PATENT ASSIGNMENT

Electronic Version v1.1
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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Nanogen, Inc.	07/02/2009
Epoch Biosciences, Inc.	07/02/2009
Nanotronics, Inc.	07/02/2009

RECEIVING PARTY DATA

Name:	Elitech Holding B.V.
Street Address:	Van Rensselaerweg 4 (6956 AV)
City:	Spankeren
State/Country:	NETHERLANDS

PROPERTY NUMBERS Total: 20

Property Type	Number
Application Number:	12172999
Application Number:	12541884
Application Number:	11127040
Application Number:	11357750
Application Number:	11202635
Application Number:	11360040
Application Number:	11937448
Application Number:	12244712
Application Number:	11338866
Application Number:	11970445
Application Number:	10672429
Application Number:	10176972
Application Number:	11770659
Application Number:	11768418

CH $800.00 12172999

Application Number:	12343435
Application Number:	12047101
Application Number:	11958895
Application Number:	11423399
Application Number:	11929884
Application Number:	12020908

CORRESPONDENCE DATA

Fax Number: (214)661-6876

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

Phone: 214-953-5758

Email: sborrelli@jw.com

Correspondent Name: Sara K. Borrelli

Address Line 1: 901 Main Street

Address Line 2: Suite 6000

Address Line 4: Dallas, TEXAS 75202

ATTORNEY DOCKET NUMBER:	130101.00005
NAME OF SUBMITTER:	Sara K. Borrelli

Total Attachments: 37

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PATENT ASSIGNMENT AGREEMENT

This Patent Assignment Agreement (the "Agreement") is made as of July 2, 2009, by and among Nanogen, Inc., a Delaware corporation ("Nanogen"), Epoch Biosciences, Inc., a Delaware corporation and wholly-owned subsidiary of Nanogen ("Epoch"), Nanotronics, Inc., a California corporation and wholly-owned subsidiary of Nanogen ("Nanotronics" and, collectively with Nanogen and Epoch, the "Assignors" and each an "Assignor"), and Elitech Holding B.V., a corporation organized and existing under the laws of The Netherlands ("Assignee").

PRELIMINARY STATEMENTS

A. Pursuant to that certain Asset Purchase Agreement (the "Purchase Agreement") dated as of May 13, 2009, as amended, by and among Assignors and Financière Elitech SAS, a *société par actions simplifiée* formed under the laws of France ("E litech"), Assignors have agreed to transfer and assign unto Elitech all of Assignors' right, title and interest in and to certain assets and contracts of Assignors, and Assignee has agreed to assume certain obligations of Assignors.

B. Pursuant to notice delivered to Assignors dated June 29, 2009, Elitech designated Assignee as the Affiliate to receive all of the Purchased Intellectual Property not related to the Point of Care Business to be transferred to Elitech under the Purchase Agreement.

C. Pursuant to the terms and conditions of this Agreement and the Purchase Agreement, Assignors desire to assign to Assignee all of Assignors' right, title and interest in, to and under all the United States and foreign patent rights owned by Assignors, including those listed on Exhibit A attached hereto and incorporated herein by reference (all of the foregoing being referred to herein as the "Patents"), and A ssignee desires to accept such assignment.

D. Capitalized terms used but not otherwise defined in this Agreement shall have the respective meanings ascribed to them in the Purchase Agreement.

AGREEMENT

The parties, intending to be legally bound, agree as follows:

1. Assignment. Assignors hereby sell, assign, transfer, convey and deliver to Assignee all of Assignors' right, title and interest in, to and under the Patents in the United States and all jurisdictions outside the United States, including the right to apply for letters patent in any and all such jurisdictions based on said Patents, and including all divisionals, renewals, substitutes, continuations, continuations-in-part, reexaminations, reissues, extensions, and convention applications or patents based upon such Patents, and any and all letters patent that may issue thereon, in any and all such jurisdictions, to the full end of the term or terms for which said letters patent may be issued, and every priority right that may be predicated upon the foregoing, the same to be held and enjoyed by Assignee for its own use and benefit and for the

use and benefit of its successors and assigns to be used as fully and entirely as said rights would have been held and enjoyed by Assignors if this assignment had not been made.

2. Authorization. Assignors hereby authorize the Commissioner of Patents and Trademarks of the United States and other empowered officials of the United States Patent and Trademark Office and/or the appropriate empowered officials in relevant jurisdictions outside the United States to record the transfer of the Patents to Assignee as purchaser and assignee of Assignors' entire right, title and interest in, to and under the Patents, and to issue to Assignee all letters patent and other items referred to above which may issue with respect to the Patents, in accordance with this Assignment.

3. Choice of Law. This Agreement will be governed by and construed under the laws of the State of Delaware, without regard to conflicts of laws principles that would require the application of any other law.

4. Subject to Purchase Agreement; Modification. This Agreement is being executed pursuant to the Purchase Agreement, and is subject to the terms and conditions contained therein. This Agreement may not be changed, modified, discharged or terminated in any manner other than by a written agreement signed by the parties to this Agreement or their respective successors and assigns.

5. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument.

6. Disclaimer by Assignors. Assignors and Assignee agree that this Agreement has been prepared solely by Assignee, and Assignors make no representation, and expressly disclaim any warranties or representations regarding the Patents, or this Assignment, including those relating to their validity, enforceability, effectiveness, or whether they will be accepted or approved by the U.S. Patent Office.

7. Due Diligence by Assignee. Assignee hereby represents and agrees that it has performed its own independent investigation of the Patents being assigned pursuant to this Agreement, and that it understands and agrees that such assignment is made on an "AS IS" basis by Assignors, without any representations or warranties of any kind, all of which Assignee has fully disclaimed and waived.

[SIGNATURE PAGE FOLLOWS]

The parties have executed and delivered this Agreement as of the date indicated in the first sentence of this Agreement.

ASSIGNORS:

NANOGEN, INC.
a Delaware corporation

By: _____
Name: David Ludvigson
Title: President + CEO

EPOCH BIOSCIENCES, INC.
a Delaware corporation

By: _____
Name: David Ludvigson
Title: President

NANOTRONICS, INC.
a California corporation

By: _____
Name: David Ludvigson
Title: Director

ASSIGNEE:

ELITECH HOLDING BV
a Netherlands company

By: _____
Pierre Debiais, President

The parties have executed and delivered this Agreement as of the date indicated in the first sentence of this Agreement.

ASSIGNORS:

NANOGEN, INC.
a Delaware corporation

By: _____
Name: _____
Title: _____

EPOCH BIOSCIENCES, INC.
a Delaware corporation

By: _____
Name: _____
Title: _____

NANOTRONICS, INC.
a California corporation

By: _____
Name: _____
Title: _____

ASSIGNEE:

ELITECH HOLDING BV
a Netherlands company

By: _____
Pierre Debiais, President

EXHIBIT A

PATENTS

Immunodiagnostics

	Title	App/Patent No.	Filing/Issuance Dates	Status	Source
		TYPE II DIABETES			
81	2132.014US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1845 Daltons	US 6,627,607	Filed 4/30/01 Issued 9/30/03	Abandoned Granted to 4/30/2021	Syn X In back file room
82	2132.108US Complement C3 Precursor Biopolymer Markers Predictive of Type II Diabetes	US 7,097,989	Filed 11/23/01 Issued 8/29/06	Abandoned Granted to 11/23/2021	Syn X In back file room
83	2132.110US Protein Biopolymer Markers Predictive of Type II Diabetes	US 7,125,678	Filed 11/23/01 Issued 10/24/06	Abandoned Granted to 11/23/2021	Syn X In back file room
84	2132.027US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1097 Daltons	US 6,677,303	Filed 4/30/01 Issued 1/13/04	Abandoned Granted to 4/30/2021	Syn X In back file room
		INSULIN RESISTANCE			
85	2132.051US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 2753 Daltons	US 7,087,435	Filed 4/30/01 Issued 8/8/06	Abandoned Granted to 4/30/2021	Syn X In back file room
86	2132.050US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 2753 Daltons	US 6,620,787	Filed 4/30/01 Issued 9/16/03	Abandoned Granted to 4/30/2021	Syn X In back file room
87	2132.052US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 2937 Daltons	US 6,620,786	Filed 4/30/01 Issued 9/16/03	Abandoned Granted to 4/30/2021	Syn X In back file room
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
88	2132.101US Apolipoprotein Biopolymer	US 7,314,762	Filed 11/21/01	Abandoned	Syn X

