

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|------------------------------|--|
| NATURE OF CONVEYANCE: | SECURITY AGREEMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| Precision Therapeutics, Inc. | 03/06/2012 |
| RECEIVING PARTY DATA | |
| Name: | Cowen Healthcare Royalty Partners II, L.P. |
| Street Address: | 177 Broad Street, Suite 1101 |
| City: | Stamford |
| State/Country: | CONNECTICUT |
| Postal Code: | 06901 |
| PROPERTY NUMBERS Total: 35 | |
| Property Type | Number |
| Patent Number: | 5728541 |
| Patent Number: | 6900027 |
| Patent Number: | 6887680 |
| Patent Number: | 7314731 |
| Patent Number: | 7501260 |
| Patent Number: | 7771963 |
| Patent Number: | 8058025 |
| Application Number: | 13267581 |
| Patent Number: | 6933129 |
| Patent Number: | 7112415 |
| Patent Number: | 7563593 |
| Patent Number: | 7678552 |
| Application Number: | 12690529 |
| Patent Number: | 6416967 |
| Patent Number: | 7972769 |

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| Patent Number: | 7575868 |
| Patent Number: | 7829288 |
| Patent Number: | 8039213 |
| Application Number: | 13247436 |
| Patent Number: | 7642048 |
| Application Number: | 12622022 |
| Application Number: | 12530541 |
| Application Number: | 12252073 |
| Application Number: | 13127337 |
| Application Number: | 12466129 |
| Application Number: | 12795286 |
| Application Number: | 12878239 |
| Application Number: | 12791425 |
| Application Number: | 13378507 |
| Application Number: | 12820573 |
| Application Number: | 12957604 |
| Application Number: | 12957608 |
| Application Number: | 13029895 |
| Application Number: | 61469364 |
| Application Number: | 13304990 |

CORRESPONDENCE DATA

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Phone: 4156932440

Email: crhem@cooley.com

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

Correspondent Name: Cooley LLP

Address Line 1: 101 California Street, 5th Floor

Address Line 4: San Francisco, CALIFORNIA 94111

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|-------------------------|---------------------|
| ATTORNEY DOCKET NUMBER: | 306520-100 PTI/CHRP |
|-------------------------|---------------------|

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| NAME OF SUBMITTER: | C. Rhem |
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Total Attachments: 12

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PATENT
REEL: 027922 FRAME: 0460

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PATENT AND TRADEMARK SECURITY AGREEMENT

THIS PATENT AND TRADEMARK SECURITY AGREEMENT (as amended, supplemented or otherwise modified from time to time, this "Agreement") is made and entered into as of March 6, 2012, by and between PRECISION THERAPEUTICS, INC., a Delaware corporation ("Borrower"), and each Subsidiary of Borrower that becomes a party hereto by joinder (collectively, the "Guarantors" and, together with Borrower, the "Grantors"), and COWEN HEALTHCARE ROYALTY PARTNERS II, L.P., a Delaware limited partnership, as lender (the "Lender").

RECITALS:

A. Borrower and Lender are parties to that certain Loan Agreement dated as of March 6, 2012 (as amended, supplemented or otherwise modified from time to time, and as refunded or refinanced, whether in whole or in part, the "Loan Agreement").

B. As a condition precedent to the Lender's obligations under the Loan Agreement, Borrower has entered into that certain Security Agreement dated as of even date hereof (as may be amended, supplemented or otherwise modified from time to time, the "Security Agreement") with the Lender, pursuant to which Borrower is required to execute and deliver this Agreement to the Lender.

C. Pursuant to the terms of the Security Agreement, Borrower has granted to the Lender, as general and continuing security for the due performance and payment of all of the Secured Obligations, a first-ranking (subject only to any Liens permitted under Sections 9.03(b), 9.03(c), 9.03(d), 9.03(g) (to the extent provided in any control agreement), and 9.03(i) (to the extent provided in any intercreditor agreement) of the Loan Agreement) security interest in and to the Collateral, including all right, title and interest of Borrower in, to and under all now owned and hereafter acquired patents, patent applications, patent licenses, trademarks, trademark applications and trademark licenses, and all products and proceeds thereof.

D. From time to time after the date hereof, pursuant to Section 8.13 of the Loan Agreement, Subsidiaries of Borrower may be required to execute joinder agreements or guarantees with respect to Borrower's obligations under the Loan Documents and, in connection therewith, become parties hereto.

