

Vertex 125805/04-128/00048  
Form PTO-1595 (Rev. 07/05)  
OMB No. 0651-0027 (exp. 6/30/2008)

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## RECORDATION FORM COVER SHEET PATENTS ONLY

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)**

Lewis R. Makings  
337 Cerro Street  
Encinitas, California 92024

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

**3. Nature of conveyance/Execution Date(s):**

Execution Date(s) November 11, 2005

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Joint Research Agreement  
☐ 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: Massachusetts

Country: USA Zip: 02139-4242

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

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

A. Patent Application No.(s)

11/208,386

☐ This document is being filed together with a new application.

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Jonathan P. O'Brien

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

Street Address: 444 West Michigan Avenue

City: Kalamazoo

State: Michigan Zip: 49007

Phone Number: (269) 383-5833

Fax Number: (269) 383-5828

Email Address: \_\_\_\_\_

**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)

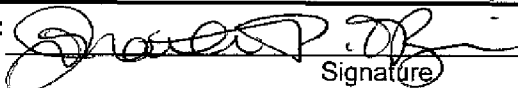
**8. Payment Information**

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

b. Deposit Account Number 503654

Authorized User Name Jonathan P. O'Brien

**9. Signature:**

  
Signature

January 31 2006  
Date

Jonathan P. O'Brien

Name of Person Signing

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

13

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**PATENT**  
**REEL: 017224 FRAME: 0263**

Vertex 125805/04-128/00048

RECORDATION FORM COVER SHEET  
Additional Page

Form PTO-1595  
OMB No. 0651-0027  
U.S. Department of Commerce  
United States Patent and Trademark Office

**NAME OF CONVEYING PARTY(IES) EXECUTION DATE(S): Continued**

2. Miguel Garcia-Guzman Blanco  
4076 Carmel Springs Way  
San Diego, California 92130  
Execution Date: December 2, 2005
  
3. Dennis R. Hurley  
1513 Black Walnut Drive  
San Marcos, California 92078  
Execution Date: December 2, 2005
  
4. Ioana Drutu  
328 Rosemont Street  
La Jolla, CA 92037  
Execution Date: November 30, 2005
  
5. Gabriel Raffai  
1421 Alta Palma Road  
Perris, CA 92571  
Execution Date: November 30, 2005
  
6. Daniele M. Bergeron  
7050 Stanford Avenue  
La Mesa, California 91941  
Execution Date: November 30, 2005
  
7. Akiko Nakatani  
10726 Dabney Drive #72  
San Diego, California 92126  
Execution Date: November 30, 2005
  
8. Andreas P. Termin  
2080 Wandering Road  
Encinitas, CA 92024  
Execution Date: November 30, 2005
  
9. Alina Silina  
7160 Shoreline Drive #4308  
San Diego, CA 92122  
Execution Date: December 2, 2005

■

Number 2 of 2**PATENT**  
**REEL: 017224 FRAME: 0264**

VPI/04-128 US &amp; PCT

ASSIGNMENT

(1)	Lewis R. Makings
(2)	Miguel Garcia-Guzman Blanco
(3)	Dennis R. Hurley
(4)	Ioana Drutu
(5)	Gabriel Raffai
(6)	Daniele J. Bergeron
(7)	Akiko Nakatani
(8)	Andreas P. Termin
(9)	Alina Silina

I/We, residing, respectively, at

(1)	337 Cerro Street Encinitas, California 92024
(2)	4076 Carmel Springs Way San Diego, California 92130
(3)	1513 Black Walnut Drive San Marcos, California 92078
(4)	328 Rosemont Street La Jolla, California 92037
(5)	1421 Alta Palma Road Perris, California 92571
(6)	7050 Stanford Avenue La Mesa, California 91941
(7)	10726 Dabney Drive #72 San Diego, California 92126
(8)	2080 Wandering Road Encinitas, California 92024
(9)	7160 Shoreline Drive # 4308 San Diego, CA, 92122 USA