	Markers Predictive of Insulin Resistance		Issued 1/1/08	Granted 11/21/2021	In back file room
89	2132.104US HP Biopolymer Markers Predictive of Insulin Resistance	US 6,890,722	Filed 11/23/01 Issued 5/10/05	Abandoned Granted to 11/23/2021	Syn X In back file room
90	2132.099US Inter-Alpha Trypsin Inhibitor Biopolymer Marker Indicative of Insulin Resistance	US 7,015,004	Filed 11/23/01 Issued 3/21/06	Abandoned Granted to 11/23/2021	Syn X In back file room
91	2132.100US Betaine/Gaba Transport Protein Biopolymer Marker Indicative of Insulin Resistance	US 7,132,244	Filed 11/21/01 Issued 11/7/06	Abandoned Granted to 11/21/2021	Syn X In back file room
92	2132.167US Interalpha Trypsin Inhibitor Biopolymer Markers Indicative of Insulin Resistance	US 7,329,501	Filed 5/23/06 Issued 2/12/08	Abandoned Granted to 11/21/2021	Syn X In back file room
93	2132.106US Protein Biopolymer Markers Predictive of Insulin Resistance	US 7,052,849	Filed 11/23/01 Issued 5/30/06	Abandoned Granted to 11/23/2021	Syn X In back file room
94	2132.097US Protein Biopolymer Markers Indicative of Insulin Resistance	US 7,135,297	Filed 11/23/01 Issued 11/14/06	Abandoned Granted to 11/23/2021	Syn X In back file room
95	2132.102US Complement C3 Precursor Biopolymer Markers Indicative of Insulin Resistance	US 7,179,610	Filed 11/23/01 Issued 2/20/07	Abandoned Granted to 1/23/2021	Syn X In back file room
96	2132.103US Fibronectin Biopolymer Marker Indicative of Insulin Resistance	US 7,094,549	Filed 11/23/01 Issued 8/22/06	Abandoned Granted to 11/21/2021	Syn X In back file room

	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
	ALZHEIMERS & DEMENTIA				
97	2132.125US Process for Differential Diagnosis of Alzheimer's Dementia in	US 7,070,945	Filed 9/17/02 Issued 7/4/06	Abandoned Granted	Syn X In back file room

	Patients Exhibiting Mild Cognitive Impairment			(parent 2132.077US)	
98	2132.133US A Method for Retarding or Precluding Alzheimer's Dementia	US 7,014,854	Filed 12/30/02 Issued 3/21/06	Abandoned Granted to 12/30/2022	Syn X In back file room
99	2132.077US Method for Determining the Presence of Monomeric Brain Associated Human Glutamine Synthetase	US 7,101,680	Filed 10/4/01 Issued 9/5/06	Abandoned Parent 2132.023US	Syn X In back file room
100	2132.084 IG Lambda Biopolymer Markers Predictive of Alzheimers Disease	US 7,026,129	Filed 11/23/01 Issued 4/11/06	Abandoned Granted to 11/23/2021	Syn X In back file room
101	2132.088US Protein Biopolymer Markers Indicative of Alzheimer's Disease	US 7,074,576	Filed 11/23/01 Issued 7/11/06	Abandoned Granted to 11/23/2021	Syn X In back file room
102	2132.092US Fibronectin Precursor Biopolymer Markers Indicative of Alzheimer's Disease	US 7,179,605	Filed 11/23/01 Issued 2/20/07	Abandoned Granted to 11/23/2021	Syn X In back file room
103	2132.095US IG Heavy Chain, IG Kappa, IG Lambda Biopolymer Markers Predictive of Alzheimer's Disease	US 7,179,606	Filed 11/23/01 Issued 2/20/07	Abandoned Granted to 11/23/2021	Syn X In back file room
104	2132.023US Process for Differential Diagnosis of Alzheimer's Dementia and Device Therefor	US 6,451,547	Filed 4/25/01 Issued 9/17/02	Abandoned Granted to 4/25/2021	Syn X In back file room

	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
	MISCELLANEOUS MOLECULAR WEIGHT MARKERS				
105	2132.040US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1562 Daltons	US 7,314,717	Filed 4/30/01 Issued 1/1/08	Abandoned Granted to 4/30/2021	Syn X In back file room
106	2132.124US Amino Acid Sequence Pattern	US 6,891,154	Filed 8/30/02	Abandoned	Syn X

	Matching		Issued 5/10/05	Granted to 8/30/2022	In back file room
107	2132.030US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 2753 Daltons	US 7,294,688	Filed 4/30/01 Issued 11/13/07	Abandoned Granted to 4/30/01	Syn X In back file room
108	2132.029US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1211 Daltons	US 7,049,397	Filed 4/30/01 Issued 5/23/06	Abandoned Granted to 4/30/01	Syn X In back file room
109	2132.028US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1206 Daltons	US 6,627,608	Filed 4/30/01 Issued 9/30/03	Abandoned Granted to 4/30/2021	Syn X In back file room
110	2132.031US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1350 Daltons	US 6,890,763	Filed 5/30/05 Issued 5/10/05	Abandoned Granted to 5/30/2025	Syn X In back file room
111	2132.034US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1449 Daltons	US 6,602,855	Filed 4/30/01 Issued 8/5/03	Abandoned Granted to 4/30/2021	Syn X In back file room
112	2132.037US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1521 Daltons	US 6,693,080	Filed 4/30/01 Issued 2/17/04	Abandoned Granted to 4/30/2021	Syn X In back file room
113	2132.045US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1865 Daltons	US 6,617,308	Filed 4/30/01 Issued 9/9/03	Abandoned Granted to 4/30/2021	Syn X In back file room
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
114	2132.046US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 1896 Daltons	US 6,703,366	Filed 4/30/01 Issued 3/9/04	Abandoned Granted to 4/30/2021	Syn X In back file room
115	2132.048US Biopolymer Marker Indicative of Disease State Having a Molecular Weight of 2021 Daltons	US 6,756,476	Filed 4/30/01 Issued 6/29/04	Abandoned Granted to 4/30/2021	Syn X In back file room
116	2132.035US Biopolymer Marker Indicative	US 6,627,606	Filed 4/30/01	Abandoned	Syn X

	of Disease State Having a Molecular Weight of 1465 Daltons		Issued 9/30/03	Granted to 4/30/2021	In back file room
117	2132.025US Biopolymer marker Indicative of Disease State Having a Molecular Weight of 1020 Daltons	US 6,599,877	Filed 4/30/01 Issued 7/29/03	Abandoned Granted to 4/30/2021	Syn X In back file room
118	2132.042US Biopolymer marker Indicative of Disease State Having a Molecular Weight of 1690 Daltons	US 6,593,298	Filed 4/30/01 Issued 7/15/03	Abandoned Granted to 4/30/2021	Syn X In back file room

Real Time PCR

MGB

184	17682A-006000US 137 Covalently Linked Oligonucleotide Minor Groove Binder Conj	US 5,801,155	Filed 04/03/95 Issued 09/01/98	Granted	Epoch Townsend
185	17682A-006000AT 137-EP Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	EP 0819133	Filed 04/03/96 Issued 01/02/08	Granted – Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, UK, Switzerland/Liechtenstein	Epoch Townsend
186	17682A-006001JP 137-JP Covalently Linked Oligonucleotide Minor Groove Binder	JP 531051/1996 JP2002527040T2	Filed 04/03/96	Pending	Epoch Townsend

	Conjugates				
187	17682-006001CN 137-CN Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	CN 200410055897.4 CN1187363C	Filed 04/03/96	Pending	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
188	17682[a]-006000CN 137-CN Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	CN ZL96194421.8	Filed 04/03/96 Granted 2/2/05	Granted	Epoch Townsend
189	17682A-006000CA 137-CA Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	CA2223678	Filed 04/03/96	Allowed 1/6/09	Epoch Townsend
190	17682A-006000AU 137AU Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	AU 716108	Filed 04/03/96 Issued 02/17/02	Granted	Epoch Townsend
191	17682A-004010JP 137A-PCT-JP Improved Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	JP2000-542342	Filed 04/05/99	Pending	Epoch Townsend
192	17682A-004010CA 137A-PCT-CA Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	CA2329135	04/05/99	Pending	Epoch Townsend
193	17682A-004000US 137A Improved Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	US 6,312,894	Filed 04/03/98 Issued 11/06/01	Granted	Epoch Townsend
194	17682A-004010EP 137A-PCT-EP Hybridization And Mismatch Discrimination Using Oligonucleotides Conjugated To Minor Groove Binders	EP 99916391.8	Filed 04/05/99	Pending, Being valid in France, Germany,	Epoch Townsend

