

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| | |
|------------------------------|----------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| Sue K. DeNise | 01/16/2004 |
| Paul Charteris | 01/15/2004 |
| David Rosenfeld | 01/15/2004 |
| Tom Holm | 01/19/2004 |
| Stephen Bates | 01/12/2004 |
| MetaMorphix, Inc. | 03/28/2008 |

RECEIVING PARTY DATA

| | |
|------------------------|----------------------|
| Name: | MetaMorphix, Inc. |
| Street Address: | 8510-A Corridor Road |
| City: | Savage |
| State/Country: | MARYLAND |
| Postal Code: | 20763 |

| | |
|------------------------|-------------------------------------|
| Name: | MetaMorphix, Incorporated |
| Street Address: | 8000 Virginia Manor Road, Suite 140 |
| City: | Beltsville |
| State/Country: | MARYLAND |
| Postal Code: | 20705 |

| | |
|------------------------|-------------------------|
| Name: | Cargill Incorporated |
| Street Address: | 15407 McGinty Road West |
| City: | Wayzata |
| State/Country: | MINNESOTA |
| Postal Code: | 55391-2399 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------|--------|
| | |

501139871

**PATENT
 REEL: 024189 FRAME: 0757**

OP \$40.00 12719275

Application Number:

12719275

CORRESPONDENCE DATA

Fax Number: (240)359-4879

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Email: smacdonald@johnsonbiopatent.com

Correspondent Name: Stephen C. MacDonald

Address Line 1: 317A East Liberty St.

Address Line 2: johnson & Associates

Address Line 4: Savannah, GEORGIA 31401

ATTORNEY DOCKET NUMBER:

MMI-0106

NAME OF SUBMITTER:

Stephen C. MacDonald, Ph.D.

Total Attachments: 6

source=MMI_0106_Assignment_Invs_MMI#page1.tif

source=MMI_0106_Assignment_Invs_MMI#page2.tif

source=MMI_0106_Assignment_Invs_MMI#page3.tif

source=MMI_0106_Assignment_Invs_MMI#page4.tif

source=MMI_0106_Assignment_MMI_MMICargill#page1.tif

source=MMI_0106_Assignment_MMI_MMICargill#page2.tif

ASSIGNMENT

This assignment ("Assignment") is made by Sue K. DeNise of Davis, California, Paul Charteris of Davis, California, David Rosenfeld of Sacramento, California, Tom Holm of Salt Lake City Utah and Stephen Bates of Davis, California (collectively, the "Assignors") to Assignee, **METAMORPHIX, INC.**, a Delaware Corporation ("Assignee"), having a place of business at 8510-A Corridor Road, Savage, Maryland 20763.

Recitals

A. Each of the Assignors has invented a new and useful invention entitled **COMPOSITIONS, METHODS AND SYSTEMS FOR INFERRING BOVINE BREED** for which an application for United States Letters Patent Application was filed **December 31, 2003** in the United States Patent and Trademark Office.

B. **Each of the Assignors authorizes and requests insertion of the serial number of the application when officially known:**

The United States Application Serial No.: 10/750,622 ;

C. Each of the Assignors believes the Assignors to be the original, first and joint inventors of the invention disclosed and/or claimed in the application for Letters Patent.

D. The parties desire to have a recordable instrument assigning from the Assignors to the Assignee the entire rights, title and interest in and to the invention, the application and all Letters Patent in the United States and throughout the world that may be granted or issued for the invention or that derive a right of priority from the application (including, without limitation, all divisional, continuation, continuation-in-part and continued prosecution applications thereof, and all reissues and reexaminations thereof, and all foreign counterparts thereof) (collectively, the "Invention Patents").

Agreement

NOW, THEREFORE, in accordance with the obligations to assign the Invention Patents and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each of the Assignors agrees to the foregoing and as follows:

1. Each of the Assignors does and will sell, assign and transfer to Assignee, such Assignor's entire rights, title, and interest in and to each of the Invention Patents, including, without limitation, the rights to file foreign applications directly in the name of the Assignee and to claim for any such foreign applications any priority rights to which such applications are entitled under international conventions, treaties, or otherwise.

2. Each of the Assignors agrees that, upon request and without further compensation, but at no expense to such Assignor, such Assignor and such Assignor's legal representatives and assigns will do all lawful acts, including the execution of papers and the giving of testimony, that may be necessary or desirable for obtaining, sustaining, reissuing, or enforcing each of the Invention Patents in the United States and throughout the world, and for perfecting, recording, or maintaining the title of Assignee, and Assignee's successors and assigns, in and to each of the Invention Patents in the United States and throughout the world. In the event that Assignee is unable for any reason to secure any of the Assignors' signatures to any document that may be necessary or desirable for obtaining, sustaining, reissuing, or enforcing each of the Invention Patents in the United States and throughout the world, or for perfecting, recording, or maintaining the title of Assignee, and Assignee's successors and assigns, in and to each of the Invention Patents in the United States and throughout the world, each such Assignor hereby irrevocably designates and appoints Assignee and Assignee's duly authorized officers and agents as such Assignor's agents and attorneys-in-fact to act for and on such Assignor's behalf and instead of such Assignor to execute such document, all with the same legal force and effect as if executed by such Assignor.

3. Each of the Assignors represents and warrants that such Assignor has not granted and will not grant to others either (1) any rights, title or interest in and to any of the Invention Patents, or (2) any rights inconsistent with the rights granted herein.

