900248481 03/04/2013

TRADEMARK ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|--------------------------|
| NATURE OF CONVEYANCE: | RELEASE BY SECURED PARTY |

CONVEYING PARTY DATA

| Name Formerly | | Execution Date | Entity Type |
|---------------|--|----------------|-----------------------------------------------------------------------------------------------------|
| Comerica Bank | | 02/27/2013 | A Texas Banking Association and Authorized Foreign Bank under the Bank Act (Canada): TEXAS |

RECEIVING PARTY DATA

| Name: | Cytochroma Inc. |
|-------------------|----------------------|
| Street Address: | 100 Allstate Parkway |
| Internal Address: | Suite 600 |
| City: | Markham, Ontario |
| State/Country: | CANADA |
| Entity Type: | CORPORATION: CANADA |

PROPERTY NUMBERS Total: 6

| Property Type | Number | Word Mark |
|----------------|----------|------------|
| Serial Number: | 78415141 | CYTOCHROMA |
| Serial Number: | 85392298 | REPLIDEA |
| Serial Number: | 85392305 | ALIVIMO |
| Serial Number: | 85392308 | RAYACAL |
| Serial Number: | 85392751 | D-REPLA |
| Serial Number: | 85392753 | EQUODI |

CORRESPONDENCE DATA

Fax Number: 3124740448

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Email:anagelberg@marshallip.comCorrespondent Name:Marshall, Gerstein & Borun LLP

Address Line 1: 233 South Wacker Drive

TRADEMARK REEL: 004974 FRAME: 0170 OP \$165.00 78415141

900248481

| Address Line 2: Suite 6300 Address Line 4: Chicago, ILLINOIS 60606 | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--|--|--|
| ATTORNEY DOCKET NUMBER: | 31138/10049 | | | |
| DOMESTIC REPRESENTATIVE | | | | |
| Name: Address Line 1: Address Line 2: Address Line 3: Address Line 4: | | | | |
| NAME OF SUBMITTER: | Audrey Nagelberg | | | |
| Signature: | /Audrey Nagelberg/ | | | |
| Date: | 03/04/2013 | | | |
| Total Attachments: 22 source=Cytochroma_release#page1.tif source=Cytochroma_release#page2.tif source=Cytochroma_release#page3.tif source=Cytochroma_release#page4.tif source=Cytochroma_release#page5.tif source=Cytochroma_release#page6.tif source=Cytochroma_release#page7.tif source=Cytochroma_release#page8.tif source=Cytochroma_release#page9.tif source=Cytochroma_release#page10.tif source=Cytochroma_release#page11.tif source=Cytochroma_release#page12.tif source=Cytochroma_release#page13.tif source=Cytochroma_release#page15.tif source=Cytochroma_release#page15.tif source=Cytochroma_release#page16.tif source=Cytochroma_release#page17.tif source=Cytochroma_release#page18.tif source=Cytochroma_release#page19.tif source=Cytochroma_release#page20.tif source=Cytochroma_release#page21.tif source=Cytochroma_release#page21.tif source=Cytochroma_release#page21.tif source=Cytochroma_release#page21.tif | | | | |

RELEASE OF SECURITY INTEREST

WHEREAS, **Cytochroma Inc.** ("Cytochroma"), a corporation incorporated under the laws of the Province of Ontario with offices at 100 Allstate Parkway, Suite 600, Markham, Ontario, L3R 6H3 is the owner of the trademarks set forth in Exhibit 1, as well as the underlying goodwill of said trademarks (collectively, the "Trademarks");

WHEREAS, **Cytochroma** is the owner of the patents set forth in Exhibit 1 (collectively, the "Patents");

WHEREAS, **Comerica Bank**, a Texas banking association with offices at Suite 2210, South Tower, Royal Bank Plaza, PO Box 61, Toronto, Ontario, M5J 2J2 entered into a General Security Agreement with Cytochroma dated July 31, 2012 (the "General Security Agreement") by which Cytochroma granted to Comerica Bank a lien and security interest as set forth in the General Security Agreement (the "Security Interest") in the Intellectual Property (as defined in the General Security Agreement):

WHEREAS a Notice of Security Interest was filed against the Canadian Trademarks with the Canadian Intellectual Property Office on August 23, 2012 and against the USA Trademarks with the United States Patent and Trademark Office on August 21, 2012;

