

11-19-2001  
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Form PTO-1595  
(Rev. 03/01)  
OMB No. 0651-0027

EET

U.S. DEPARTMENT OF COMMERCE  
U.S. 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):  
**Steven M. Ruben, Craig A. Rosen, Yi Li, Zhizhen Zeng, Hla Kyaw, Carrie L. Fischer, Haodong Li, Daniel R. Soppet, Reiner L. Gentz, Ying-Fei Wei, Paul A. Moore, Paul E. Young, John M. Greene, and Ann M. Ferrie.**

2. Name and address of receiving party(ies):  
Name: **Human Genome Sciences, Inc.**  
Street Address: **9410 Key West Avenue**  
City: **Rockville, Maryland 20850**  
Country: **U.S.A.**

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

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

3. Nature of conveyance  
 Assignment  Merger  
 Security Agreement  Change of Name  
 Other \_\_\_\_\_

Execution Date: **09/06/01; 09/18/01; 09/15/01; 08/30/2001; 09/04/01; 09/04/01; 09/01/01; 08/29/01; 09/20/01; 09/04/01; 08/30/01; 10/02/01; 08/30/01; 10/22/01.**

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

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

A. Patent Application No.(s) **09/852,797**

B. Patent No.(s)

Additional numbers attached?  Yes  No

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

**Human Genome Sciences, Inc.  
Attn. Legal Dept.  
9410 Key West Avenue  
Rockville, MD 20850  
Facsimile: 301-309-8439**

6. Total number of applications and patents involved: **1**

7. Total Fee (37 CFR 3.41) .....\$ **40.00**

Enclosed

Authorized to be charged to deposit account

8. Deposit account number:

**08-3425**

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

11/19/2001 AMMED1 00000001 083425 09852797  
01 FC:581 40.00 CH

DO NOT USE THIS SPACE

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.*

**Janet M. Martineau** (Reg. No. 46,903)  
Name of Person Signing

*Janet M. Martineau*  
Signature

**NOVEMBER 14 2001**  
Date

Total number of pages including cover sheet, attachments, and documents: **31**

**PATENT**  
**REEL: 012306 FRAME: 0089**

## ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, each of the undersigned, **Steven M. Ruben, Craig A. Rosen, Yi Li, Zhizhen Zeng, Hla Kyaw, Carrie L. Fischer, Haodong Li, Daniel R. Soppet, Reiner L. Gentz, Ying-Fei Wei, Paul A. Moore, Paul E. Young, John M. Greene, and Ann M. Ferrie**, hereby sells, assigns, transfers, and sets over to Human Genome Sciences, Inc. ("Assignee") having a place of business at 9410 Key West Avenue, Rockville, MD 20850, its successors, assigns and legal representatives, his/her entire right, title and interest, including the right to sue and collect for all past, present and future damages, for the United States of America, including all its territories and possessions, and all other countries,

- (a) in and to the invention known as **28 Human Secreted Proteins** for which application for United States Letters Patent was filed on **May 11, 2001**, and assigned US Serial No. **09/852,797**, in any and all applications thereon, in any and all Patent(s) therefor, and
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing (continuation, divisional) applications, reissues, extensions, renewals and reexaminations of the patent application or patent therefor listed above in part (a), to the full extent of the term or terms for which patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals, and examinations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.


Each of the undersigned further agrees that said Assignee may apply for and receive patent(s) for said invention(s) in its own name; and agrees to execute all papers necessary in connection with said application(s) and any continuing application(s) (continuation, divisional, or continuation-in-part), substitutes, renewals, reissues, reexaminations, extensions, and all other patent applications on all such invention(s), including all rightful oaths, declarations, powers of attorney and other papers; and agrees to execute separate assignments in connection with such application(s) as the Assignee may deem necessary and expedient; and agrees to communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said invention(s) and the history thereof; and agrees to cooperate fully and completely with said Assignee, its successors, assigns, and representatives in securing, maintaining, and enforcing proper patent protection for said invention(s) and for vesting title to said invention(s) and all patent applications and all patents on said invention(s) in Assignee, its successors, assigns and representatives.

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Each of the undersigned hereby represents and warrants to Assignee, its successors, assigns and representatives that no assignment, grant, mortgage, license or other right or agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned and that full right to convey the same as expressed herein is possessed by the undersigned.