	Title	App/Patent No.	Filing/Issuance Dates	Status	Source
195	17682A-004010US 137A1 Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	US 6,492,346	Filed 08/16/00 Issued 12/10/02	Granted	Epoch Townsend
196	17682A-004020US 137A2 Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	US 6,884,584	Filed 04/22/02 Issued 04/26/05	Pending	Epoch Townsend
197	17682A-004040US 137A4 Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	US 11/784,539 2009/0048427	Filed 04/06/07	Pending, should issue by 6/15/09	Epoch Townsend
198	17682A-004050US 137-A5 Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	US 12/172,999 US-2009-0048427-A1	Filed 07/14/08	Published	Epoch Townsend
199	17682A-004010AU 137A-PCT-AU Hybridization and Mismatch Discrimination Using Oligonucleotides Conjugated to Minor Groove Binders	AU 763948	Filed 04/05/96 Issued 08/07/03	Granted	Epoch Townsend
200	17682A-006010US 137B Oligonucleotide-Minor Groove Binder Conjugates	US 6,084,102	Filed 08/27/98 Issued 07/04/00	Granted	Epoch Townsend
201	17682A-003500US 137C Covalently Linked Oligonucleotide Minor Groove Binder Conjugates	US 6,426,408	Filed 02/18/00 Issued 07/30/02	Granted	Epoch Townsend
202	17682A-003510US 137D Covalently Linked	US 6,486,308	Filed 12/18/00	Granted	Epoch

Italy, Sweden, Switzerland and UK (2/11/09)

	Oligonucleotide Minor Groove Binder Conjugates		Issued 11/26/02		Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
203	17682A-005010US 156 Negatively Charged Minor Groove Binders	US 10/507,267	Filed 04/21/03	Pending	Epoch Townsend
		FLUORS/QUENCHERS			
204	17682A-007310US 157A Compounds and Methods for Fluorescent Labeling	US 6,972,339	Filed 12/21/01 Issued 12/06/05	Granted	Epoch Townsend
205	17682A-007310EP 157-PCT-EP Compounds And Methods For Fluorescent Labeling	EP 02768821.7	Filed 09/06/02	Pending Published	Epoch Townsend
206	17682A-007340EP 157B-EP Compounds and Methods for Fluorescent Labeling	EP 07756934.1	Filed 02/13/07	Pending Published	Epoch Townsend
207	17682-007340CA 157B-CA Compounds And Methods For Fluorescent Labeling	CA 2642360	Filed 02/13/07	Pending	Epoch Townsend
208	17682A-007340JP Compounds And Methods For Fluorescent Labeling	JP 2008-555459	Filed 02/13/07	Pending	Epoch Townsend
209	17682A-007340IN 157B-IN Compounds And Methods For Fluorescent Labeling	IN 4917/CHENP/2008	Filed 02/13/07	Pending	Epoch Townsend
210	17682A-007320US Compounds and Methods for Fluorescent Labeling	US 7,112,684	Filed 12/22/04 Issued 09/01/06	Granted	Epoch Townsend
211	17682A-007330US 157B Compounds and Methods for Fluorescent Labeling	US 11/127,040 2005/0277144	Filed 05/10/05	Pending	Epoch Townsend
212	17682A-007340US 157B Compounds and Methods for Fluorescent Labeling	US 11/357,750 2006/0204990	Filed 02/17/06	Pending	Epoch Townsend
213	17682A-008510US 163Compounds and Methods for Fluorescent Labeling (Long Linker Fluorophores)	US 10/975,042 2005/0159606	Filed 10/25/04	Pending, should issue by 6/15/09	Epoch Townsend
214	17682A-008800US 164 Phosphonated Fluorescent Xanthenes Dyes	US 11/202,635 2007/0172832	Filed 8/12/05	Pending Published	Epoch Townsend
215	17682A-008810CA Phosphonated Fluorescent Dyes And Conjugates	CA 2577053	Filed 8/12/05	Pending	Epoch Townsend

	Title	App/Patent No.	Filing/Issuance Dates	Status	Source
216	17682A-008820CA, 164A/CA Phosphonated Fluorescent Dyes And Conjugates	CA 2642747	Filed 2/20/07	Pending	Epoch Townsend
217	17682A-008820EP, 164A Phosphonated Fluorescent Dyes And Conjugates	EP 07751231.7	Filed 2/20/07	Pending	Epoch Townsend
218	17682A-008800EP Phosphonated Fluorescent Dyes And Conjugates	EP 05786453.0	Filed 8/12/05	Pending Published	Epoch Townsend
219	17682A-008810EP 164EP Phosphonated Fluorescent Dyes And Conjugates	EP 2007-525859	Filed 8/12/05	Pending Published	Epoch Townsend
220	17682A-008820JP 164A Phosphonated Fluorescent Dyes And Conjugates	JP 2008-556399	Filed 2/20/07	Pending	Epoch Townsend
221	17682A-008820US 164A Phosphonated Fluorescent Dyes and Conjugates	US 11/360,040 2006/0199955	Filed 02/21/06	Pending Published	Epoch Townsend
222	17682A-008830US 164A1 Phosphonylated Fluorescent Dyes and Conjugates	US 11/937,448 2008/0207887	Filed 11/08/07	Pending Published	Epoch Townsend
223	17682A-010110US 171 Amide-Substituted Xanthene Dyes	US 12/244,712 US-2009-0093612-A1	Filed 10/02/08	Published	Epoch Townsend
224	17682A-010110PCT 171 Amide-Substituted Xanthene Dyes	PCT/US2008/078540 WO 2009/046165	Filed 10/02/08 Pub. 4/9/09	Published	Epoch Townsend
225	17682A-0068000US 151 Fluorescent Quenching Detection Reagents And Methods	US 6,727,356	Filed 12/08/99 Issued 04/27/04	Granted	Epoch Townsend
226	17682A-006810US 151 Flourescent Quenching Detection Reagents And Methods	US 6,790,945	Filed 06/06/01 Issued 09/14/04	Granted	Epoch Townsend
227	17682A-006820US 151A1 Flourescent Quenching Detection Reagents And Methods	US 6,653,473	Filed 02/26/02 Issued 11/25/03	Granted	Epoch Townsend
228	17682A-006841EP 151A PCT EP Fluorescent Quenching Detection Reagents And Methods	EP 0273792.7	Filed 06/05/02	Pending Published	Epoch Townsend
229	17682A-006800JP 151-PCT-JP Flourescent Quenching Detection Reagents And Methods	JP2001-544376	Filed 12/08/00	Pending	Epoch Townsend

Title	App/Patent No.	Filing/Issuance Dates	Status	Source

230	17682A-006800CA 151-PCT-CA Fluorescent Quenching Detection Reagents And Methods	CA2396795	Filed 12/08/00	Pending	Epoch Townsend
231	17682A-006800EP 151-PCT-EP Fluorescent Quenching Detection Reagents And Methods	EP 00984069.5	Filed 12/08/00	Pending Published	Epoch Townsend
232	17682A-006841US 151-A3 Fluorescent Quenching Detection Reagents And Methods	US 11/338,866 2006/0292589	Filed 01/232006	Pending	Epoch Townsend
233	17682A-006830US 151-B Fluourescent Quenching Detection Reagents And Methods	US 6,699,975	Filed 03/07/02 Issued 03/02/04	Granted	Epoch Townsend
	MODIFIED BASES				
234	17682A-005100US 116E Crosslinking Oligonucleotides	US RE38,416	Filed 11/04/94 Issued 10/20/98	Granted	Epoch Townsend
235	17682A-005500CA 116-CA Crosslinking Oligonucleotides	CA 1338379	Filed 09/27/89 Issued 06/11/96	Granted	Epoch Townsend
236	17682A-006100US 138 Selective Binding Complementary Oligonucleotides	US 5,912,340	Filed 10/04/95 Issued 06/15/99	Granted	Epoch Townsend
237	17682A-004100US 146 Oligonucleotides Containing Pyrazolo[3,4-D]Pyrimidines for Hybridization and Mismatch Discrimination	US 6,127,121	Filed 04/03/98 Issued 10/03/00	Granted	Epoch Townsend
238	17682A-004110US 146A Oligonucleotides containing pyrazolo[3,4-D] pyrimidines for hybridization and mismatch discrimination	US 6,485,906	Filed 11/01/99 Issued 11/26/02	Granted	Epoch Townsend
239	17682A-004100AU 146-AU Oligonucleotides containing pyrazolo[3,4-D] pyrimidines for hybridization and mismatch discrimination	AU 759944	Filed 4/5/99 Issued 8/21/03	Granted	Epoch Townsend
240	17682A-004100EP 146EP Oligonucleotides Containing Pyrazolo[3,4-D]Pyrimidines For Hybridization And Mismatch Discrimination	EP 1068358	Filed 04/05/99 Issued 03/15/06	Granted-Germany, France	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
241	17682A-004100JP 146JP Oligonucleotides containing pyrazolo[3,4-D] pyrimidines for	JP 2000-542486	Filed 04/05/99	Pending	Epoch Townsend