WHEREAS a Notice of Security Interest was filed against the Canadian Patents with the Canadian Intellectual Property Office on August 30, 2012 and against the USA Patents with the United States Patent and Trademark Office on August 16, 2012;

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged:

- 1. Comerica Bank hereby releases and discharges its Security Interest in the Intellectual Property (as defined in the General Security Agreement).
- To the extent Comerica retains any such interest, Comerica hereby assigns, transfers and conveys to Cytochroma all of Comerica's rights, title and interest, now owned or hereinafter acquired, that it may have whether by assignment or otherwise, in and to any mortgage and continuing security interest and collateral assignment in the Intellectual Property (as defined in the General Security Agreement). Such assignment, transfer and conveyance by Comerica is made without any representation or warranty (express or implied) by Comerica.
- 3. Comerica hereby agrees to execute, acknowledge and deliver all such further instruments and to take all such further actions as may be reasonably requested or are required in order to more fully and effectively carry out the purposes of this Release of Security Interest, all at the expense of Cytochroma.
- 4. This Release of Security Interest shall be binding upon and enure to the benefit of the respective successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the undersigned have caused their duly authorized representatives to execute this Release of Security Interest effective as of the date shown above and in the capacities shown below.

Dated: February 27, 2013

CYTOCHROMA INC.

By: Charles Bishop
Title: President & CEO

COMERICA BANK

By: _____ Name: Title:

Release of IP Security - Cytochroma Inc.

| epresenta | | cute this | Release | undersigned have caused their duly authorized and Security Interest effective as of the date shown w. |
|-----------|--------------|-----------|---------|-------------------------------------------------------------------------------------------------------------|
| Dated: | February, 27 | 7 * | 2013 | |
| | | | | CYTOCHROMA INC. |
| | | | | By: Name: Charles Bishop Title: President & CEO |
| | | | | COMERICA BANK |
| | | | | By: Name/ Byce Alkman Tirle: Vice-President |

EXHIBIT 1

INTELLECTUAL PROPERTY

COPYRIGHTS

None

TRADEMARKS

Mark: CYTOCHROMA & Design

| | E | | |
|------------------|-------------------------------|---------------------------------|------------|
| Country U.S.* | Application Number 78/415,141 | Application Date April 28, 2004 | Comment |
| Canada* | 1,215,000 | April 28, 2004 | Allowed |
| | | | |
| | | | |
| Mark: D-REPLA | | | |
| | | | _ |
| Country | Application Number | Application Date | Comment |
| Canada* | 1559924 | January 16, 2012 | |
| China* | 10445655 | January 20, 2012 | |
| EU* | 10559052 | January 13, 2012 | Registered |
| India* | TBD | January 31, 2012 | ٥ |
| Japan | 2012-3286 | January 20, 2012 | |
| U.S.* | 85/392,751 | August 8, 2011 | Published |
| | | <u> </u> | |
| | | | |
| Mark: REPLIDEA | | | |
| | | | |
| C | A 11 41 NT 1 | 4 11 (1 T) (| |

| Country | Application Number | Application Date | Comment |
|---------|--------------------|------------------|--------------|
| Canada* | 1559923 | January 16, 2012 | |
| China* | 10445656 | January 20, 2012 | |
| EU* | 10559276 | January 13, 2012 | Registered |
| India* | TBD | January 31, 2012 | - |
| Japan | 2012-3287 | January 20, 2012 | Registered |
| U.S.* | 85/392,298 | August 8, 2011 | Published |

Mark: ALIVIMO

| Country | Application Number | Application Date | Comment |
|---------|--------------------|------------------|-----------|
| U.S.* | 85/392,305 | August 8, 2011 | Published |

Mark: EQUODI

Country

Application Number

Application Date

Comment

U.S.*

85/392,753

August 8, 2011

Published

Mark: RAYACAL

Country

Application Number

Application Date

Comment

U.S.*

85/392,308

August 8, 2011

Published

PATENTS

1. Methods and Articles for Treating 25-Hydroxyvitamin D Insufficiency and Deficiency (Inventors: Charles W. Bishop, Keith H. Crawford, Eric J. Messner)

The following patents are owned by Proventiv Therapeutics, LLC and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patents.