Each of the undersigned hereby grants the power to James H. Davis (Reg. No. 40,582), Kenley K. Hoover (Reg. No. 40,302), Michele M. Wales (Reg. No. 43,975), Jonathan L. Klein (Reg. No. 41,119), Joseph J. Kenny (Reg. No. 43,710), Mark J. Hyman (Reg. No. 46,789), and Janet M. Martineau (Reg. No. 46,903) of Human Genome Sciences, Inc., 9410 Key West Avenue, Rockville, MD, 20850 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 and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, this Assignment is executed by the undersigned on the date(s) opposite their signature(s):

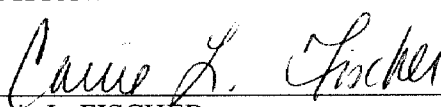
Inventor's Signature:  Date: 9/6/01  
Steven M. RUBEN

Inventor's Signature:  Date: 9/18/01  
Craig A. ROSEN

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Yi LI


Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Zhizhen ZENG

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Hla KYAW

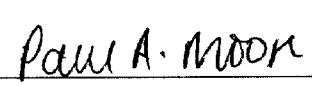
Inventor's Signature:  Date: 09.04.01  
Carrie L. FISCHER

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Haodong LI

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Daniel R. SOPPET

Inventor's Signature:  Date: 9/20/01  
Reiner L. GENTZ

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Ying-Fei WEI

Inventor's Signature:  Date: 8/30/01  
Paul A. MOORE

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul E. YOUNG

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
John M. GREENE

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Ann M. FERRIE

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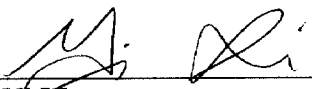
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Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Steven M. RUBEN

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Craig A. ROSEN

Inventor's Signature:  \_\_\_\_\_ Date: 9/15/01  
YFLI

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Zhizhen ZENG

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Hla KYAW

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Craig A. ROSEN

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Yi LI

Inventor's Signature: Zhizhen ZENG Date: Aug. 30, 2001  
Zhizhen ZENG

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
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Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
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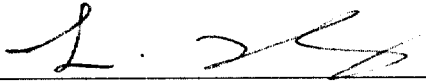
Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Craig A. ROSEN

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Yi LI

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Hla KYAW

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Carrie L. FISCHER

Inventor's Signature:  \_\_\_\_\_ Date: 09/01/01  
Haodong LI

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Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Ann M. FERRIE



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Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Haodong LI

Inventor's Signature:  Date: 8/29/01  
Daniel R. SOPPET

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Reiner L. GENTZ

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John M. GREENE

AUGUST 30, 2001

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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- (a) in and to the invention known as **28 Human Secreted Proteins** for which application for United States Letters Patent was filed on **May 11, 2001**, and assigned US Serial No. **09/852,797**, in any and all applications thereon, in any and all Patent(s) therefor, and
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing (continuation, divisional) applications, reissues, extensions, renewals and reexaminations of the patent application or patent therefor listed above in part (a), to the full extent of the term or terms for which patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals, and examinations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

Each of the undersigned further agrees that said Assignee may apply for and receive patent(s) for said invention(s) in its own name; and agrees to execute all papers necessary in connection with said application(s) and any continuing application(s) (continuation, divisional, or continuation-in-part), substitutes, renewals, reissues, reexaminations, extensions, and all other patent applications on all such invention(s), including all rightful oaths, declarations, powers of attorney and other papers; and agrees to execute separate assignments in connection with such application(s) as the Assignee may deem necessary and expedient; and agrees to communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said invention(s) and the history thereof; and agrees to cooperate fully and completely with said Assignee, its successors, assigns, and representatives in securing, maintaining, and enforcing proper patent protection for said invention(s) and for vesting title to said invention(s) and all patent applications and all patents on said invention(s) in Assignee, its successors, assigns and representatives.

Each of the undersigned agrees to execute all papers necessary in connection with any interference that may be declared or litigation that may be instituted concerning the application(s) or patent(s) referred to above and to cooperate fully and completely with the Assignee, its successors, assigns, and representatives in obtaining evidence and going forward with such interference or litigation, including providing testimonial evidence.

Each of the undersigned hereby represents and warrants to Assignee, its successors, assigns and representatives that no assignment, grant, mortgage, license or other right or agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned and that full right to convey the same as expressed herein is possessed by the undersigned.

Each of the undersigned hereby grants the power to James H. Davis (Reg. No. 40,582), Kenley K. Hoover (Reg. No. 40,302), Michele M. Wales (Reg. No. 43,975), Jonathan L. Klein (Reg. No. 41,119), Joseph J. Kenny (Reg. No. 43,710), Mark J. Hyman (Reg. No. 46,789), and Janet M. Martineau (Reg. No. 46,903) of Human Genome Sciences, Inc., 9410 Key West Avenue, Rockville, MD, 20850 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 and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, this Assignment is executed by the undersigned on the date(s) opposite their signature(s):

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Steven M. RUBEN

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Craig A. ROSEN

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Yi LI

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Zhizhen ZENG

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Hla KYAW

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Carrie L. FISCHER

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Haodong LI

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Daniel R. SOPPET

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Reiner L. GENTZ

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Ying-Fei WEI

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul A. MOORE

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul E. YOUNG

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
John M. GREENE

Inventor's Signature: Ann m Ferrie Date: 10/22/01  
Ann M. FERRIE