NOW, THEREFORE, in consideration of the premises set forth herein and for other good and valuable consideration, receipt and sufficiency of which are hereby acknowledged, each Grantor agrees as follows:

1. Incorporation of the Security Agreement. The Security Agreement and the terms and provisions thereof are hereby incorporated herein in their entirety by this reference thereto. All terms capitalized but not otherwise defined herein shall have the same meanings herein as in the Security Agreement.

2. Grant and Reaffirmation of Grant of Security Interests. To secure the due performance and payment of all of the Secured Obligations, each Grantor hereby grants to the

Lender, a continuing first-ranking (subject only to any Liens permitted under Sections 9.03(b), 9.03(c), 9.03(d), 9.03(g) (to the extent provided in any control agreement), and 9.03(i) (to the extent provided in any intercreditor agreement) of the Loan Agreement) security interest in such Grantor's entire right, title and interest in and to the following, whether now owned or existing or hereafter created, acquired or arising (for the avoidance of doubt, excluding, in each case, any items that are Excluded Property pursuant to the terms and conditions of the Security Agreement):

(i) each trademark and trademark application owned by such Grantor, including, without limitation, each trademark and trademark application referred to in Schedule 1 annexed hereto, together with any reissues, continuations or extensions thereof and all goodwill associated therewith;

(ii) each trademark license to which such Grantor is a party, together with all goodwill associated therewith;

(iii) all products and proceeds of the foregoing, including, without limitation, any claim by such Grantor against third parties for past, present or future infringement of any such trademark, including, without limitation, any trademark referred to in Schedule 1 annexed hereto (as such Schedule may be supplemented for Grantors which become parties hereto after the date hereof), any trademark issued pursuant to a trademark application referred to in Schedule 1 (as such Schedule may be supplemented for Grantors which become parties hereto after the date hereof) and any trademark licensed under any trademark license;

(iv) each patent and patent application owned by such Grantor, including, without limitation, each patent and patent application referred to in Schedule 2 annexed hereto (as such Schedule may be supplemented for Grantors which become parties hereto after the date hereof), together with any reissues, continuations or extensions thereof and all goodwill associated therewith;

(v) each patent license to which such Grantor is a party, together with all goodwill associated therewith; and

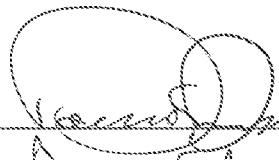
(vi) all products and proceeds of the foregoing, including, without limitation, any claim by such Grantor against third parties for past, present or future infringement of any such patent, including, without limitation, any patent referred to in Schedule 2 annexed hereto (as such Schedule may be supplemented for Grantors which become parties hereto after the date hereof), any patent issued pursuant to a patent application referred to in Schedule 2 (as such Schedule may be supplemented for Grantors which become parties hereto after the date hereof) and any patent licensed under any patent license.

3. Recordation with the United States Patent and Trademark Office. The Lender may from time to time, and without any further action by any Grantor, make such filings as are necessary or advisable to record or otherwise perfect its security interest in the collateral described under Section 2 of this Agreement with the United States Patent and Trademark Office.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their respective authorized officers as of the date first above written.

PRECISION THERAPEUTICS, INC.

By: 
Name: _____
Title: Dawn F. Kypole
 cfo

COWEN HEALTHCARE ROYALTY PARTNERS II, L.P.

By: Cowen Healthcare Royalty GP II, LLC,
 its General Partner

By: _____
Name:
Title:

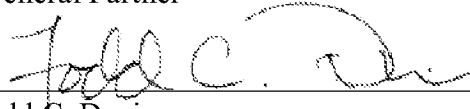
IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their respective authorized officers as of the date first above written.

PRECISION THERAPEUTICS, INC.