Pending:

U.S. Patent Application No. 11/549,001

Filed: October 12, 2006

Priority: October 12, 2005 (U.S.S.N. 60/725,709)

Canadian Patent Application No. 2,624,897

Filed: October 12, 2006

Priority: October 12, 2005 (U.S.S.N. 60/725,709)

European Patent Application No. 06836270.6

Filed: October 12, 2006

Priority: October 12, 2005 (U.S.S.N. 60/725,709)

Japanese Patent Application No. 2008-535659

Filed: October 12, 2006

Priority: October 12, 2005 (U.S.S.N. 60/725,709)

2. Methods and Compositions for Controlled Release Oral Dosage of a Vitamin D Compound (Inventors: Samir P. Tabash, Jay A. White, Charles W. Bishop, , Sammy Agudoawu)

The following patents are owned by Proventiv Therapeutics, LLC and Cytochroma Inc., and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patents.

Issued/Granted:

U.S. Patent No. 8,207,149 lsued: June 26, 2012

Filed: September 26, 2011

Priority: April 25, 2007 (U.S.S.N. 60/913,853)

Pending:

U.S. Patent Application No. 12/109,983

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,853)

Canadian Patent Application No. 2,683,997

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,853)

Chinese Patent Application No. 200880013357.6

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,853)

European Patent Application No. 08746908.6

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,853)

European Patent Application No. 12154573.5

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,853)

Hong Kong Patent Application No. 10108648.7

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,853)

Japanese Patent Application No. 2010-506520

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,853)

South Korean Patent Application No. 10-2009-7024328

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,853)

3. Method of Treating Vitamin D Insufficiency and Deficiency (Inventors: P. Martin Petkovich, Christian F. Helvig, Samir P. Tabash)

Cytochroma Inc. has been assigned ownership of the following patents.

Pending:

Canadian Patent Application No. 2,683,628

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,849)

Chinese Patent Application No. 200880013367.X

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,849)

European Patent Application No. 08837933.4

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,849)

(Allowed)

Japanese Patent Application No. 2010-504912

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,849)

Korean Patent Application No. 10-2009-7024309

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,849)

United States Patent Application No. 12/597,230

Filed: December 24, 2009

Priority: April 25, 2007 (U.S.S.N. 60/913,849)

4. Treating Vitamin D Insufficiency and Deficiency with 25-Hydroxyvitamin D_2 and 25-Hydroxyvitamin D_3 (Inventors: Charles W. Bishop, Keith H. Crawford, Eric J. Messner)

The following patents are owned by Proventiv Therapeutics, LLC and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patents.

Pending:

Canadian Patent Application No. 2,640,094

Filed: February 2, 2007

Priority: February 3, 2006 (U.S.S.N. 60/764,665)

European Patent Application No. 07763210.7

Filed: February 2, 2007

Priority: February 3, 2006 (U.S.S.N. 60/764,665)

Japanese Patent Application No. 2008-553520

Filed: February 2, 2007

Priority: February 3, 2006 (U.S.S.N. 60/764,665)

United States Patent Application No. 12/278,053

Filed: February 23, 2009

Priority: February 3, 2006 (U.S.S.N. 60/764,665)

5. Method and Compounds for Vitamin D Therapy (Inventors: P. Martin Petkovich, Charles W. Bishop, Eric J. Messner, Keith H. Crawford)

The following patents are owned by Proventiv Therapeutics, LLC and Cytochroma Inc., and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patents.

Pending:

Canadian Patent Application No. 2,684,778 Filed: April 25, 2008 Priority: April 25, 2007 (U.S.S.N. 60/913,848

European Patent Application No. 08746915.1 Filed: April 25, 2008 Priority: April 25, 2007 (U.S.S.N. 60/913,848

Japanese Patent Application No. 2010-506521 Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,848

United States Patent Application No. 12/597,224 Filed: April 25, 2008 Priority: April 25, 2007 (U.S.S.N. 60/913,848

.

6. Method of Treating and Preventing Secondary Hyperparathyroidism (Inventors: Charles W. Bishop, Keith H. Crawford, Eric J. Messner, P. Martin Petkovich, Christian F. Helvig)

The following patents are owned by Proventiv Therapeutics, LLC and Cytochroma Inc., and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patents.

Pending:

Canadian Patent Application No. 2,655,499

Filed: June 21, 2007

Priority: June 21, 2006 (U.S.S.N. 60/815,148)

European Patent Application No. 07840277.3

Filed: June 21, 2007

Priority: June 21, 2006 (U.S.S.N. 60/815,148)

Japanese Patent Application No. 2009-516725

Filed: June 21, 2007

Priority: June 21, 2006 (U.S.S.N. 60/815,148)

United States Patent Application No. 12/305,572

Filed: March 02, 2009

Priority: June 21, 2006 (U.S.S.N. 60/815,148)

7. Method of Safely and Effectively Treating and Preventing Secondary Hyperparathyroidism in Chronic Kidney Disease (Inventors: Charles W. Bishop, Eric J. Messner)

The following patents are owned by Proventiv Therapeutics, LLC and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patents.