	hybridization and mismatch discrimination				
242	17682A-004100CA 146-CA Oligonucleotides Containing Pyrazolo[3,4-D]Pyrimidines For Hybridization And Mismatch Discrimination	CA2327547	Filed 04/05/99	Pending Allowed	Epoch Townsend
243	17682A-004130US 146B Oligonucleotides containing pyrazolo[3,4-D] pyrimidines for hybridization and mismatch discrimination	US 11/970,445 2003/0143602	Filed 01/07/08	Pending	Epoch Townsend
244	17682A-003610US 152A Modified Oligonucleotides for Mismatch Discrimination	US 6,949,367	Filed 03/01/00 Issued 09/27/05	Granted	Epoch Townsend
245	17682A-003620US 152B Modified Oligonucleotides for Mismatch Discrimination	US 7,045,610	Filed 02/28/01 Issued 05/16/06	Granted	Epoch Townsend
246	17682A-003621EP 152A-PCT-EPO Modified oligonucleotides for mismatch discrimination	EP 08075235.5	Filed 03/01/01	Pending Published	Epoch Townsend
247	17682A-003620CA 152A-PCT-CA Modified Oligonucleotides for Mismatch Discrimination	CA2401781	Filed 03/01/01	Pending	Epoch Townsend
248	17682A-003620JP 152B-PCT-JP Modified Oligonucleotides for mismatch discrimination	JP2001-563645	Filed 03/01/01	Pending	Epoch Townsend
249	17682A-003620EP 152A-PCT-EPO Modified Oligonucleotides For Mismatch Discrimination	EP 01916372.4	Filed 03/01/01	Pending Published	Epoch Townsend
250	17682A-003622EP 152A-PCT EPO Modified Oligonucleotides For Mismatch Discrimination	EP08075233.0	Filed 03/01/01	Pending	Epoch Townsend
251	17682A-003623EP 152A-PCT-EPOModified Oligonucleotides For Mismatch Discrimination	EP 08075234.8	Filed 03/01/01	Pending	Epoch Townsend
252	17682A-003621US 152B1 Tm Leveling Methods	US 7,368,549	Filed 04/19/05 Issued 05/06/08	Granted	Epoch Townsend
253	17682A-003630US 152B Tm Leveling Methods	US 6,683,173	Filed 12/21/01 Issued 01/27/04	Granted	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
254	17682A-003650US 152C1 Tm Leveling Methods	US 10/672,429 2005/0075491	Filed 09/26/03	Pending Published	Epoch Townsend
255	17682A-003640US 152D Systems and Methods for Predicting Oligonucleotide	US 10/176,972 2003/0235822	Filed 06/18/03	Pending	Epoch Townsend

	Melting Temperatures (TmS)				
256	17682A-003640EP 152D-PCT-EP Systems And Methods For Predicting Oligonucleotide Melting Temperatures (TmS)	EP 03760477.4	Filed 06/18/03	Pending Published	Epoch Townsend
257	17682A-003640JP 152D-PCT-JP Systems and Methods for Predicting Oligonucleotide Melting Temperatures (TmS)	JP2004-513894	Filed 06/18/03	Pending Published	Epoch Townsend
258	17682A-003640CA 152D-PCT-CA Systems And Methods For Predicting Oligonucleotide Melting Temperatures (Tms)	CA2490466AA	Filed 06/18/03	Pending	Epoch Townsend
259	17682A-004300US 153 Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of Synthesis And Use Thereof	US 6,660,845	Filed 11/23/99 Issued 12/09/03	Granted	Epoch Townsend
260	17682A-004300EP 153 Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of Synthesis And Use Thereof	EP 00980769.4	Filed 11/21/00	Pending Published	Epoch Townsend
261	17682A-004300JP 153 Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of Synthesis And Use Thereof	JP 2001-539925	Filed 11/21/00	Pending	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
262	17682A-004300CA 153 Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues; Methods Of Synthesis And Use Thereof	CA2392033	Filed 11/21/00	Pending	Epoch Townsend
263	17682A-004310US 153 Non-Aggregating, Non-Quenching Oligomers Comprising	US 6,972,328	Filed 11/04/03 Issued 12/06/05	Granted	Epoch Townsend

	Nucleotide Analogues; Methods Of Synthesis And Use Thereof				
264	17682A-004320US 153A Non-Aggregating, Non-Quenching Oligomers Comprising Nucleotide Analogues, Methods of Synthesis And Use Thereof	US 11/129,003 2005/0239121-A1	Filed 5/13/05	Abandoned Published	Epoch Townsend
265	17682A-007400US 154 Process For The Synthesis Of Pyrazolopyrimidines	US 6,962,991	Filed 07/31/01 Issued 11/08/05	Granted	Epoch Townsend
266	17682A-007400EP Process For The Synthesis Of Pyrazolopyrimidines	EP 02766251.9	Filed 09/05/02	Pending Published	Epoch Townsend
		LINKERS			
267	17682A-005422US 114B Solid Support for Synthesis of 3'-Tailed Oligonuc leotides.	US 5,419,966	Filed 07/12/93 Issued 05/30/95	Granted	Epoch Townsend
268	17682A-005422JP 114B-JP Solid Support for Synthesis of 3'-Tailed Oligonuc leotides.	JP 3256539	Filed 08/28/91 Issued 1/30/01	Granted	Epoch Townsend
269	17682A-005423JP 114B-JP-DIV Solid Support for Synthesis of 3'-Tailed Oligonucleot ides.	JP 3284127	Filed 08/28/91 Issued 03/01/02	Granted	Epoch Townsend
270	17682A-005410US 114-D Trifunctional Intermediates for Preparing 3'-Tailled Oligonucleotides.	US 5,512,667	Filed 02/03/93 Issued 04/30/96	Granted	Epoch Townsend
271	17682A-005410JP 114-D JP Trifunctional Intermediates for Preparing 3'-Tailled Oligonucleotides.	JP 3284127	Filed 08/28/91 Issued 05/20/02	Granted	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
		ATTACHMENT CHEMISTRY			
272	17682A-006700US 150 Attachment of Oligonucleotides to Solid Supports Through Schiff Base Type Linkages for Capture and Detection of Nucleic Acids	US 6,339,147	Filed 07/29/99 Issued 01/15/02	Granted	Epoch Townsend
273	17682A-006710US 150A Attachment of Oligonucleotides to Solid Supports Through Schiff Base Type Linkages for Capture and	US 6,548,652	Filed 02/09/01 Issued 04/15/03	Granted	Epoch Townsend

	Detection of Nucleic Acids.				
274	17682A-006720US 150B Attachment of Oligonucleotides to Solid Supports Through Schiff Base Type Linkages for Capture and Detection of Nucleic Acids.	US 6,441,159	Filed 02/09/01 Issued 08/27/02	Granted	Epoch Townsend
		AMPLICATION DETECTION			
275	17682A-007910US 159 Abasic Site Endonuclease Assay	US 7,252,940	Filed 8/20/2003 Issued 08/07/07	Granted	Epoch Townsend
276	17682A-007910EP 159PCT-EP Abasic Site Endonuclease Assay	EP 03759194.8	Filed 08/20/03	Pending	Epoch Townsend
277	17682A-007910JP 159PCT-JP Abasic Site Endonuclease Assay	JP 2004-529748	Filed 08/20/03	Pending Published	Epoch Townsend
278	17682A-007910CA Abasic Site Endonuclease Assay	CA2494993	Filed 08/20/03	Pending	Epoch Townsend
279	17682A-007920US 157 Abasic Site Endonuclease Assay	7,553,643 US 11/432,763 2007/0141586	Filed 05/10/06 Issued 6/30/09	Pending Allowed	Epoch Townsend
280	17682A-007930US 159 Abasic Site Endonuclease Assay	US 11/770,659 2008/0166782	Filed 06/28/07	Pending Published	Epoch Townsend
281	17682A-009410US 165 Method for Generating Target Nucleic Acid (Isothermal Endonuclease Assay)	US 11/768,418 US-2009-0092967-A1	Filed 06/26/07	Published	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
282	17682A-009410PCT Methods For Generating Target Nucleic Acid Sequences	WO08002920A2 PCT/US2007/072136	Filed 06/26/07	Abandoned	Epoch Townsend
283	17682A-007220US Real-time Linear Detection Probes: Sensitive 5'-Minor Groove Binder-Containing DNA Probes for PCR Analysis	US 7,205,105	Filed 06/06/02 Issued 04/17/07	Granted	Epoch Townsend
284	17682A-007220EP 158A-PCT-EP Real-Time Linear Detection Probes: Sensitive 5'-Minor Groove Binder-Containing Probes For Pcr Analysis	EP 02787009.6	Filed 12/10/02	Pending	Epoch Townsend