4. Each of the Assignors authorizes and requests the Assistant Commissioner for Patents of the United States and the various counterparts thereof throughout the world to issue and/or grant any Letters Patent granted for each of the Invention Patents to Assignee, its successors and assigns, as the assignee of the entire interest in such Invention Patents.

5. This Assignment constitutes the entire agreement with respect to its subject matter and supersedes all prior or contemporaneous oral or written agreements concerning such subject matter. No waiver, amendment, or modification of this Assignment shall be effective against the Assignee, unless in writing executed by a duly authorized representative of the Assignee. This Assignment shall be governed in all respects by the laws of the United States of America and by the laws of the state/province of California, as such laws are applied to agreements entered into and to be performed entirely within California between California residents. Each of the parties irrevocably consents to the exclusive personal jurisdiction of the federal and state courts located in California, as applicable, for any matter arising out of or relating to this Assignment, except that in any action seeking to enforce any order or any judgment of such federal or state courts located in California, such personal jurisdiction shall be nonexclusive. A breach of any of the promises or agreements contained herein will result in irreparable and continuing damage to Assignee for which there will be no adequate remedy at law, and Assignee shall be entitled to injunctive relief and/or a decree of specific performance, and such other relief as may be proper.

ATTORNEY DOCKET NO.:
MMI1150

IN WITNESS WHEREOF, each of the Assignors has executed this Assignment
on the date(s) provided below.

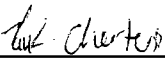
Assignor : Sue K. DeNise

Date: January 16, 2004

Signature: 

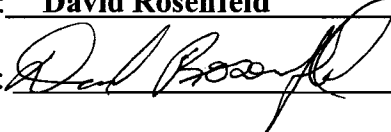
Assignor : Paul Charteris

Date: January 15, 2004

Signature: 

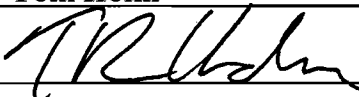
Assignor : David Rosenfeld

Date: JANUARY 15, 2004

Signature: 

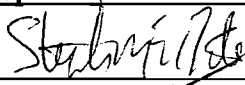
Assignor : Tom Holm

Date: January 19, 2004

Signature: 

Assignor : Stephen Bates

Date: January 12th 2004

Signature: 

ASSIGNMENT NUNC PRO TUNC

WHEREAS, **METAMORPHIX, INC.**, a corporation of the State of Delaware having a principal place of business at 8000 Virginia Manor Road, Suite 140, Beltsville, MD 20705, is the owner of certain inventions and improvements disclosed in an application for Letters Patent entitled "**COMPOSITIONS, METHODS AND SYSTEMS FOR INFERRING BOVINE BREED,**" filed in the United States Patent and Trademark Office on **December 31, 2003**, and assigned Serial No. **10/750,622**; and

WHEREAS, **METAMORPHIX, INC.**, a corporation of the State of Delaware having a principal place of business at 8000 Virginia Manor Road, Suite 140, Beltsville, MD 20705, and **CARGILL, INCORPORATED**, a corporation of the State of Delaware having a principal place of business at 15407 McGinty Road West, Wayzata, MN 55391-2399, are desirous of acquiring a joint undivided interest in the same.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, **METAMORPHIX, INC.**, by these presents does sell, assign, and transfer to **METAMORPHIX, INC. and CARGILL, INCORPORATED**, as co-assignees, their respective successors and assigns, each the full, exclusive, and joint right, title, and undivided interest in and to said application, in and to any divisions, continuations, reexaminations, and reissues thereof, and in and to all inventions and improvements disclosed and described in said application, preparatory to obtaining Letters Patent of the United States therefor; and hereby requests the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States resulting from said application, or from a division, continuation, reexamination, or reissue thereof, jointly to **METAMORPHIX, INC. and CARGILL, INCORPORATED**, as co-assignees, for their interest and for the sole use and benefit of **METAMORPHIX, INC. and CARGILL, INCORPORATED**, and their assigns and legal representatives;

For the same consideration, **METAMORPHIX, INC.**, by these presents, does sell, assign, and transfer to **METAMORPHIX, INC. and CARGILL, INCORPORATED**, the full, exclusive, and

joint right, title, and undivided interest in and to any foreign application or applications corresponding to said application, in whole or in part, in countries other than the United States, in and to any Letters Patent and similar protective rights granted on said foreign applications, and in and to the right to claim any applicable priority rights arising from or required for said foreign applications under the terms of any applicable conventions, treaties, statutes, or regulations; said foreign applications to be filed and issued in the name of **METAMORPHIX, INC. and CARGILL, INCORPORATED**, or their designees insofar as permitted by applicable law;

AND, for the same consideration, **METAMORPHIX, INC.** agrees to sign all lawful papers, execute all division, continuing, reexamination, reissue, and other applications, make all assignments and rightful oaths, and generally do everything possible to aid **METAMORPHIX, INC. and CARGILL, INCORPORATED**, their successors, assigns, and nominees, to obtain and enforce proper protection for all said inventions and improvements in all countries throughout the world.

This Assignment is expressly made **NUNC PRO TUNC** to have the same legal force and effect as if executed on **October 27, 2005** (the date of the Assignment from MMI Genomics, Inc. to MetaMorphix, Inc. and Cargill, Incorporated).

METAMORPHIX, INC.

Date:

2/29/09

By:



Name:

Linda Yaswan-Cookery

Title:

Chief Compliance Officer
VP - Strategic Planning

Our Docket: MMI-0102 (14972.105004)