By: _____
Name:
Title:

**COWEN HEALTHCARE ROYALTY PARTNERS
II, L.P.**

By: Cowen Healthcare Royalty GP II, LLC,
its General Partner

By:  _____
Name: Todd C. Davis
Title: Managing Director

SCHEDULE 1

TRADEMARKS AND TRADEMARK APPLICATIONS

| Mark | Reg. No (Serial No) | Reg. Date (Filing Date) | Record Owner/Liens/Comments |
|---------------------------|--------------------------------|--|--|
| CHEMOFX | 2339226 | 04/04/00 | Certificate of Merger between Precision Therapeutics, Inc. (PA) and Precision Therapeutics, Inc. (DE) recorded on 07/02/01 |
| RAYFX | (76132424) | (09/20/00) | Certificate of Merger between Precision Therapeutics, Inc. (PA) and Precision Therapeutics, Inc. (DE) recorded on 07/02/01 |
| PRECISION THERAPEUTICS | 2190715 | (09/22/98) | Certificate of Merger between Precision Therapeutics, Inc. (PA) and Precision Therapeutics, Inc. (DE) recorded on 07/02/01 |
| CHEMOFX ASSAY | 2499516 | 10/23/01 | Certificate of Merger between Precision Therapeutics, Inc. (PA) and Precision Therapeutics, Inc. (DE) recorded on 07/02/01 |
| LUNGEXPRESS DX | (77805337) | (08/14/09) | Med Biogene Inc. assigned security interest to Precision Therapeutics, Inc. (DE) on 05/04/11 |
| PRECISION THERAPEUTICS | 2739805 | 07/22/03 | Precision Therapeutics, Inc. |
| PRECISION THERAPEUTICS | 2736154 | 07/15/03 | Precision Therapeutics, Inc. |
| CHEMOFX | 3724556 | 12/15/09 | Precision Therapeutics, Inc. |
| CHEMOFX PRO | 3887693 | 12/07/10 | Precision Therapeutics, Inc. |
| GENOFX | (77956397) | (03/11/10) | Precision Therapeutics, Inc. |
| BIOSPECIFX | (85202292) | (12/20/10) | Precision Therapeutics, Inc. |
| PROFILEFX | (85202518) | (12/21/10) | Precision Therapeutics, Inc. |
| GENEFX | (85336388) | (06/02/11) | Precision Therapeutics, Inc. |

SCHEDULE 2

PATENTS AND PATENT APPLICATIONS

| Title | Application No. | Application Date | Registration No. | Case Status | Country | Expiry Date |
|--|-----------------|------------------|------------------|-------------|------------------------|-------------|
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 36493/97 | Jul-10-1997 | 712302 | Registered | Australia | Jul-10-2017 |
| METHOD FOR PREPARING A BIOPSY SAMPLE OF TISSUE CONTAINING MALIGNANT CELLS FOR CHEMOSENSITIVITY TESTING | PI9710348-9 | Jul-10-1997 | | Abandoned | Brazil | |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 2,259,984 | Jul-10-1997 | 2,259,984 | Registered | Canada | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 97933267.3 | Jul-10-1997 | 0912085 | Registered | Switzerland | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 97196143.3 | Jul-10-1997 | 97196143.3 | Registered | China | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 97933267.3 | Jul-10-1997 | 0912085 | Registered | Germany | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 97933267.3 | Jul-10-1997 | 0912085 | EP Granted | European Patent Office | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 97933267.3 | Jul-10-1997 | 0912085 | Registered | Spain | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 97933267.3 | Jul-10-1997 | 0912085 | Registered | France | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 97933267.3 | Jul-10-1997 | 0912085 | Registered | United Kingdom | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 127964 | Jul-10-1997 | 127694 | Registered | Israel | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 97933267.3 | Jul-10-1997 | 0912085 | Registered | Italy | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 10-506069 | Jul-10-1997 | 4108128 | Registered | Japan | Jul-10-2017 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 333830 | Jul-10-1997 | 333830 | Abandoned | New Zealand | |