285	17682A-007220JP 158A-PCT-JP Real-time Linear Detection Probes: Sensitive 5'-Minor Groove Binder-Containing DNA Probes for PCR Analysis	JP 2003-562312	Filed 12/10/02	Pending Published	Epoch Townsend
286	17682A-007220CA 158A-PCT0CA Real-Time Linear Detection Probes: Sensitive 5'-Minor Groove Binder-Containing Probes For Pcr Analysis	CA 2473960	Filed 12/10/02	Pending	Epoch Townsend
287	17682A-007221US 158A Real-time Linear Detection Probes: Sensitive 5'-Minor Groove Binder-Containing DNA Probes for PCR Analysis	US 7,485,442	Filed 06/19/06 Issued 2/3/09	Granted	Epoch Townsend
288	17682A-007222US 158A Real-time Linear Detection Probes: Sensitive 5'-Minor Groove Binder-Containing DNA Probes for PCR Analysis	US 12/343,435	Filed 12/23/08	Pending	Epoch Townsend
289	17682A-008410US 161 Fluorescent ProbesContaining 5'-Minor Groove Binder, Fluorophore and Quenching Moieties and Methods of Use Thereof	US 7,381,818	Filed 10/27/04 Issued 06/03/08	Granted	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
290	17682A-008411US 161A Fluorescent Probes for DNA Detection by Hybridization with Improved Sensitivity and Low Background	US 12/047,101 2008/0293586	Filed 03/12/08	Pending Published	Epoch Townsend
291	17682A-008410EP 161 Fluorescent Probes for DNA Detection by Hybridization with Improved Sensitivity and Low Background	EP04817540.0	Filed 10/27/04	Pending	Epoch Townsend
292	17682A-008410US 161 Fluorescent Probes for DNA Detection by Hybridization with Improved Sensitivity and Low Background	CA2542768	Filed 10/27/04	Pending	Epoch Townsend
293	17682A-008410JP 161 Fluorescent Probes for DNA Detection by Hybridization with	JP2006-538554	Filed 10/27/04	Pending Published	Epoch Townsend

	Improved Sensitivity and Low Background				
294	17682A-008710US 166 Amplification Methods	US 7,319,022	Filed 8/11/05 Issued 01/15/08	Granted	Epoch Townsend
295	17682A-00871US 166A Amplification Methods	US 11/958,895 US 2008-0248474-A1	Filed 12/18/07	Pending Published	Epoch Townsend
296	17682A-008710CA 166 Amplification Methods	CA 2576381	Filed 08/11/05	Pending	Epoch Townsend
297	17682A-008710EP 166 Amplification Methods	EP 05785367.3	Filed 08/11/05	Pending Published	Epoch Townsend
298	17682A-008710JP 166 Amplification Methods	JP 2007-525843	Filed 08/11/05	Pending	Epoch Townsend
299	17682A-009110US 168-A Improved Primer-Based Amplification Methods	US 11/423,399 2007/0048758	Filed 06/09/05	Pending Published	Epoch Townsend
300	17682A-009110EP 168EP-A Improved Primer-Based Amplification Methods	EP06772720.6	Filed 06/09/06	Pending Published	Epoch Townsend
301	17682A-009110CA 168-A Improved Primer-Based Amplification Methods	CA2611507	Filed 06/09/06	Pending	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
302	17682A-009110JP 168 Improved Primer-Based Amplification Methods	JP 2008-515978	Filed 06/09/06	Pending Published	Epoch Townsend
303	17682A-004200US 148 Hybridization-triggered fluorescent detection of nucleic acids	US 6,472,153	Filed 10/26/99 Issued 10/29/02	Granted	Epoch Townsend
304	17682A-004210US 148 (PARENT) Hybridization-triggered fluorescent detection of nucleic acids	US 6,951,930	Filed 08/21/02 Issued 10/04/05	Granted	Epoch Townsend
305	17682a-004220US 148 (PARENT) Hybridization-triggered fluorescent detection of nucleic acids	US 7,297,495	Filed 10/03/05 Issued 11/20/07	Granted	Epoch Townsend
306	17682A-010000US Minor Groove Binder - Energy Transfer Oligonucleotides and Methods of Their Use	US 11/929,884	Filed 10/30/07	Pending	Epoch Townsend

307	17628A-010010PCT Minor Groove Binder-Energy Transfer Oligonucleotides and Methods for Their Use	PCT/US2008/081570	Filed 10/29/08	Pending	Epoch Townsend
308	17682A-008310US 162 Single Nucleotide Polymorphism Analysis of Highly Polymorphic Target Sequences	US 7,348,146	Filed 9/29/04 Issued 03/25/08	Granted	Epoch Townsend
309	17682A-008311US 162 Single Nucleotide Polymorphism Analysis of Highly Polymorphic Target Sequences	US 12/020,908 2005/0118623	Filed 01/28/08	Pending	Epoch Townsend
310	17682A-008310EP 162 Single Nucleotide Polymorphism Analysis of Highly Polymorphic Target Sequences	EP 04789416.7	Filed 09/30/04	Pending Published	Epoch Townsend
311	17682A-008310CA 162 Single Nucleotide Polymorphism Analysis of Highly Polymorphic Target Sequences	CA2540551	Filed 09/30/04	Pending	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
312	17682A-008310JP 162 Single Nucleotide Polymorphism Analysis of Highly Polymorphic Target Sequences	JP2006-534123	Filed 09/30/04	Pending Published	Epoch Townsend
	PHARMACEUTICALS				
313	17682A-005800US 132 Oligonucleotides Containing N-Methyl Thiolated Bases Having Antiviral Activity	US 5,652,359	Filled 12/02/93 Issued 07/02/97	Granted	Epoch Townsend
314	17682A-006300US 140 Oligonucleotide-Cyclopropapyrroloindole Conjugates as Sequence Specific Hybridization and Crosslinking Agents for Nucleic Acids	US 5,659,022	*Filed 1/5/96* Issued 8/19/97	Granted	Epoch Townsend
315	17682A-006200US 118B Crosslinking Oligonucleotides	US 5,849,482	Filed 6/7/95 Issued 12/15/98	Granted	Epoch Townsend
316	17682A-003800US 118C Targeted Mutagenesis in Living Cells Using Modified	US 5,935,830	Fled 3/26/97 Issued 8/10/99	Granted	Epoch Townsend

	Oligonucleotides				
317	17682A-006600US 147 Diaziridinyl-aryl and bis[di(chloroethyl)amino]-aryl oligonucleotide conjugates and reagents for making the same.	US 6,072,046	Filed 8/26/98 Issued 06/06/00	Granted	Epoch Townsend
318	17682A-003910US 145 Methods and Compositions to Facilitate D-Loop Formation by Oligonucleotides	US 6,312,925	Filed 5/8/97 Issued 11/6/01	ABANDONED Granted	Epoch Townsend
319	17682A-005710US 118A Bifunctional Crosslinking Oligonucleotides Adapted for Linking to a Desired Gene Sequence of Invading Organism or Cell	US 6,312,953	Filed 06/27/94 Issued 11/6/01	ABANDONED Granted	Epoch Townsend
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
320	17682A-005900US 133 Sterol Modified Oligonucleotide Duplexes Having Anticancer Activity	US 5,646,126	Filed 2/28/94 Issued 07/08/97	Granted	Assigned to Yale University and Epoch Townsend
	THERMAL CYCLING				
321	Inductive Heating for Rapid Thermal Cycling	US 61/099,537	Filed 9/23/08	Pending	Nanogen Mintz Levin
322	Inductive Heating for Rapid Thermal Cycling			To Be Filed	Nanogen Mintz Levin
	MicroArray				
	ACTIVE PROGRAMMABLE ELECTRNONIC MATRIX				
323	101US Active Programmable Electronic Devices for Molecular biological Analysis and Diagnostics	US 5,605,662	Filed 11/1/93 Issued 2/25/97	Granted	Nanogen O'Melveny
324	101D2CA Method for Electronic Assembly of	CA 2,504,343	Filed 5/9/05	Abandoned	Nanogen

	Nanoparticles				O'Melveny
325	101EP Self-Addressable Self-Assembling Microelectronic Systems and Devices for Molecular Biological Analysis and Diagnostics	EP 0727045	Filed 10/26/94 Issued 12/19/01	Granted-Spain, France, UK, Italy, Sweden	Nanogen O'Melveny
326	101C1US Method for Electronic Synthesis of Polymers	US 5,929,208	Filed 10/4/96 Issued 7/27/99	Granted	Nanogen O'Melveny
327	102US Methods for Electronic Stringency Control for Molecular Biological Analysis and Diagnostics	US 6,017,696	Filed 7/7/94 Issued 1/25/00	Granted	Nanogen O'Melveny

	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
328	102AU Self-Addressable Self Assembling Microelectronic Systems and Devices for Molecular Biological Analysis and Diagnostics	AU 708677	Filed 7/5/95 Issued 1/25/99	Abandoned NC Granted	Nanogen O'Melveny
329	102D1AUSelf-Addressable Self Assembling Microelectronic Systems and Devices for Molecular Biological Analysis and Diagnostics	AU 746974	Filed 10/21/99 Issued 8/22/02	Abandoned NC Granted	Nanogen O'Melveny
330	102CA Self-Addressable Self-Assembling Microelectronic Systems and Devices for Molecular Biological Analysis and Diagnostics	CA 2,169,852	Filed 7/5/95 Issued 9/23/08	Granted	Nanogen O'Melveny
331	102GB Self-Addressable Self-Assembling Microelectronic Systems and Devices for Molecular Biological Analysis and Diagnostics	GB 0717749	Filed 7/5/95 Issued	Granted	Nanogen O'Melveny
332	102C1US Methods for Transport in Molecular Biological Analysis and Diagnostics	US 6,238,624	Fled 10/4/96 Issued 5/29/01	Granted	Nanogen O'Melveny
333	102C2US Methods for Electronically-Controlled Enzymatic Reactions	US 7,172,864	Filed 11/24/00 Issued 2/6/07	Granted	Nanogen O'Melveny
334	102C5US Self-Addressable Self Assembling Microelectronic Systems and Devices for Molecular Biological Analysis and Diagnostics	US 11/702,353	Filed 2/5/07	Pending	Nanogen O'Melveny