Pending:

Canadian Patent Application No. 2,683,514

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,850

European Patent Application No. 08746920.1

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,850

Japanese Patent Application No. 2010-506524

Filed: April 25, 2008

Priority: April 25, 2007 (U.S.S.N. 60/913,850

United States Patent Application No. 12/597,234

Filed: December 4, 2009

Priority: April 25, 2007 (U.S.S.N. 60/913,850

8. Non-Calcemic, Antiproliferative, Transcriptionally Active Sulfur-Containing Analogs of $1\alpha,25$ -Dihydroxy Vitamin D_3 (Inventors: Gary H. Posner, Jae Kyoo Lee, Qiang Wang, Kenneth R. Crawford, Gyoonhee Han):

The following patents are owned by the Johns Hopkins University, and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patents, subject the rights of the Johns Hopkins University to use and practice the licensed technology and patents for non-commercial, research and/or academic purposes.

Issued/Granted:

U.S. Patent No. 6,380,408 Issued: April 30, 2002

Filed: March 31, 2000

Priority: April 1, 1999 and April 9, 1999 (U.S.S.N. 60/127,328 & U.S.S.N. 60/128,478)

Canadian Patent No. 2,366,586

Issued: June 22, 2004

Filed: March 31, 2000

Priority: April 1, 1999 and April 9, 1999 (U.S.S.N. 60/127,328 & U.S.S.N. 60/128,478)

Japanese Patent No. 3,630,101 Issued: December 24, 2004 Filed: March 31, 2000

Priority: April 1, 1999 and April 9, 1999 (U.S.S.N. 60/127,328 & U.S.S.N. 60/128,478)

Mexican Patent No. 221,757

Issued: July 27, 2004

Filed: March 31, 2000

Priority: April 1, 1999 and April 9, 1999 (U.S.S.N. 60/127,328 & U.S.S.N. 60/128,478)

Japanese Patent No. 3,796,508

Issued: July 12, 2006 Filed: October 1, 2004

Priority: April 1, 1999 and April 9, 1999 (U.S.S.N. 60/127,328 & U.S.S.N. 60/128,478)

European Patent No. 1,180,035 Issued: November 2, 2006

Filed: March 31, 2000

Priority: April 1, 1999 and April 9, 1999 (U.S.S.N. 60/127,328 & U.S.S.N. 60/128,478)

Validated in:

The Netherlands

Denmark

Sweden

Monaco

Greece

Finland

Belgium

Luxembourg

Spain

Switzerland

Austria

France

Portugal

Italy

Germany

Cyprus

UK

Ireland

Hong Kong Patent No. 1,044,293

Granted: June 8, 2007 Filed: March 31, 2000

Priority: April 1, 1999 and April 9, 1999 (U.S.S.N. 60/127,328 & U.S.S.N. 60/128,478)

Pending:

European Divisional Patent Application No. 06020197.7

Filed: September 27, 2006

Priority: April 1, 1999 and April 9, 1999 (U.S.S.N. 60/127,328 & U.S.S.N. 60/128,478 & European Patent 1,180,035)

Hong Kong Patent Application No. 07107913.2

Filed: July 20, 2007

Priority: April 1, 1999 and April 9, 1999 (U.S.S.N. 60/127,328 & U.S.S.N. 60/128,478)

9. Low-Calcemic Oxime Analogs of 10,25-Dihydroxy Vitamin D₃ (Inventors: Gary H. Posner, Mehmet Kahraman, Heung Bae Jeon, Jay A. White, Glenville Jones, Bethany Halford)

The following patents are owned by the Johns Hopkins University and Cytochroma Inc., and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patent, subject the rights of the Johns Hopkins University to use and practice the licensed technology and patents for non-commercial, research and/or academic purposes.

