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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

IKEDA, MASATO  
OHNISHI, JUNKO  
MITSUHASHI, SATOSHI  
OCHIAI, KEIKO

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

Name: **KYOWA HAKKO KOGYO CO., LTD.**

Internal

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

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

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_Execution Date: **April 23, 2004; May 6, 2004; May 17, 2004.**Street Address: **1-1, Kyowa-cho, Hofu-shi,  
Yamaguchi 747-8522 Japan**

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Additional 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 of the application is: **April 23, 2004; May 6, 2004; May 17, 2004.**

A. Patent Application No.(s)

B. Patent Registration No.(s)

Additional number(s) attached ☐ Yes ☒ No

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

Name: **Antonelli, Terry, Stout & Kraus, LLP**

Internal Address:

**1300 North Seventeenth Street  
Suite 1800  
Arlington, VA 22209  
USA**

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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:

**01-2135**

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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.*

**William I. Solomon, Reg# 28,565**

Name of Person Signing

Signature

**06/03/2004**

Date

Total number of pages including cover sheet, attachments, and document: **3**

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**PATENT**  
**REEL: 016066 FRAME: 0279**

## ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to Masato Ikeda whose post office address is 8304-201, Minamiminowa-mura, Kamiina-gun, Nagano 399-4511 Japan; Junko Ohnishi whose post office address is c/o Tokyo Research Laboratories, KYOWA HAKKO KOGYO CO., LTD., 6-6, Asahi-machi 3-chome, Machida-shi, Tokyo 194-8533 Japan; Satoshi Mitsuhashi whose post office address is c/o Technical Research Laboratories, KYOWA HAKKO KOGYO CO., LTD., 1-1, Kyowa-cho, Hofu-shi, Yamaguchi 747-8522 Japan; and Keiko Ochiai whose post office address is c/o Tokyo Research Laboratories, KYOWA HAKKO KOGYO CO., LTD., 6-6, Asahi-machi 3-chome, Machida-shi, Tokyo 194-8533 Japan; subjects of Japan, by Kyowa Hakko Kogyo Co., Ltd., a corporation organized under the laws of Japan, located at 6-1, Ohtemachi 1-chome, Chiyoda-ku, Tokyo 100-8185 Japan, receipt of which is hereby acknowledged, we the said Masato Ikeda, Junko Ohnishi, Satoshi Mitsuhashi and Keiko Ochiai do hereby sell and assign to said Kyowa Hakko Kogyo Co., Ltd., its successors and assigns, all our right, title and interest in and for the United States of America, in and to the invention relating to

"MUTANT 6-PHOSPHOGLUCONATE DEHYDROGENASE" invented by us and described in the application for United States Letters Patent therefor, executed on even date herewith, and all United States Letters Patent which may be granted therefor, and all divisions, reissues, ownership of the said Letters Patent when granted, to be held and enjoyed by said Kyowa Hakko Kogyo Co., Ltd., its successors, assigns or other legal representatives, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made;

And we hereby agree to sign and execute any further

documents or instruments which may be necessary, lawful, and proper in the prosecution of said above-named application or in the preparation and prosecution of any continuing, continuation-in-part, substitute, divisional, renewal, reviewed or reissue applications or in any amendment, extension, or interference proceedings, or otherwise to secure the title thereto in said assignee;

And we do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to said Kyowa Hakko Kogyo Co., Ltd.

Signed this 23rd day of April, 2004

Masato Ikeda  
Masato Ikeda

Junko Ohnishi  
Junko Ohnishi

Witness  
Witness

Witness  
Witness

Signed this 6th day of May, 2004

Satoshi Mitsuhashi  
Satoshi Mitsuhashi

Hajime Ikeda  
Witness

Kenji Tanaka  
Witness

Signed this 17th day of May, 2004

Keiko Ochiai  
Keiko Ochiai

Yoko Kato  
Witness

Witness  
Witness