

Attorney Docket No. 17682A-009900US

Form PTO-1595 (Rev. 03/05)
OMB No. 0651-0027 (exp. 6/30/2005)U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office**RECORDATION FORM COVER SHEET
PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Epoch Biosciences, Inc.

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No**3. Nature of conveyance/Execution Date(s):**

Execution Date(s) 09/29/06

☐ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Joint Research Agreement☐ Government Interest Assignment☐ Executive Order 9424, Confirmatory License☒ Other Collateral Assignment Agreement**2. Name and address of receiving party(ies)**

Name: Drug Royalty Trust 9

Internal Address: c/o HSBC Bank

Wilmington Delaware Trust Office

Street Address: 1201 Market Street, Suite 1001

City: Wilmington

State: Delaware

Country: US

Zip: 19801

Additional name(s) & address(es) attached? ☐ Yes ☒ No**4. Application or patent number(s):**☐ This document is being filed together with a new application.

A. Patent Application No.(s)

See Schedule A

B. Patent No.(s)

See Schedule A

Additional numbers attached? ☐ Yes ☒ No**5. Name and address to whom correspondence concerning document should be mailed:**

Name: William B. Kezer

Internal Address:

TOWNSEND AND TOWNSEND AND CREW LLP

Street Address: Two Embarcadero Center,

Eighth Floor

City: San Francisco

State: California Zip: 94111-3834

Phone Number: (415) 576-0200

Fax Number: (415) 576-0300

Email Address: wbkezer@townsend.com

6. Total number of applications and patents Involved: See attached Schedule A**7. Total fee (37 CFR 1.21(h) & 3.41) \$ 1080**☐ Authorized to be charged by credit card☒ Authorized to be charged to deposit account☐ Enclosed☐ None required (government interest not affecting title)**8. Payment Information**

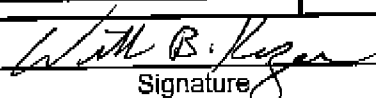
a. Credit Card Last 4 numbers

Expiration Date

b. Deposit Account Number 20-1430

Authorized User Name Townsend and

Townsend and Crew LLP

9. Signature:

Signature

10.5.06

Date

William B. Kezer

Name of Person Signing

Atty. Reg. No. 37,369

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

10

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, VA 22313-1450**PATENT****REEL: 018362 FRAME: 0870**

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1. Additional name(s) of conveying party(ies):
(Continued from Page 1)

Nanogen, Inc.

2. Additional name(s) and address(es) of receiving party(ies):
(Continued from Page 1)

3. Additional application number(s) or patent number(s):
(Continued from Page 1)

A. Patent Application No.(s)

B. Patent No.(s)

Schedule A

Licensed U.S. Patents, Related Patents and Application

US Patent #	Application Number	Title	Status
6,727,356	09/457,616	Fluorescent Quenching Detection Reagents And Methods	Granted
6,790,945	09/876,830	Fluorescent Quenching Detection Reagents And Methods	Granted
6,699,975	10/093,769	Fluorescent Quenching Detection Reagents And Methods	Granted
	11/338,866	Fluorescent Quenching Detection Reagents And Methods	Pending
6,312,894	09/054,832	Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	Granted
6,492,346	09/640,953	Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	Granted
	10/870,578	Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	Pending
5,801,155	08/415,370	Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	Granted

PATENT

REEL: 018362 FRAME: 0872

US Patent #	Application Number	Title	Status
6,084,102	09/141,764	Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	Granted
6,426,408	09/507,345	Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	Granted
6,486,308	09/739,928	Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	Granted
RE38,416	09/693,213	Cross-Linking Oligonucleotides	Granted
	10/302,607	Cross-Linking Oligonucleotides	Pending
6,127,121	09/054,830	Oligonucleotides Containing Pyrazolo 3,4-D Pyrimidines for Hybridization and Mismatch Discrimination	Granted
6,485,906	09/431,385	Oligonucleotides containing pyrazolo[3,4-D] pyrimidines for hybridization and mismatch discrimination	Granted
6,949,367	09/724,959	Modified Oligonucleotides for Mismatch Discrimination	Granted
7,045,610	09/796,988	Modified Oligonucleotides for Mismatch Discrimination	Granted
6,683,173	10/032,307	T _m Leveling Methods	Granted
	10/672,429	T _m Leveling Methods	Pending
	11/109,923	T _m Leveling Compositions	Pending
6,660,845	09/447,936	Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of	Granted

PATENT

REEL: 018362 FRAME: 0873

US Patent #	Application Number	Title	Status
		Synthesis And Use Thereof	
6,972,328	10/702,007	Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of Synthesis And Use Thereof	Granted
	11/129,003	Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of Synthesis And Use Thereof	Pending
6,962,991	09/954,624	Process for the Synthesis of Pyrazolopyrimidines	Granted
	10/302,608	Oligonucleotides Containing Pyrazolo (3,4-D) Pyrimidines for Hybridization and Mismatch Discrimination	Pending
5,512,667	08/012,896	Trifunctional Intermediates for Preparing 3'-Tailed Oligonucleotides	Granted
	11/448,218	Process for the Synthesis of Pyrazolopyrimidines	Pending

Licensed Foreign Patents and Applications

Title	Country	Patent Number	Application Number	Status
Fluorescent Quenching Detection Reagents And Methods	Australia	782204	20748/01	Granted
Fluorescent Quenching Detection Reagents And Methods	Canada		2396795	Pending