Issued/Granted:

U.S. Patent No. 6,982,258

Issued: January 3, 2006 Filed: October 15, 2002

Priority: October 12, 2001 (U.S.S.N 60/328,428)

European Patent No. 1,436,257

Granted: April 18, 2007 Filed: October 11, 2002

Priority: October 12, 2001 (U.S.S.N 60/328,428)

Validated in:

The Netherlands

Denmark

Sweden

Monaco

Greece

Finland

Belgium

Luxembourg

Spain

Switzerland

Austria

France

Portugal

Italy

Germany Cyprus UK Ireland

Japanese Patent No. 4336674 Issued: January 8, 2010 Filed: October 11, 2002 Priority: October 12, 2001 (U.S.S.N 60/328,428)

Canadian Patent No. 2,463,505

Issued: July 12, 2011 Filed: October 11, 2002

Priority: October 12, 2001 (U.S.S.N 60/328,428)

10. 24- Sulfoximine Vitamin D3 Compounds (Inventors: Mehmet Kahraman, Gary H. Posner, Uttam Saha)

The following patents are owned by the Johns Hopkins University and Cytochroma Inc., and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patent, subject the rights of the Johns Hopkins University to use and practice the licensed technology and patents for noncommercial, research and/or academic purposes.

Issued:

U.S. Patent No. 7,101,865 Issued: September 5, 2006 Filed: June 13, 2003

Priority: June 13, 2002 (U.S.S.N. 60/387,904)

U.S. Patent No. 7,973,024 Issued July 5, 2011 Filed: May 30, 2006

Priority: June 13, 2002 (U.S.S.N. 60/387,904)

Japanese Patent No. 4,490,262

Issued: April 9, 2010 Filed: June 13, 2003

Priority: June 13, 2002 (U.S.S.N. 60/387,904)

Canadian Patent No. 2,488,334 Issued December 7, 2010 Filed: June 13, 2003

Priority: June 13, 2002 (U.S.S.N. 60/387,904)

European Patent No.1511725

Granted: February 1, 2012
Filed: June 13, 2003
Priority: June 13, 2002 (U.S.S.N. 60/387,904)
Validated in:
 France
 Germany
 Ireland
 Italy
 Luxembourg
 Monaco
 Spain
 Switzerland

11. Non-Calcemic, Antiproliferative, Transcriptionally Active 24-Fluorinated Hybrid Analogs of $1\alpha,25$ -Dihydroxy Vitamin D_3 (US) and 24,24-Difluorinated Analogs of $1\alpha,25$ -Dihydroxy Vitamin D_3 (Canada, Europe) (Inventors: Gary H. Posner, Jae Kyoo Lee, Qiang Wang)

The following patents are owned by the Johns Hopkins University, and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patents, subject the rights of the Johns Hopkins University to use and practice the licensed technology and patents for non-commercial, research and/or academic purposes.

Issued/Granted:

U.S. Patent Number 6,043,386 Issued: March 28, 2000 Filed: June 1, 1999 Priority: June 3, 1998 (U.S.S.N. 60/088,035)

European Patent No. 1,095,017 Granted: May 7, 2003

Filed: June 2, 1999

Priority: June 3, 1998 & June 1, 1999 (U.S.S.N. 60/088,035 & U.S.S.N. 09/323,106)

Validated in:

Italy

Switzerland

UK

France

Germany

Canadian Patent No. 2,334,347 Granted January 13, 2009 Filed: June 2, 1999

Priority: June 3, 1998 & June 1, 1999 (U.S.S.N. 60/088,035 & U.S.S.N. 09/323,106)

12. 24-Sulfur-Substituted Analogs of $1\alpha,25$ -Dihydroxy Vitamin D_3 (Inventors: Gary H. Posner, Kenneth R. Crawford, Hong Woon Yang, Jay A. White, Glenville Jones, Byung-Chul Suh, Heung Bae Jeon, Mark Hatcher)

The following patents are owned by the Johns Hopkins University and Cytochroma Inc., and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patent, subject the rights of the Johns Hopkins University to use and practice the licensed technology and patents for non-commercial, research and/or academic purposes.