| Title | Application No. | Application Date | Registration No. | Case Status | Country | Expiry Date |
|--|-----------------|------------------|------------------|-------------------------|---------------------------|-------------|
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR CHEMOTHERAPEUTIC AND OTHER ASSAYS | 08/679,056 | Jul-12-1996 | 5,728,541 | Registered | United States of America | Jul-12-2016 |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | PCT/US97/11595 | Jul-10-1997 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| PRECISE EFFICACY ASSAY METHODS FOR ACTIVE AGENTS INCLUDING CHEMOTHERAPEUTIC AGENTS | 09/040,161 | Mar-17-1998 | 6,900,027 | Registered | United States of America | Jul-12-2016 |
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR CHEMOTHERAPEUTIC AND OTHER ASSAYS | 10/205,887 | Jul-26-2002 | 6,887,680 | Registered | United States of America | Jul-12-2016 |
| METHOD FOR SELECTING THERAPEUTIC AGENTS FOR CANCER | 11/081,827 | Jul-26-2002 | 7,314,731 | Registered | United States of America | Jul-12-2016 |
| METHODS FOR DETERMINING EFFICACY OF CHEMOTHERAPEUTIC AGENTS FOR A PATIENT PRIOR TO TREATMENT | 11/944,884 | Nov-26-2007 | 7,501,260 | Registered | United States of America | Jul-12-2016 |
| METHODS FOR DETERMINING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 12/244,463 | Oct-02-2008 | 7,771,963 | Registered | United States of America | Jul-12-2016 |
| METHODS FOR DETERMINING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 12/828,665 | Jul-01-2010 | 8,058,025 | Registered | United States of America | Jul-12-2016 |
| METHODS FOR DETERMINING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 13/267,581 | Oct-06-2011 | | Pending | United States of America | |
| METHOD FOR CULTURING AND ASSAYING CELLS | 09/039,957 | Mar-16-1998 | 6,933,129 | Registered | United States of America | Jul-12-2016 |
| METHOD OF PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR ASSAYING A RESPONSE TO AN AGENT | 11/073,931 | Mar-08-2005 | 7,112,415 | Registered | United States of America | Jul-12-2016 |
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR ASSAYING SECRETED FACTORS | 11/504,098 | Aug-15-2006 | 7,563,593 | Registered | United States of America | Oct-12-2016 |
| METHOD FOR SELECTING THERAPEUTIC AGENTS FOR CANCER TREATMENT | 12/208,076 | Sep-10-2008 | 7,678,552 | Registered | United States of America | Jul-12-2016 |
| ASSAYING CELLULAR MARKER FOR THE EVALUATION OF TUMORS | 12/690,529 | Jan-20-2010 | | Allowed | United States of America | |
| STAINING AGENTS AND PROTOCOLS FOR CHARACTERIZING MALIGNANT CELLS IN CULTURE | 09/095,993 | Jun-11-1998 | | Abandoned | United States of America | |
| METHOD FOR USING MULTICELLULAR PARTICULATES TO ANALYZE MALIGNANT OR HYPERPROLIFERATIVE TISSUE | 09/189,310 | Nov-10-1998 | 6,416,967 | Registered | United States of America | Jul-12-2016 |

| Title | Application No. | Application Date | Registration No. | Case Status | Country | Expiry Date |
|--|-------------------|------------------|------------------|-------------------------|---------------------------|-------------|
| METHOD FOR THE GENETIC ANALYSIS OF PROLIFERATING CELLS | 09/691,492 | Oct-18-2000 | | Abandoned | United States of America | |
| METHOD FOR THE GENETIC ANALYSIS OF PROLIFERATING CELLS | PCT/US01/32540 | Oct-18-2001 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| METHOD FOR TANDEM GENOMIC/PROTEOMIC ANALYSES OF PROLIFERATING CELLS | 10/399,563 | Oct-18-2001 | | Abandoned | United States of America | |
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR CHEMOTHERAPEUTIC AND OTHER ASSAYS | 03784853.8 | Jul-30-2003 | 60334025.3 | Registered | Germany | Jul-30-2023 |
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR CHEMOTHERAPEUTIC AND OTHER ASSAYS | 03784853.8 | Jul-30-2003 | 1572969 | Registered | European Patent Office | Jul-30-2023 |
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR CHEMOTHERAPEUTIC AND OTHER ASSAYS | 03784853.8 | Jul-30-2003 | 1572969 | Registered | France | Jul-30-2023 |
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR CHEMOTHERAPEUTIC AND OTHER ASSAYS | 03784853.8 | Jul-30-2003 | 1572969 | Registered | United Kingdom | Jul-30-2023 |
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR CHEMOTHERAPEUTIC AND OTHER ASSAYS | 10/208,480 | Jul-30-2002 | | Abandoned | United States of America | |
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR CHEMOTHERAPEUTIC AND OTHER ASSAYS | PCT/US2003/023888 | Jul-30-2003 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| METHOD FOR PREPARING CELL CULTURES FROM BIOLOGICAL SPECIMENS FOR CHEMOTHERAPEUTIC AND OTHER ASSAYS | 11/595,967 | Nov-13-2006 | 7,972,769 | Registered | United States of America | Jun-16-2024 |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 03779093.8 | Oct-10-2003 | 1556515 | Registered | Germany | Oct-10-2023 |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 03779093.8 | Oct-10-2003 | 1556515 | Registered | European Patent Office | Oct-10-2023 |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 03779093.8 | Oct-10-2003 | 1556515 | Registered | France | Oct-10-2023 |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 03779093.8 | Oct-10-2003 | 1556515 | Registered | United Kingdom | Oct-10-2023 |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 60/417,439 | Oct-10-2002 | | Expired | United States of America | |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | PCT/US03/32285 | Oct-10-2003 | | Expired/PCT Period Over | Patent Cooperation Treaty | |

