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FORM PTO-1595 (Substitute)

(Rev. 8-96)

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

To the Honorable Commissioner of Patents and T

Documents or copy thereof.

1. Name of conveying party(ies):

Leslie B. Vossball, Hubert O. Amrein
and Richard Axel

102330658

Conveying party(ies):

Name: The Trustees of Columbia University in
the City of New York

Internal Address:

Street Address: West 116th Street and Broadway

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

☐ Yes ☒ No

3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

City/State/Zip: New York, New York 10027

Execution Date(s): November 13, 2002 and
July 5, 2002Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date(s) of the application is(are):

A. Patent Application No.(s) 10/183,708

B. Patent No.(s)

Additional numbers attached?

☐ Yes ☒ No

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

Name: John P. White

Internal Address: Cooper & Dunham LLP

Street Address: 1185 Avenue of the Americas

City/State/Zip: New York, New York 10036

6. Total number of applications and patents involved:

7. Total fee (37 CFR §3.41): \$ 40.00

☐ Enclosed☒ Authorized to be charged to deposit account

8. Deposit account number:

03-3125

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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.

Alan J. Morrison

Name of Person Signing

Reg. No. 37,399

Signature

Date

12/19/02

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Alan J. Morrison

Reg. No. 37,399

Date

12/19/02

Total Number of pages including cover sheet, attachments and document: 6

OMB No. 0651-0011 (exp. 4/94)

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks

Box Assignments

Washington, D.C. 20231

PATENT

REEL: 013627 FRAME: 0605

Assignment

In consideration of One Dollar (\$1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, we , the undersigned,

Leslie B. Vosshall, residing at 430 East 63rd Street, Apt. 3E, New York, New York 10021-7921, USA;

Hubert O. Amrein, residing at 604 Carved Oak Drive, Durham, North Carolina 27707, USA; and

Richard Axel, residing at 435 Riverside Drive, Apt. 62, New York, New York 10027 USA,

Hereby sell, assign and transfer to THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK

a corporation of the State of

NEW YORK having a place of business at 110 Low Memorial Library, West 116th

& Broadway in the County of New York and State of New York 10027, U.S.A.

its successors, assigns and legal representatives, the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and any and all inventions which are disclosed but not claimed, in the application for United States Patent, which has been executed by the undersigned on and is entitled

GENES ENCODING INSECT ODORANT RECEPTORS AND USES THEREOF

(U.S. Serial No. 10/183,708 filed June 25, 2002 which claims benefit of U.S. Serial No. 09/932,227, filed August 17, 2001, a continuation of PCT International Application No. PCT/US00/04995, filed February 25, 2000, which claims priority of and is a continuation-in-part of U.S. Serial No. 09/257,706 filed February 25, 1999)

and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions;

Authorize and request the Commissioner of Patents of the United States to issue to said Assignee, the corporation above named, its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said inventions or any of them disclosed in said application;

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.



[L.S.]

Leslie B. Voss hall

Date: November 13, 2002

Witness: Miriam Gutierrez [signature]

Miriam Gutierrez [printed name]

45 Park Ten. West [address]

New York, NY 10034

[L.S.]

Date: _____ 20

Hubert O. Amrein

Witness: _____ [signature]

_____ [printed name]

_____ [address]

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: _____ 20 _____
 Witness: _____ [signature]
 _____ [printed name]
 _____ [address]

Date: 7/5/02 20
Witness: St Bray
STEVEN BRAY
2103 Ruffin St.
Durham NC 27704

Hubert Amrein [L.S.]
Hubert O. Amrein
[signature]
[printed name]
[address]

Date: November 13 2002Witness: [Signature] [signature]PHYLLIS JANE KISLOEE [printed name]3555 OXFORD AVE [address]RIVERDALE, NY 10463[Signature]

[L.S.]

Richard Axel

Date: _____ 20

Witness: _____ [signature]

_____ [printed name]

_____ [address]

[L.S.]

Date: _____ 20

Witness: _____ [signature]

_____ [printed name]

_____ [address]

[L.S.]

Date: _____ 20

Witness: _____ [signature]

_____ [printed name]

_____ [address]

[L.S.]

Date: _____ 20

Witness: _____ [signature]

_____ [printed name]

_____ [address]

[L.S.]

Date: _____ 20

Witness: _____ [signature]

_____ [printed name]

_____ [address]

[L.S.]