Issued:

U.S. Patent No. 7,166,585 Issued: January 23, 2007

Filed: July 3, 2003

Priority: August 21, 2001, October 12, 2001, June 13, 2002 (U.S.S.N. 60/313,769, U.S.S.N. 60/328,429, U.S.S.N 60/387,931)

Canadian Patent No. 2,458,415 Granted: September 21, 2010 Filed: August 22, 2002

Priority: August 21, 2001, October 12, 2001, June 13, 2002 (U.S.S.N. 60/313,769, U.S.S.N. 60/328,429, U.S.S.N 60/387,931)

European Patent No. 1419143 Granted April 15, 2009 Filed: August 22, 2002

Priority: August 21, 2001, October 12, 2001, June 13, 2002 (U.S.S.N. 60/313,769, U.S.S.N. 60/328,429, U.S.S.N 60/387,931)

Validated in:

France Germany UK Italy

Switzerland

13. 25-SO₂ Substituted Analogs of 10,25-Dihydroxy Vitamin D_3 (Inventors: Gary H. Posner, Jae Kyoo Lee, Qiang Wang, Kenneth R. Crawford, Hong Woon Yang, Steven M. Silverman, Byung-Chul Suh, Jay White, Glenville Jones, Uttam Saha)

The following patents are owned by the Johns Hopkins University and Cytochroma Inc., and Cytochroma Inc., has been granted exclusive, world-wide licenses to use and sub-license the patent, subject the rights of the Johns Hopkins University to use and practice the licensed technology and patents for non-commercial, research and/or academic purposes.

Issued:

U.S. Patent No. 8.106.035 Issued: January 31, 2012 Filed: December 18, 2003

Priority: December 18, 2002 (U.S.S.N. 60/433,951)

Canadian Patent Application No. 2,510,228

Filed: December 18, 2003

Priority: December 18, 2002 (U.S.S.N. 60/433,951)

(Allowed)

14. Low-Calcemic 16,23-Diene 25-Oxime Analogs of 1a,25-Dihydroxy Vitamin D₃ (Inventors: Uttam Saha, Gary H. Posner, Mehmet Kahraman)

The following patents are owned by the Johns Hopkins University and Cytochroma Inc., and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patent, subject the rights of the Johns Hopkins University to use and practice the licensed technology and patents for non-commercial, research and/or academic purposes.

Pending:

U.S. Patent Application No. 11/912,395

Filed: April 25, 2006

Priority: April 25, 2005 (U.S.S.N. 60/674,282)

Canadian Patent Application No. 2,605,815

Filed: April 25, 2006

Priority: April 25, 2005 (U.S.S.N. 60/674,282)

European Patent Application No. 06721850.3

Filed: April 25, 2006

Priority: April 25, 2005 (U.S.S.N. 60/674,282)

Japanese Patent Application No. 2008-508035

Filed: April 25, 2006

Priority: April 25, 2005 (U.S.S.N. 60/674,282)

15. Process for Producing Phosphineoxide Vitamin D Precursors (Inventor: Uttam Saha)

Cytochroma Inc. has been assigned ownership of the following patents.

Issued:

U.S. Patent No. 8,039,676 Issued October 18, 2011

Filed: May 29, 2008

Priority: May 30, 2007 (U.S.S.N. 60/940,866)

Pending:

Canadian Patent Application No. 2,688,083

Filed: May 23, 2008

Priority: May 30, 2007 (U.S.S.N. 60/940,866)

Chinese Patent Application No. 200880018041.6

Filed: May 23, 2008

Priority: May 30, 2007 (U.S.S.N. 60/940,866)

European Patent Application No. 08762721.2

Filed: May 23, 2008

Priority: May 30, 2007 (U.S.S.N. 60/940,866)

Indian Patent Application No. 7657/CHENP/2009

Filed: May 23, 2008

Priority: May 30, 2007 (U.S.S.N. 60/940,866)

Japanese Patent Application No. 2010-509907

Filed: May 23, 2008

Priority: May 30, 2007 (U.S.S.N. 60/940,866)

16. Stable Cytochrome P450 24 (CYP24) Expressing Cell Line and Methods and Uses Thereof (Inventors: Anqi Zhang, Mian Gao)

Cytochroma Inc. has been assigned ownership of the following patents.

Issued:

U.S. Patent No. 7,288,407 Issued: October 30, 2007 Filed: May 2, 2003

Priority: May 2, 2002 (U.S.S.N. 60/376,806)

Pending:

Canadian Patent Application No. 2,484,244

Filed: May 2, 2003

Priority: May 2, 2002 (U.S.S.N. 60/376,806)

17. Cytochrome P450 24 (CYP24) Monoclonal Antibody Methods and Uses Thereof (Inventors: Samuel Suming Chuang, Andrew Howard Collop)

Cytochroma Inc. has been assigned ownership of the following patents.