| Title | Application No. | Application Date | Registration No. | Case Status | Country | Expiry Date |
|--|-------------------|------------------|------------------|-------------------------|---------------------------|-------------|
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 10/336,659 | Jan-02-2003 | | Abandoned | United States of America | |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 11/713,662 | Mar-05-2007 | 7,575,868 | Registered | United States of America | Jan-02-2023 |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 12/510,671 | Jul-28-2009 | 7,829,288 | Registered | United States of America | Jan-02-2023 |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 12/898,232 | Oct-05-2010 | 8,039,213 | Registered | United States of America | Jan-02-2023 |
| METHODS FOR ASSESSING EFFICACY OF CHEMOTHERAPEUTIC AGENTS | 13/247,436 | Sep-28-2011 | | Pending | United States of America | |
| USE OF EXPRESSION ARRAYS TO IDENTIFY GENES FROM OVARIAN CANCER CELLS THAT ARE ASSOCIATED WITH CARBOPLATIN SENSITIVITY | 60/616,851 | Oct-08-2004 | | Expired | United States of America | |
| USE OF EXPRESSION ARRAYS TO IDENTIFY GENES FROM OVARIAN CANCER CELLS THAT ARE ASSOCIATED WITH CARBOPLATIN SENSITIVITY AND RESISTANCE | 60/722,956 | Oct-04-2005 | | Expired | United States of America | |
| CHEMO-RESISTANT CELL ASSAYS | 60/712,814 | Sep-01-2005 | | Expired | United States of America | |
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERISTICS | 60/712,815 | Sep-01-2005 | | Expired | United States of America | |
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERISTICS | 2006287175 | Sep-01-2006 | | Pending | Australia | |
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERISTICS | 2,620,936 | Sep-01-2006 | | Pending | Canada | |
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERISTICS | 06814138.1 | Sep-01-2006 | | Pending | European Patent Office | |
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERISTICS | 2008-529367 | Sep-01-2006 | | Pending | Japan | |
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERISTICS | 11/514,172 | Sep-01-2006 | | Abandoned | United States of America | |
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERISTICS | PCT/US2006/034469 | Sep-01-2006 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERISTICS | 11/785,984 | Apr-23-2007 | 7,642,048 | Registered | United States of America | Nov-17-2026 |

