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness Name:

\_\_\_\_\_  
Date

L. Swenson  
Lovokra Swenson

(3)

04/15/03  
Date

On this 15<sup>th</sup> day of April, 2003, Lovorka Swenson (3) personally appeared before me, a Notary Public in and for the Commonwealth of Massachusetts, and executed the foregoing Assignment and duly acknowledged to me that such Assignment was executed for the uses and purposes therein expressed.

Valerie M. Gifford  
Notary Public

MY COMMISSION EXPIRES: \_\_\_\_\_

3/6/09

\_\_\_\_\_  
Joyce T. Coll

(4)

\_\_\_\_\_  
Date

On this \_\_\_\_\_ day of \_\_\_\_\_, 2003,  
Joyce T. Coll (4) personally appeared before me, a Notary  
Public in and for the \_\_\_\_\_, and  
executed the foregoing Assignment and duly acknowledged  
to me that such Assignment was executed for the uses and  
purposes therein expressed.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Suzanne Renwick

(5)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness Name:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness Name:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Peter Weber

(6)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness Name:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness Name:

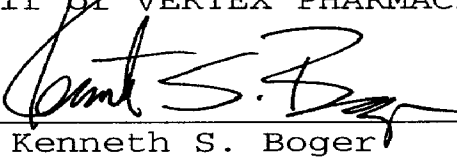
\_\_\_\_\_  
Date



ACKNOWLEDGEMENT OF ASSIGNEE:

I hereby acknowledge the foregoing executed Assignment on behalf of VERTEX PHARMACEUTICALS INCORPORATED

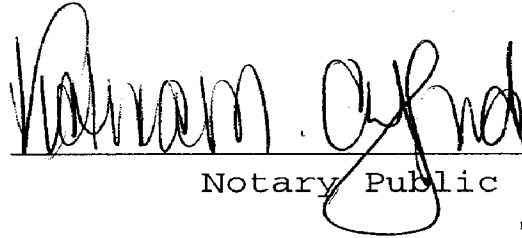
By:



Kenneth S. Boger  
Senior Vice President & General Counsel

On this 15<sup>th</sup> day of April, 2003,

Kenneth S. Boger personally appeared before me, a Notary Public in and for the Commonwealth of Massachusetts, and duly acknowledged the executed Assignment on behalf of the Assignee.



Notary Public

NOTARY COMMISSION EXPIRES 04

3/4/09