Issued:

U.S. Patent No. 7,427,670 Issued: September 23, 2008 Filed: December 17, 2004

Priority: December 19, 2003 (U.S.S.N. 60/530,604)

Pending:

Canadian Patent Application No. 2,494,572

Filed: December 17, 2004

Priority: December 19, 2003 (U.S.S.N. 60/530,604)

18. 1 \alpha-Hydroxylase Materials and Methods (Inventors: Rene St-Arnaud, Francis H. Glorieux)

The following patents are owned by Shriners Hospital for Children, and Cytochroma Inc. has been granted a non-exclusive, world-wide license to use the licensed technology generally, and an exclusive license in the Field of Use. The Field of Use is defined as the identification of novel cytochromes, modulators of the cytochromes, related antibodies and other derived materials but expressly excludes purposes related to the production of a D vitamin.

Issued:

U.S. Patent Number 6,096,876

Issued: August 1, 2000 Filed: August 6, 1997 Priority: August 6, 1997

19. Method of Reducing Phosphate Absorption (Inventors: Mark E. Cook, Martin Petkovich, Christian Helvig, Erica Hellestad, Keith H. Crawford)

The following patent is owned by WARF and aOvatechnologies, Inc. and Cytochroma Inc. has been granted an exclusive world-wide sublicense to use and sub-license the patent, subject the rights of WARF to use and practice the licensed technology and patents for non-commercial, research and/or academic purposes.

Pending:

PCT Patent Application No. PCT/US07/82247

Filed: October 23, 2007

Priority: October 25, 2006 (U.S.S.N. 60/862,876)

20. Methods for Reducing Phosphate Absorption (Inventors: Mark E. Cook, Martin Petkovich, Christian Helvig, Erica Hellestad, Keith H. Crawford):

The following patent is owned by WARF and aOvatechnologies, Inc. and Cytochroma Inc. has been granted an exclusive world-wide sublicense to use and sub-license the patent, subject the rights of WARF to use and practice the licensed technology and patents for non-commercial, research and/or academic purposes.

Pending:

PCT Patent Application No. PCT/US07/82236

Filed: October 23, 2007

Priority: October 26, 2006 (U.S.S.N. 60/854,550)

21. Methods for Reducing Phosphate Absorption (Inventors: Mark E. Cook, Martin Petkovich, Christian Helvig, Erica Hellestad, Keith H. Crawford):

The following patent is owned by WARF and aOvatechnologies, Inc. and Cytochroma Inc. has been granted an exclusive world-wide sublicense to use and sub-license the patent, subject the rights of WARF

to use and practice the licensed technology and patents for non-commercial, research and/or academic purposes.

Pending:

PCT Patent Application No. PCT/US07/82244

Filed: October 23, 2007

Priority: October 26, 2006 (U.S.S.N. 60/854,550)

22. Stabilized 1,25-Dihydroxyvitamin D₂ and Method of Making Same (Inventor: Uttam Saha):

Cytochroma Inc. has been assigned ownership of the following patents.

Pending:

Canadian Patent Application No. 2,718,238

Filed March 12, 2009

Priority: March 12, 2008 (U.S.S.N. 60/036,021)

Chinese Patent Application No. 200980112429.7

Filed March 12, 2009

Priority: March 12, 2008 (U.S.S.N. 60/036,021)

European Patent Application No. 09720292.3

Filed March 12, 2009

Priority: March 12, 2008 (U.S.S.N. 60/036,021)

Hong Kong Patent Application No. 11104112.2

Filed March 12, 2009

Priority: March 12, 2008 (U.S.S.N. 60/036,021)

Japanese Patent Application No. 2010-550007

Filed March 12, 2009

Priority: March 12, 2008 (U.S.S.N. 60/036,021)

United States Patent Application 12/403,271

Filed March 12, 2009

Priority: March 12, 2008 (U.S.S.N. 60/036,021)

23. Methods of Diagnosing Vitamin D Deficiency, Susceptibility Thereto, Treatment Thereof, and Prevention Thereof (Inventors: Joel Melnick, Martin Petkovich, Christian Helvig):

The following patents are owned by Proventiv Therapeutics, LLC and Cytochroma Inc., and Cytochroma Inc. has been granted exclusive, world-wide licenses to use and sub-license the patents.