| Title | Application No. | Application Date | Registration No. | Case Status | Country | Expiry Date |
|---|-------------------|------------------|------------------|-------------------------|---------------------------|-------------|
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERISTICS | 12/622,022 | Nov-19-2009 | | Pending | United States of America | |
| MOLECULAR METHODS OF PREDICTING CHEMOTHERAPEUTIC RESPONSE | 60/684,983 | May-27-2005 | | Expired | United States of America | |
| CHEMO-SENSITIVITY ASSAYS USING TUMOR CELLS EXHIBITING PERSISTENT PHENOTYPIC CHARACTERS | 60/735,813 | Nov-14-2005 | | Expired | United States of America | |
| METHOD FOR INCREASING PREDICTIVE ACCURACY OF CELL CULTURE BASED BIOLOGICAL AND PHARMACOLOGICAL ASSAYS | 60/819,631 | Jul-11-2006 | | Expired | United States of America | |
| METHOD FOR PREDICTING A PATIENT'S RESPONSE TO AN ANTI-ANGIOGENESIS AGENT | 60/907,181 | Mar-23-2007 | | Expired | United States of America | |
| METHOD FOR EVALUATING ANGIOGENIC POTENTIAL IN CULTURE | 2,680,528 | Mar-24-2008 | | Pending | Canada | |
| METHOD FOR EVALUATING ANGIOGENIC POTENTIAL IN CULTURE | 08732753.2 | Mar-24-2008 | | Pending | European Patent Office | |
| COMPARISON OF ANGIOGENESIS-RELATED FACTOR EXPRESSION IN PRIMARY TUMOR CULTURES UNDER NORMAL AND HYPOXIC GROWTH CONDITIONS | 61/029,164 | Feb-15-2008 | | Expired | United States of America | |
| METHOD FOR EVALUATING ANGIOGENIC POTENTIAL IN CULTURE | PCT/US2008/058001 | Mar-24-2008 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| METHODS FOR EVALUATING ANGIOGENIC POTENTIAL IN CULTURE | 12/530,541 | Mar-24-2008 | | Pending | United States of America | |
| METHODS FOR SELECTING CHEMOTHERAPY AGENTS FOR CANCER PATIENTS | 60/980,098 | Oct-15-2007 | | Expired | United States of America | |
| METHODS FOR SELECTING ACTIVE AGENTS FOR CANCER TREATMENT | 2,700,238 | Oct-15-2008 | | Pending | Canada | |
| METHODS FOR SELECTING ACTIVE AGENTS FOR CANCER TREATMENT | 08840503.0 | Oct-15-2008 | | Pending | European Patent Office | |
| METHODS FOR SELECTING ACTIVE AGENTS FOR CANCER TREATMENT | 12/252,073 | Oct-15-2008 | | Allowed | United States of America | |
| METHODS FOR SELECTING CHEMOTHERAPY AGENTS FOR CANCER PATIENTS | PCT/US2008/079964 | Oct-15-2008 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| METHODS OF SIMULATING CHEMOTHERAPY FOR A PATIENT | 61/110,730 | Nov-03-2008 | | Expired | United States of America | |
| METHODS OF SIMULATING CHEMOTHERAPY FOR A PATIENT | 13/127,337 | Nov-03-2009 | | Pending | United States of America | |
| METHODS OF SIMULATING CHEMOTHERAPY FOR A PATIENT | PCT/US2009/063060 | Nov-03-2009 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| METHODS OF PREDICTING A PATIENT'S RESPONSE TO EGFR TYROSINE KINASE INHIBITORS | 61/053,094 | May-14-2008 | | Expired | United States of America | |
| METHODS FOR PREDICTING A PATIENT'S RESPONSE TO EGFR INHIBITORS | 61/142,809 | Jan-06-2009 | | Expired | United States of America | |

| Title | Application No. | Application Date | Registration No. | Case Status | Country | Expiry Date |
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| METHODS FOR PREDICTING A PATIENT'S RESPONSE TO EGFR INHIBITORS | 2,721,687 | May-14-2009 | | Pending | Canada | |
| METHODS FOR PREDICTING A PATIENT'S RESPONSE TO EGFR INHIBITORS | 09747590.9 | May-14-2009 | | Pending | European Patent Office | |
| METHODS FOR PREDICTING A PATIENT'S RESPONSE TO EGFR INHIBITORS | MX/a/2010/012408 | May-14-2009 | | Pending | Mexico | |
| METHODS FOR PREDICTING A PATIENT'S RESPONSE TO EGFR INHIBITORS | 12/466,129 | May-14-2009 | | Pending | United States of America | |
| METHODS FOR PREDICTING A PATIENT'S RESPONSE TO EGFR INHIBITORS | PCT/US2009/043973 | May-14-2009 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| METHODS FOR PREDICTING A PATIENT'S RESPONSE TO EGFR INHIBITORS | 12/795,286 | Jun-07-2010 | | Pending | United States of America | |
| CALIBRATION DEVICE AND METHODS FOR USE WITH A LIQUID HANDLER | 2,751,786 | Sep-07-2011 | | Pending | Canada | |
| CALIBRATION DEVICE AND METHODS FOR USE WITH A LIQUID HANDLER | 12/878,239 | Sep-09-2010 | | Pending | United States of America | |
| METHODS AND SYSTEMS FOR EVALUATING THE SENSITIVITY OR RESISTANCE OF TUMOR SPECIMENS TO CHEMOTHERAPEUTIC AGENTS | 61/182,445 | May-29-2009 | | Expired | United States of America | |
| METHODS AND SYSTEMS FOR EVALUATING THE SENSITIVITY OR RESISTANCE OF TUMOR SPECIMENS TO CHEMOTHERAPEUTIC AGENTS | 12/791,425 | Jun-01-2010 | | Pending | United States of America | |
| METHODS AND SYSTEMS FOR EVALUATING THE SENSITIVITY OR RESISTANCE OF TUMOR SPECIMENS TO CHEMOTHERAPEUTIC AGENTS | PCT/US2010/036854 | Jun-01-2010 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| METHODS AND MARKERS FOR PREDICTING RESPONSES TO CHEMOTHERAPY | 61/187,108 | Jun-15-2009 | | Expired | United States of America | |
| METHODS AND MARKERS FOR PREDICTING RESPONSES TO CHEMOTHERAPY | 13/378,507 | Jun-15-2010 | | Pending | United States of America | |
| METHODS AND MARKERS FOR PREDICTING RESPONSES TO CHEMOTHERAPY | PCT/US2010/038641 | Jun-15-2010 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| METHODS FOR PREDICTING A CANCER PATIENT'S RESPONSE TO ANTIFOLATE CHEMOTHERAPY | 61/219,129 | Jun-22-2009 | | Expired | United States of America | |
| METHODS FOR PREDICTING A CANCER PATIENT'S RESPONSE TO ANTIFOLATE CHEMOTHERAPY | 12/820,573 | Jun-22-2010 | | Pending | United States of America | |
| METHODS FOR PREDICTING A CANCER PATIENT'S RESPONSE TO ANTIFOLATE THERAPY | PCT/US2010/039456 | Jun-22-2010 | | Expired/PCT Period Over | Patent Cooperation Treaty | |
| MULTI DRUG RESISTANCE MARKERS FOR BREAST CANCER CELLS | 61/265,588 | Dec-01-2009 | | Expired | United States of America | |