335	101C2US Self-Addressable Self Assembling Microelectronic Systems and Devices for Molecular Biological Analysis and Diagnostics	US 7,314,708	Filed 8/4/98 Issued 1/1/08	Granted	Nanogen O'Melveny
336	101C3US Methods for Electronic Synthesis of Polymers	US 09/358,788	Filed 7/22/99	Pending	Nanogen O'Melveny
337	101C4US Self-Addressable Self Assembling Microelectronic Systems and Devices for Molecular Biological Analysis and Diagnostics	US 11/963,317	Filed 12/21/07	Pending	Nanogen O'Melveny
338	103US Molecular Biological Diagnostic Systems Including Electrodes	US 5,632,957	Filed 9/9/94 Issued 5/27/97	Granted	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
339	103AU Automated Molecular Biological Diagnostic System	AU 702773	Filed 9/6/95 Issued 6/17/99	Granted	Nanogen O'Melveny
340	103EP Automated Molecular Biological Diagnostic System	EP0871888	Filed 9/6/95 Issued 7/10/02	Granted- Germany	Nanogen O'Melveny
341	103C1US Control System for Active Programmable Electronic Microbiology System	US 6,582,660	Fled 5/20/97 Issued 6/24/03	Granted	Nanogen O'Melveny
342	104US Methods for Hybridization Analysis Utilizing Electrically Controlled Hybridization	US 5,849,486	Filed 9/27/95 Issued 12/15/98	Granted	Nanogen O'Melveny
343	104AU Methods for Hybridization Analysis Utilizing Electrically Controlled Hybridization	AU 723134	Filed 9/6/96 Issued 11/30/00	Granted	Nanogen O'Melveny
344	104C1 Methods for Fingerprinting Utilizing an Electronically Addressable Array	US 6,245,508	Filed 8/27/98 Issued 6/12/01	Abandoned NC Granted	Nanogen O'Melveny
345	104C2US Apparatus for Active Programmable Matrix Devices	US 7,101,661	Filed 6/20/00 Issued 9/5/06	Granted	Nanogen O'Melveny
346	104C3US Apparatus and Methods for Active Programmable Matrix Devices	US 11/505,679 US-2007-0054299-A1	Filed 8/17/06	Published	Nanogen O'Melveny
347	105US Methods for Electronic Fluorescent Perturbation for Analysis and Electronic Perturbation Catalysis for Synthesis	US 6,048,690	Filed 5/14/97 Issued 4/11/00	Granted	Nanogen O'Melveny
348	105C3US Methods for Electronic Fluorescent	US-2007-0055453-A1	Filed 12/08/05	Abandoned	Nanogen

	Perturbation for Sequence Analysis			Published	O'Melveny
349	106US Methods and Procedures for Molecular Biological Analysis and Diagnostics	US 6,051,380	Filed 12/5/97 Issued 4/18/00	Granted	Nanogen O'Melveny
350	106HK Self-Addressable Self-Assembling Microelectronic Integrated Systems, Component Devices, Mechanisms, Methods and Procedures for Molecular Biological Analysis and Diagnostics	HK 1034519	Filed 12/01/98 Issued 12/22/06	Abandon in due course Granted	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
351	106C1US Method for Enhancing the Hybridization Efficiency of Target Nucleic Acids Using a Self-Addressable, Self-Assembling Microelectronic Device	US 6,518,022	Filed 11/22/99 Issued 2/11/03	Granted	Nanogen O'Melveny
352	106C3US Self-Addressable Self-Assembling Microelectronic Integrated Systems, Component Devices, Mechanisms, Methods and Procedures for Molecular Biological Analysis and Diagnostics	US 11/726,520 US-2007-0178516-A1	Filed 3/22/07	Published	Nanogen O'Melveny
353	107US Electronic Systems, Component Devices, Mechanisms, Methods, and Procedures for Macroscopic and Microscopic Molecular Biological Reactions, Analyses and Diagnostics	US 6,780,584	Filed 9/27/00 Issued 8/24/04	Granted	Nanogen O'Melveny
354	107D1US Electronic Systems and Component Devices for Macroscopic and Microscopic Molecular biological Reaction, Analyses, and Diagnostics	US 7,300,757	Filed 8/23/04 Issued 11/27/07	Granted	Nanogen O'Melveny
		PHOTONICS			
355	220C1US Self-Organizing Molecular Photonic Structures Based on Chromophore-and-Fluorophore-Containing Polynucleotides and	US 5,532,129	Filed 5/27/94 Issued 7/2/96	Granted	Nanogen O'Melveny

	Methods of Their Use				
356	221US Hybridization of Polynucleotides Conjugated with Chromophores and Fluorophores to Generate Donor-to-Donor Energy Transfer System	US 5,565,322	Filed 5/5/94 Issued 10/15/96	Granted	Nanogen O'Melveny

	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
357	221C1US Hybridization of Polynucleotides Conjugated with Chromophores and Fluorophores to Generate Donor-to-Donor Energy Transfer System	US 5,849,489	Filed 8/23/96 Issued 12/15/98	Granted	Nanogen O'Melveny
358	221C2US Hybridization of Polynucleotides Conjugated with Chromophores and Fluorophores to Generate Donor-to-Donor Energy Transfer System	US 6,162,603	Filed 7/28/98 Issued 12/19/00	Granted	Nanogen O'Melveny
359	221C3US Hybridization of Polynucleotides Conjugated with Chromophores and Fluorophores to Generate Donor-to-Donor Energy Transfer System	US 6,416,953	Filed 11/28/00 Issued 7/9/02	Granted	Nanogen O'Melveny
360	221C4US Hybridization of Polynucleotides Conjugated with Chromophores and Fluorophores to Generate Donor-to-Donor Energy Transfer System	US 6,911,310	Filed 10/9/01 Issued 6/28/05	Granted	Nanogen O'Melveny
361	221C5US Hybridization of Polynucleotides Conjugated with Chromophores and Fluorophores to Generate Donor-to-Donor Energy Transfer System	US 11/170,514	Filed 6/28/05	Pending	Nanogen O'Melveny
362	220EP Hybridization of Polynucleotides Conjugated with Chromophores and Fluorophores to Generate Donor-to-Donor Energy Transfer System	EP0620822	Filed 11/6/92 Issued 5/30/01	Granted- Germany, Spain, France, UK,	Nanogen O'Melveny

				Italy, Netherlands, Sweden	
	SAMPLE PREPARATION				
363	230US Apparatus and Methods for Active Biological Sample Preparation	US 6,129,828	Filed 9/6/96 Issued 10/10/00	Abandoned NC Granted	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
364	230D1US Apparatus for Active Biological Sample Preparation	US 6,824,740	Filed 4/28/00 Issued 11/30/04	Granted	Nanogen O'Melveny
365	231US Channel-Less Separation of Bioparticles on a Bioelectronic Chip by Dielectrophoresis	US 6,071,394	Filed 1/30/98 Issued 6/6/00	Granted	Nanogen O'Melveny
366	231CA Channel-Less Separation of Bioparticles on a Bioelectronic Chip by Dielectrophoresis	CA 2319705	Filed 7/28/00 Issued 7/15/08	Granted	Nanogen O'Melveny
367	231EP Channel-Less Separation of Bioparticles on a Bioelectronic Chip by Dielectrophoresis	EP 1053055	Filed 1/26/99 Issued 7/30/03	Abandoned, NC Granted, UK	Nanogen O'Melveny
368	231C1US Channel-Less Separation of Bioparticles on a Bioelectronic Chip by Dielectrophoresis	US 6,280,590	Filed 4/13/00 Issued 8/28/01	Granted	Nanogen O'Melveny
369	231C2US Channel-Less Separation of Bioparticles on a Bioelectronic Chip by Dielectrophoresis	US 6,989,086	Filed 7/13/01 Issued 1/24/06	Granted	Nanogen O'Melveny
370	232US Dialectrophoretic Separation and Immunoassay Methods on Active Electronic Matrix Devices	US 6,887,362	Filed 2/6/02 Issued 5/3/05	Granted	Nanogen O'Melveny
371	233US Three Dimensional Dielectrophoretic Separator and Methods of Use	US 2007-0187248-A1	Filed 12/12/06	Published	Nanogen O'Melveny
372	240JP Methods and Materials for Optimization of Electronic Hybridization Reactions	JP 4213216	Filed 8/18/97 Issued 11/7/08	Granted to 8/18/2017	Nanogen O'Melveny
373	241US Methods and Materials for	US 7,314,542	Filed 1/1/98	Granted	Nanogen