Pending:

Canadian Patent Application No. 2,714,996

Filed: April 2, 2009

Priority: April 2, 2008 & March 18, 2009 (U.S.S.N. 61/041,898 & U.S.S.N. 61/161,292

Chinese Patent Application No. 200980120404.1

Filed: April 2, 2009

Priority: April 2, 2008 & March 18, 2009 (U.S.S.N. 61/041,898 & U.S.S.N. 61/161,292

European Patent Application No. 09729007.6

Filed: April 2, 2009

Priority: April 2, 2008 & March 18, 2009 (U.S.S.N. 61/041,898 & U.S.S.N. 61/161,292

Hong Kong Patent Application No. 11111063.6

Filed: April 2, 2009

Priority: April 2, 2008 & March 18, 2009 (U.S.S.N. 61/041,898 & U.S.S.N. 61/161,292

Korean Patent Application No. 10-2010-7024664

Filed: April 2, 2009

Priority: April 2, 2008 & March 18, 2009 (U.S.S.N. 61/041,898 & U.S.S.N. 61/161,292

United States Patent Application No. 12/935,139

Filed: November 12, 2010

Priority: April 2, 2008 & March 18, 2009 (U.S.S.N. 61/041,898 & U.S.S.N. 61/161,292

24. Methods and Composition for Measuring the Amount of Vitamin Derivatives (Inventors: Martin Petkovich, Christian Helvig):

Cytochroma Inc. has been assigned ownership of the following patents.

Pending:

U.S Patent Application No. 13/318,442

Filed: December 21, 2011

Priority: May 6, 2009 (U.S.S.N. 61/175,919)

European Patent Application No. 10740698.5

Filed May 3, 2010

Priority: May 6, 2009 (U.S.S.N. 61/175,919)

25. Methods for Synthesizing Vitamin Analogues (Inventors: Uttam Saha)

Cytochroma Inc. has been assigned ownership of the following patents.

Pending:

U.S. Patent Application No. 13/131,176

Filed: May 25, 2011

Priority: November 26, 2008 (U.S.S.N. 61/118,030)

Canadian Patent Application No. 2744591

Filed: May 25, 2011

Priority: November 26, 2008 (U.S.S.N. 61/118,030)

Chinese Patent Application No. 200980152913.2

Filed: May 25, 2011

Priority: November 26, 2008 (U.S.S.N. 61/118,030)

EPO Patent Application No. 09828488.8

Filed: May 25, 2011

Priority: November 26, 2008 (U.S.S.N. 61/118,030)

Indian Patent Application No. TBD

Filed: May 25, 2011

Priority: November 26, 2008 (U.S.S.N. 61/118,030)

Japanese Patent Application No. 2011-537801

Filed: May 25, 2011

Priority: November 26, 2008 (U.S.S.N. 61/118,030)

26. Phosphate Management with Small Molecules (Inventors: Uttam Saha, Christian Helvig, Martin Petkovich))

Cytochroma Inc. has been assigned ownership of the following patents.

Pending:

Canadian Patent Application No. 2746832

Filed: January 26, 2010

Priority: January 26, 2009 (U.S.S.N. 61/147,348)

European Patent Application No. 10733188.6

Filed: January 26, 2010

Priority: January 26, 2009 (U.S.S.N. 61/147,348)

Hong Kong Patent Application No. 12105315.3

Filed: January 26, 2010 Priority: January 26, 2009 (U.S.S.N. 61/147,348)

Japanese Patent Application No. 2011-546558

Filed: January 26, 2010

Priority: January 26, 2009 (U.S.S.N. 61/147,348)

U.S. Patent Application No. 13/146,217

Filed: October 19, 2011

Priority: January 26, 2009 (U.S.S.N. 61/147,348)

27. 1-Deoxy Analogs of Vitamin D-Related Compounds (Inventors: Gary Posner, Lindsey Hess, Alvin Kalinda, Rachel Slack, Uttam Saha, Martin Petkovich)

The following patents are owned by the Johns Hopkins University and Cytochroma Inc.

Pending:

PCT Patent Application No. PCT/US11/21129

Filed: January 13, 2011

Priority: January 13, 2010 (U.S.S.N. 61/294,741)

28. Methods and Compositions for Reducing Parathyroid Levels (Inventors: Charles Bishop, Joel Melnick, Eric Messner, Martin Petkovich, Jay White, Samir Tabash)

The following patents are owned by Proventiv Therapeutics, LLC and Cytochroma Inc.

Pending:

PCT Patent Application No. PCT/US11/30404

Filed: March 29, 2011

Priority: March 29, 2010 and October 20, 2010

(U.S.S.N. 61/318,741 & 61/405,196)

14140069.1

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