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 (a) International Patent Application, filed under the Patent Cooperation Treaty in the United States Receiving Office (RO/US), entitled: Modulators of Muscarinic Receptors, filed August 19, 2005, 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), Botswana (BW), 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), Egypt (EG), 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), Kazakhstan (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), Namibia (NA), Netherlands (NL), New Zealand (NZ), Nicaragua (NI), Niger (NE), Norway (NO), Oman (OM), Papua New Guinea (PG), 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), Syrian Arab Republic (SY), 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/US2005/29780, filed August 19, 2005], including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications therefore, and (b) our United States patent application filed with the United States Patent and Trademark Office, [subsequently identified as United States Patent Application Serial Number 11/208,386 filed August 19, 2005], 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 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>60/602,731</u>	<u>U.S.A.</u>	<u>19 August 2004</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.

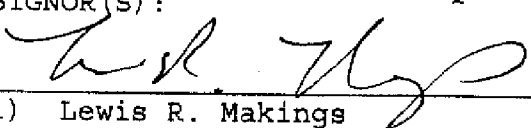
I/We agree, at any time, upon the request of VERTEX PHARMACEUTICALS INCORPORATED to execute and to deliver to VERTEX PHARMACEUTICALS INCORPORATED any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, 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.

(1)

ASSIGNOR(S):

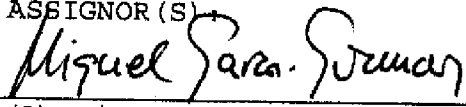
  
(1) Lewis R. Makings

On this 11<sup>th</sup> day of November, 2005,  
Lewis R. Makings, personally appeared before me, a Notary  
Public in and for San Diego, California  
~~Lewis R. Makings~~, and executed  
the foregoing Assignment and duly acknowledged to me that  
such Assignment was executed for the uses and purposes  
therein expressed.

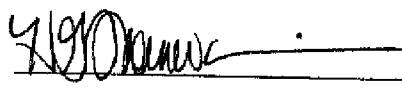
  
Notary Public

(2)

ASSIGNOR(S):

  
(2) Miguel Garcia-Guzman Blanco

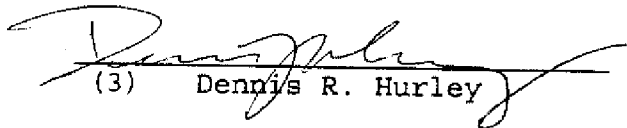
On this 2nd day of December, 2005,  
Miguel Garcia-Guzman Blanco, personally appeared before  
me, a Notary Public in and for  
San Diego, California, and executed the  
foregoing Assignment and duly acknowledged to me that  
such Assignment was executed for the uses and purposes  
therein expressed.

  
Notary Public



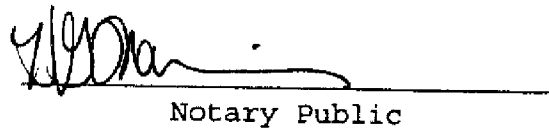
(3)

ASSIGNOR(S) :

  
(3) Dennis R. Hurley

On this 2nd day of December, 2005,  
Dennis R. Hurley, personally appeared before me, a Notary  
Public in and for San Diego, California, and  
executed the foregoing Assignment and duly acknowledged  
to me that such Assignment was executed for the uses and  
purposes therein expressed.



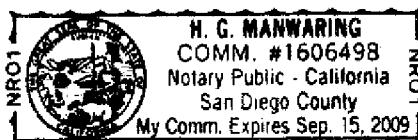
  
Notary Public

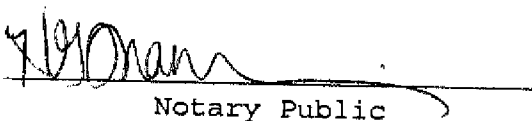
(4)

ASSIGNOR(S) :

  
(4) Ioana Drutu

On this 30th day of November, 2005,  
Ioana Drutu, personally appeared before me, a Notary  
Public in and for San Diego, California,  
and executed the foregoing Assignment and duly  
acknowledged to me that such Assignment was executed for  
the uses and purposes therein expressed.