	Optimization of Electronic Transportation and Hybridization Reactions		Issued 3/30/06		O'Melveny
374	241JP Methods and Materials for Optimization of Electronic Transportation and Hybridization Reactions	JP 2007-533704	Filed 9/23/05	Pending	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
	FIRST GENERATION MICRO-ARRAY DEVICES				
375	250US Multiplexed Active Biologic Array	US 5,965,452	Filed 7/9/96 Issued 10/12/99	Granted	Nanogen O'Melveny
376	250CN Multiplexed Active Biologic Array	CN 97196197.2	Filed 06/24/97 Issued 05/05/04	Abandoned NC Granted	Nanogen O'Melveny
377	250KR Multiplexed Active Biologic Array	KR 545275	Filed 6/24/97 Issued	Abandoned NC Granted	Nanogen O'Melveny
378	250NZ Multiplexed Active Biologic Array	NZ 333947	Filed 6/24/97 Issued 3/8/01	Abandoned NC Granted	Nanogen O'Melveny
379	250C1US Multiplexed Active Biologic Array	US 6,258,606	Filed 7/30/99 Issued 7/10/01	Granted	Nanogen O'Melveny
380	250C2US Addressable Biologic Electrode Array	US 6,682,936	Filed 7/10/01 Issued 1/27/04	Granted	Nanogen O'Melveny
381	250C3US Multiplexed Active Biologic Array	US 6,867,048	Filed 5/7/02 Issued 3/15/05	Granted	Nanogen O'Melveny
382	250C4US Biologic Electrode Array with Integrated Optical Detector	US 7,045,097	Filed 5/7/02 Issued 5/16/06	Granted	Nanogen O'Melveny
383	250C5US Addressable Biologic Electrode Array	US 7,101,717	Filed 1/23/04 Issued 9/5/06	Granted	Nanogen O'Melveny
384	250C6US Multiplexed Active Biologic Array	US 7,150,997	Filed 3/15/05 Issued 12/19/06	Granted	Nanogen O'Melveny
385	250C7US Multiplexed Active Biologic Array	US 11/639,688 US-2007-0095671-A1	Filed 12/15/06	Published	Nanogen O'Melveny
386	251US Advanced Active Electronic Devices for Molecular Biological Analysis and	US 6,099,803	Fled 2/20/98 Issued 8/8/00	Granted	Nanogen O'Melveny

	Diagnostics				
387	251C1US Electronic Device for Performing Active Biological Operations and Methods of Using Same	US 6,726,880	Filed 6/16/00 Issued 4/27/04	Granted	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
388	252US Advanced Active Electronic Devices Including Collection Electrodes for Molecular Biological Analysis and Diagnostics	US 6,225,059	Filed 1/29/00 Issued 5/1/01	Granted	Nanogen O'Melveny
389	253US Multicomponent Devices for Molecular Biological Analysis and Diagnostics	US 6,068,818	Filed 1/29/99 Issued 5/30/00	Granted	Nanogen O'Melveny
390	253C1US Multicomponent Devices for Molecular Biological Analysis and Diagnostics	US 6,540,961	Filed 3/21/00 Issued 4/1/03	Granted	Nanogen O'Melveny
391	254US Method for Fabricating Multi-Component Devices for Molecular Biological Analysis and Diagnostics	US 6,254,827	Fled 1/29/99 Issued 7/3/01	Granted	Nanogen O'Melveny
392	255US Devices for Molecular Biological Analysis and Diagnostics Including Waveguides	US 6,315,953	Filed 1/29/99 Issued 11/13/01	Granted	Nanogen O'Melveny
393	255C1US Devices for Molecular Biological Analysis and Diagnostics Including Waveguides	US 6,821,729	Filed 9/12/01 Issued 11/23/04	Granted	Nanogen O'Melveny
394	256US Advanced Active Circuits and Devices for Molecular Biological Analysis and Diagnostics	US 6,331,274	Filed 1/29/99 Issued 12/18/01	Granted	Nanogen O'Melveny
395	256AU Advanced Active Devices and Methods for Molecular Biological Analysis and Diagnostics	AU 742960	Filed 02/11/99 Issued 5/2/02	Abandoned NC Granted	Nanogen O'Melveny
396	256D1US Systems and Methods for the Active Electronic Control of Biological Reactions	US 7,425,308	Filed 5/4/01 Issued 9/16/08	Granted	Nanogen O'Melveny
397	256D2US Circuits for the Control of Output Current in an Electronic Device for	US 7,241,419	Filed 5/4/01 Issued 7/10/07	Granted	Nanogen O'Melveny

Performing Active Biological Operations

	Title	App/Patent No.	Filing/Issuance Dates	Status	Source
398	256D2C1US Circuits for the Control of Output Current in an Electronic Device for Performing Active Biological Operations	US 11/775,724 US-2008-0019872-A1	Filed 7/10/07	Published	Nanogen O'Melveny
	SECOND GENERATION MICRO-ARRAY DEVICES				
399	260US Programmable Multiplexed Active Biologic Array	US 7,267,751	Filed 8/20/02 Granted 9/11/07	Granted	Nanogen O'Melveny
400	260C1US Programmable Multiplexed Active Biologic Array	US 2008-0110755A1	Filed 9/10/07	Published	Nanogen O'Melveny
	ANCILLARY DEVICES				
401	270US Scanning Optical Detection System	US 6,309,601	Filed 5/1/97 Issued 10/30/01	Abandoned Granted	Nanogen O'Melveny
402	271US Laminated Assembly for Active Bioelectronic Device	US 6,287,517	Filed 12/4/96 Issued 9/11/01	Granted	Nanogen O'Melveny
403	271C1US Laminated Assembly for Active Bioelectronic Device	US 6,423,271	Filed 3/16/00 Issued 7/23/02	Granted	Nanogen O'Melveny
404	272US Stacked, Reconfigurable Microlaboratory	US 6,309,602	Filed 12/2/98 Issued 10/30/01	Abandoned, Granted	Nanogen O'Melveny
405	273US Electrophoretic Buss for Transport of Charged Materials in a Multi-Chamber System	US 6,375,899	Filed 12/2/98 Issued 4/23/02	Granted	Nanogen O'Melveny
406	274US System Including Functionally Separated Regions in Electrophoretic System	US 6,319,472	Filed 12/2/98 Issued 11/20/01	Abandoned Granted	Nanogen O'Melveny
407	275US Apparatus and Method for Real-time Configuration and Analysis in Detection System	US 6,638,482	Filed 12/2/98 Issued 10/28/03	Granted	Nanogen O'Melveny
408	276US Integrated Portable Biological Detection System	US 6,403,367	Filed 12/22/99 Issued 6/11/02	Granted	Nanogen O'Melveny
409	276C1US Integrated Portable Biological Detection System	US 7,172,896	Filed 6/5/02 Issued 2/6/07	Granted	Nanogen O'Melveny

	Title	App/Patent No.	Filing/Issuance Dates	Status	Source
410	276C2US Integrated Portable Biological Detection System	US2008-0047832-A1	Filed 2/5/07	Published	Nanogen O'Melveny
411	276AU Integrated Portable Biological Detection System	AU 2590/00	Filed 12/22/99 Issued	Abandoned NC Granted	Nanogen O'Melveny
412	276NZ Integrated Portable Biological Detection System	NZ 512087	Filed 12/22/99 Issued 9/8/03	Abandoned NC Granted	Nanogen O'Melveny
	PERMEATION LAYERS				
413	280US Inorganic Permeation Layer for Micro-Electric Device	US 6,306,348	Filed 7/15/99 Issued 10/23/01	Abandoned Granted	Nanogen O'Melveny
414	280AU Inorganic permeation Layer for Micro-Electric Devide	AU 769715	Filed 1/30/02 Issued 5/20/04	Abandoned NC Granted	Nanogen O'Melveny
415	281US Biomolecular Attachment Sites on Microelectronic Arrays and Methods Thereof	US 09/410,368	Filed 9/30/99	Abandoned Pending	Nanogen O'Melveny
416	281C1US Biomolecular Attachment Sites on Microelectronic Arrays and Methods Thereof	US 11/777,919 US-2009-0069198-A1	Filed 7/13/07	Published	Nanogen O'Melveny
417	281JP Biomolecular Attachment Sites on Microelectronic Arrays and Methods Thereof	JP 2001-526285	Filed 4/1/02	Pending	Nanogen O'Melveny
418	282US Methods for Molding and Grafting Highly Uniform Polymer Layers onto Electronic Microchips	US 6,524,517	Filed 12/15/99 Issued 2/25/03	Granted	Nanogen O'Melveny
419	283US Permeation Layer Attachment Chemistry and Method	US 6,303,082	Filed 12/15/99 Issued 10/16/01	Granted	Nanogen O'Melveny
420	283AU Permeation Layer Attachment Chemistry and Method	AU 43025/01	Filed 6/25/02 Issued 1/20/05	Abandoned NC Granted	Nanogen O'Melveny
421	283D1US Platinum Silicide Permeation Layer Attachment Chemistry and Method	US 6,838,053	Filed 8/3/01 Issued 1/4/05	Granted	Nanogen O'Melveny
422	284US Mesoporous Permeation Layers for Use on Active Electronic Matrix Devices	US 6,960,298	Filed 12/10/01 Issued 11/1/05	Granted	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**