| Title | Application No. | Application Date | Registration No. | Case Status | Country | Expiry Date |
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| MULTI DRUG RESPONSE MARKERS FOR BREAST CANCER CELLS | 61/364,446 | Jul-15-2010 | | Expired | United States of America | |
| MULTI DRUG RESPONSE MARKERS FOR BREAST CANCER CELLS | 12/957,604 | Dec-01-2010 | | Pending | United States of America | |
| MULTI DRUG RESPONSE MARKERS FOR BREAST CANCER CELLS | PCT/US2010/058499 | Dec-01-2010 | | Published | Patent Cooperation Treaty | |
| BIOLOGICAL PATHWAYS ASSOCIATED WITH CHEMOTHERAPY TREATMENT IN BREAST CANCER | 61/265,589 | Dec-01-2009 | | Expired | United States of America | |
| BIOLOGICAL PATHWAYS ASSOCIATED WITH CHEMOTHERAPY OUTCOME FOR BREAST CANCER | 12/957,608 | Dec-01-2010 | | Pending | United States of America | |
| BIOLOGICAL PATHWAYS ASSOCIATED WITH CHEMOTHERAPY TREATMENT IN BREAST CANCER | PCT/US2010/058512 | Dec-01-2010 | | Published | Patent Cooperation Treaty | |
| METHODS FOR PREDICTING A CANCER PATIENT'S RESPONSE TO SUNITINIB | 61/306,784 | Feb-22-2010 | | Expired | United States of America | |
| METHODS FOR PREDICTING A CANCER PATIENT'S RESPONSE TO SUNITINIB | 13/029,895 | Feb-17-2011 | | Pending | United States of America | |
| METHODS FOR PREDICTING A CANCER PATIENT'S RESPONSE TO SUNITINIB | PCT/US2011/025281 | Feb-17-2011 | | Pending | Patent Cooperation Treaty | |
| METHODS AND SYSTEMS FOR EVALUATING THE SENSITIVITY OR RESISTANCE OF TUMOR SPECIMENS TO CHEMOTHERAPEUTIC AGENTS | 61/417,678 | Nov-29-2010 | | Expired | United States of America | |
| METHODS AND SYSTEMS FOR EVALUATING THE SENSITIVITY OR RESISTANCE OF TUMOR SPECIMENS TO CHEMOTHERAPEUTIC AGENTS | 61/469,364 | Mar-30-2011 | | Pending | United States of America | |
| METHODS AND SYSTEMS FOR EVALUATING THE SENSITIVITY OR RESISTANCE OF TUMOR SPECIMENS TO CHEMOTHERAPEUTIC AGENTS | PCT/US2011/062196 | Nov-28-2011 | | Pending | Patent Cooperation Treaty | |
| METHODS AND SYSTEMS FOR EVALUATING THE SENSITIVITY OR RESISTANCE OF TUMOR SPECIMENS TO CHEMOTHERAPEUTIC AGENTS | 13/304,990 | Nov-28-2011 | | Pending | United States of America | |