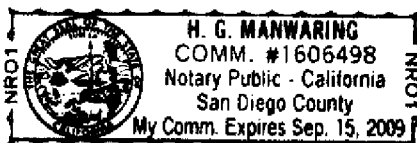
  
Notary Public

(5)

ASSIGNOR(S):

  
(5) Gabriel Raffai

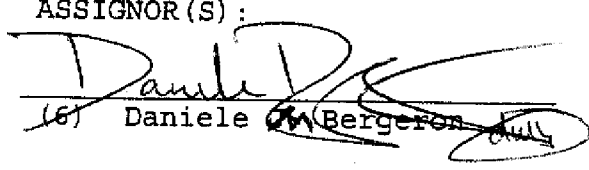
On this 30th day of November, 2005,  
Gabriel Raffai, personally appeared before me, a Notary  
Public in and for San Diego, California, and  
executed the foregoing Assignment and duly acknowledged  
to me that such Assignment was executed for the uses and  
purposes therein expressed.



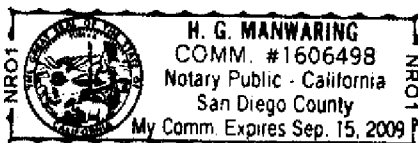
Notary Public

(6)

ASSIGNOR(S):

  
(6) Daniele ~~Bergeron~~ duffy

duffy On this 30th day of November, 2004,  
Daniele ~~Bergeron~~, personally appeared before me, a  
Notary Public in and for San Diego, California,  
and executed the foregoing Assignment and duly  
acknowledged to me that such Assignment was executed for  
the uses and purposes therein expressed.



Notary Public

(7)

ASSIGNOR(S):

Akiko Nakatani  
(7) Akiko Nakatani

On this 30th day of November, 2005,  
Akiko Nakatani, personally appeared before me, a Notary  
Public in and for San Diego, California, and  
executed the foregoing Assignment and duly acknowledged  
to me that such Assignment was executed for the uses and  
purposes therein expressed.



H. G. Manwaring  
Notary Public

(8)

ASSIGNOR(S):

Andreas P. Termin  
(8) Andreas P. Termin

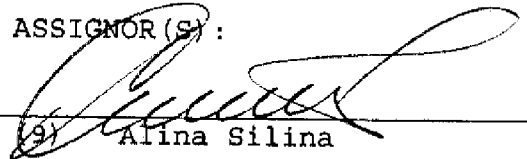
On this 30th day of November, 2005,  
Andreas P. Termin, personally appeared before me, a  
Notary Public in and for San Diego, California,  
and executed the foregoing Assignment and duly  
acknowledged to me that such Assignment was executed for  
the uses and purposes therein expressed.



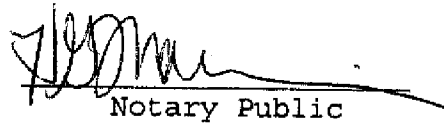
H. G. Manwaring  
Notary Public

(9)

ASSIGNOR(S):

  
(9) Alina Silina

On this 2nd day of December,  
2005, Alina Silina, personally appeared before me, a  
Notary Public in and for San Diego, California,  
and executed the foregoing Assignment and duly  
acknowledged to me that such Assignment was executed for  
the uses and purposes therein expressed.

  
Notary Public

ACKNOWLEDGEMENT OF ASSIGNEE:

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

By: Stephen Nesbitt

Stephen Nesbitt  
Chief Patent Counsel

On this 20<sup>th</sup> day of December, 2005,

Stephen Nesbitt 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.

Susan Batty-Gunn  
5/26/11 Notary Public

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