PATENT

REEL: 018362 FRAME: 0874

Title	Country	Patent Number	Application Number	Status
Fluorescent Quenching Detection Reagents And Methods	Europe		0098469.5	Pending
Fluorescent Quenching Detection Reagents And Methods	Europe		027392.7	Pending
Fluorescent Quenching Detection Reagents And Methods	Japan		2001-544376	Pending
Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	Australia	763948	34721/99	Granted
Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	Canada		2329135	Pending
Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	Europe		99916391.8	Pending
Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	Japan		2000-542342	Pending
Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	Australia	716108	53842/96	Granted
Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	Canada		2223678	Pending
Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	China	ZL96194421.8	96194421.8	Granted

PATENT

REEL: 018362 FRAME: 0875

Title	Country	Patent Number	Application Number	Status
Covalently Linked Oligonucleotide Minor Groove Binder Conjugates (Divisional)	China		200410055897.4	Pending
Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	Europe		96910723.4	Pending
Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	Japan		531051/96	Pending
Oligonucleotides Containing Pyrazolo [3,4-D] Pyrimidines for Hybridization and Mismatch Discrimination	Australia	759944	34724/99	Granted
Oligonucleotides Containing Pyrazolo[3,4-D] Pyrimidines for Hybridization and Mismatch Discrimination	Canada		2327547	Pending
Oligonucleotides Containing Pyrazolo [3,4-D] Pyrimidines for Hybridization and Mismatch Discrimination	Germany	69930379.6-08	99916394.2	Granted
Oligonucleotides Containing Pyrazolo [3,4-D] Pyrimidines for Hybridization and Mismatch Discrimination	Europe	1068358	99916394.2	Granted
Oligonucleotides Containing Pyrazolo [3,4-D] Pyrimidines for Hybridization and Mismatch Discrimination	France	1068358	99916394.2	Granted

PATENT

REEL: 018362 FRAME: 0876

Title	Country	Patent Number	Application Number	Status
Oligonucleotides Containing Pyrazolo [3,4-D] Pyrimidines for Hybridization and Mismatch Discrimination	Japan		2000-542486	Pending
Modified Oligonucleotides for Mismatch Discrimination	Canada		2401781	Pending
Modified Oligonucleotides for Mismatch Discrimination	Europe		01916372.4	Pending
Modified Oligonucleotides for Mismatch Discrimination	Japan		2001-563645	Pending
Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of Synthesis And Use Thereof	Canada		2392033	Pending
Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of Synthesis And Use Thereof	Europe		00980769.4	Pending
Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of Synthesis And Use Thereof	Japan		2001-539925	Pending
Process for the Synthesis of Pyrazolopyrimidines	Europe		02766251.9	Pending
Solid Support for Synthesis of 3'-Tailed Oligonucleotides	Japan	3256539	5154341/1991	Granted
Solid Support for Synthesis of 3'-Tailed Oligonucleotides - (Divisional)	Japan	3284127	08/090408	Granted

PATENT

REEL: 018362 FRAME: 0877

COLLATERAL ASSIGNMENT AGREEMENT**(ASSIGNMENT FOR SECURITY - PATENTS)**

WHEREAS, Epoch Biosciences, Inc., a corporation incorporated under the Delaware General Corporation Law (herein referred to as "Assignor"), owns the letters patent and patent applications listed or described on Schedule A annexed hereto as part hereof (collectively, the "Patents");

WHEREAS, Assignor is a party to that certain Second Amended and Restated Collaboration, License and Supply agreement between Assignor and Applera Corporation dated as of August 17, 2000, as amended by the First Side Agreement dated October 31, 2001, the Amendment No. 1 to the Second Amended and Restated Collaboration, License and Supply Agreement dated July 26, 2002 and Amendment No. 2 to the Second Amended and Restated Collaboration, License and Supply Agreement dated as of December 31, 2005, as it may be further amended from time to time after the date hereof (the "License Agreement");

WHEREAS, Assignor is obligated to Drug Royalty Trust 9, a trust organized under the laws of the State of Delaware (referred to herein as the "Assignee") under the Royalty Interest Assignment Agreement dated as of the date hereof among Assignor, Assignee and Nanogen, Inc., as guarantor;

WHEREAS, Assignor and Assignee have also entered into a Security Agreement dated as of the date hereof (the "Security Agreement") to secure the prompt payment, performance of the Obligations (as defined in the Security Agreement); and

WHEREAS, pursuant to the Security Agreement, Assignor has granted a security interest in the Collateral (as defined in the Security Agreement) in favor of Assignee, which Collateral includes the License Agreement, the Know-How (as defined in the Security Agreement), the Patents, and all proceeds thereof (including without limitation any reissue, continuation, continuation-in-part or extension of the Patents).

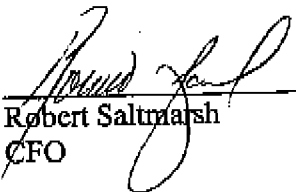
NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, Assignor does hereby grant to Assignee a continuing security interest in, and mortgage on, and does hereby assign as security to Assignee, all of Assignor's right, title and interest in and to the Collateral to secure the prompt payment and performance of the Obligations. The recitals form an integral portion of this instrument and are incorporated into the operative provisions hereof.

Assignor and, by its acceptance hereof, Assignee do hereby further acknowledge and affirm that their respective rights and Assignee's remedies with respect to the continuing security interest in and mortgage on the Collateral made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein.

Assignee's address is c/o HSBC Bank, Wilmington Delaware Trust Office, 1201 Market Street, Suite 1001, Wilmington, Delaware 19801.

IN WITNESS WHEREOF, Assignor has caused this Collateral Assignment Agreement (Assignment for Security – Patents) to be duly executed by its officer thereunto duly authorized as of the 29th day of September, 2006.

EPOCH BIOSCIENCES, INC.

By: 

Name: Robert Saltmarsh

Title: CFO

Address: 10398 Pacific Center Court, San Diego, California 92121

{Schedule A Begins on Next Page}