423	284C1USMesoporous Permeation Layers for Use on Active Electronic Matrix Devices	US 7,270,850	Filed 3/16/05 Issued 9/18/07	Granted	Nanogen O'Melveny
424	284C2US Mesoporous Permeation Layers for Use on Active Electronic Matrix Devices	US 11/855,374 US 2008-0063794-A1	Filed 9/14/07	Published	Nanogen O'Melveny
425	286US Compositions and Methods for Preserving Permeation Layers for Use on Active Electronic Matrix Devices	US 11/846,187 US 2008-00699962-A1	Filed 8/28/07	Published	Nanogen O'Melveny
426	286PCT Compositions and Methods for Preserving Permeation Layers for Use on Active Electronic Matrix Devices	PCT/US07/77188	Filed 8/30/07	Abandoned Pending	Nanogen O'Melveny
	SINGLE TANDEM REPEATS				
427	300US Methods and Apparatus for Determination of Length Polymorphisms in DNA	US 6,207,373	Filed 2/25/98 Issued 3/27/01	Granted	Nanogen O'Melveny
428	300EP Methods and Apparatus for Determination of Length Polymorphisms in DNA	EP 1056887	Filed 08/25/00 Issued 05/31/06	Granted, France, Germany, Italy	Nanogen O'Melveny
429	300C1US Methods and Apparatus for Determination of Length Polymorphisms in DNA	US 6,395,493	Filed 8/24/00 Issued 5/28/02	Granted	Nanogen O'Melveny
430	300C2US Methods and Apparatus for Determination of Length Polymorphisms in DNA	US 6,753,148	Fled 2/28/02 Issued 6/22/04	Granted	Nanogen O'Melveny
	SINGLE NUCLEOTIDE POLYMORPHISMS				
431	312US Methods for Determination of Single Nucleic Acid Polymorphisms Using a Bioelectronic Microchip	US 6,468,742	Filed 4/12/99 Issued 10/22/02	Granted	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
432	312AU Methods for Determination of Single Nucleic Acid Polymorphisms Using a	AU 769929	Filed 3/28/00 Issued	Abandoned NC Granted	Nanogen O'Melveny

	Bioelectronic Microchip				
433	312C1US Methods for Determination of Single Nucleic Acid Polymorphisms Using a Bioelectronic Microchip	US 2003-0073122-A1	Filed 9/16/02	Pending	Nanogen O'Melveny
434	312C2US Methods and Apparatus for Screening and Detecting Multiple Genetic Mutations	US 10/627,950	Filed 7/24/03	Pending	Nanogen O'Melveny
		GENE EXPRESSION			
435	320US Improved Methods for Gene Expression Monitoring on Electronic Microarrays	US 6,379,897	Filed 11/9/00 Issued 4/30/02	Granted	Nanogen O'Melveny
436	320D2US Improved Quantitative Analysis Methods on Active Electronic Mocroarrays	US 6,492,122	Filed 10/10/01 Issued 12/10/02	Granted	Nanogen O'Melveny
		STRAND DISPLACEMENT AMPLIFICATION			
437	331US Anchored Strand Displacement Amplification on an Electronically Addressable Microchip	US 6,531,302	Filed 4/12/99 Issued 3/11/03	Will let go abandoned but granted till 5/12/10	Nanogen O'Melveny
438	332US Electronically Mediated Nucleic Acid Amplification in Nasba	US 6,326,173	Filed 4/12/99 Issued 12/4/01	Abandoned Granted	Nanogen O'Melveny
439	332C1US Electronically Mediated Nucleic Acid Amplification in NASBA	US 7,070,961	Filed 10/9/01 Issued 7/4/06	Granted	Nanogen O'Melveny
440	333US Multiplex Amplification and Separation of Nucleic Acid Sequences Using Ligation-Dependant Strand Displacement Amplification and Bioelectronic Chip Technology	US 6,238,868	Filed 4/12/99 Issued 5/29/01	Granted	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
441	333D1US Multiplex Amplification and Separation of Nucleic Acid Sequences Using Ligation-Dependant Strand Displacement	US 6,864,071	Filed 5/25/01 Issued 3/8/05	Granted	Nanogen O'Melveny

	Amplification and Bioelectronic Chip Technology				
442	335US Multiplex Amplification and Separation of Nucleic Acid Sequences on a Bioelectronic Microchip Using Asymmetric Structures	US 6,309,833	Filed 4/12/99 Issued 10/30/01	Abandoned Granted	Nanogen O'Melveny
443	335D1US Multiplex Amplification and Separation of Nucleic Acid Sequences on a Bioelectronic Microchip Using Asymmetric Structures	US 6,589,742	Filed 9/17/01 Issued 7/8/03	Granted	Nanogen O'Melveny
444	37610-519001US Methods for Rapid, Single-Step Strand Displacement Amplification of Nucleic Acids	US11/838,024 0096257	Filed 8/13/07	Published	Nanogen O'Melveny
445	376210-519001EP Methods for Rapid, Single-Step Strand Displacement Amplification of Nucelic Acids	EP	Filed 2/9/09	Pending	Nanogen O'Melveny
446	340US Topoisomerase Type II Gene Polymorphisms and Their Use in Identifying Drug Resistance and Pathogenic Strains of Microorganisms	US 7,135,283	Filed 11/17/98 Issued 11/14/06	Granted	Nanogen O'Melveny
447	37610-520C01US Method for Detecting Large Mutations/Duplications Using Control Amplification Comparisons to Paralogous Genes	US 12/118,312 US-2009-0087846-A1	Filed 5/9/08	Published	Nanogen O'Melveny

	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
	NANOFABRICATION				
448	401US Methods and Apparatus for the Electronic, Homogeneous Assembly and Fabrication of Devices	US 6,569,382	Filed 11/8/99 Issued 5/27/03	Granted	Nanogen O'Melveny
449	401CA Methods and Apparatus for the	CA 2,389,314	Filed 4/24/02	Pending	Nanogen

	Electronic, Homogeneous Assembly and Fabrication of Devices				O'Melveny
450	401EP Methods and Apparatus for the Electronic, Homogeneous Assembly and Fabrication of Devices	EP 976960.5-2004	Filed 4/26/02	Published	Nanogen O'Melveny
451	401JP Methods and Apparatus for the Electronic, Homogeneous Assembly and Fabrication of Devices	JP 2001-537462	Filed 5/8/02	Pending	Nanogen O'Melveny
452	400US Methods for the Electronic Assembly and Fabrication of Devices	US 6,652,808	Filed 12/6/96 Issued 11/25/03	Granted	Nanogen O'Melveny
453	401C2US Methods for the Electronic, Homogeneous Assembly and Fabrication of Devices	US 11/401,713	Filed 4/11/06	Pending	Nanogen O'Melveny
454	400D1JP Affinity Based Self-Assembly Systems and Devices for Photonic and Electronic Application	JP 2007-203204	Filed 8/3/07	Pending	Nanogen O'Melveny
455	401C1US Methods for the Electronic, Homogeneous Assembly and Fabrication of Devices	US 7,060,224	Filed 1/6/03 Issued 6/13/06	Granted	Nanogen O'Melveny
456	402US Systems and Devices for Photoelectrophoretic Transport and Hybridization of Oligonucleotides	US 6,706,473	Filed 1/24/00 Issued 3/16/04	Granted	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
457	402C1US Systems and Devices for Photoelectronic Transport and Hybridization of Oligonucleotides	US 10/772,744	Filed 2/4/04	Pending	Nanogen O'Melveny
458	403CA Nanoscale Electronic Detection System	CA 2567114	Filed 5/27/05	Abandoned Pending	Nanogen O'Melveny
459	403EP Nanoscale Electronic Detection System	EP05804857.0	Filed 5/27/05	Abandoned Pending	Nanogen O'Melveny

460	403JP Nanoscale Electronic Detection System	JP 2007-515461	Filed 5/27/05	Pending	Nanogen O'Melveny
461	403KR Nanoscale Electronic Detection System	KR 10-2006-7027434	Filed 12/27/06	Pending	Nanogen O'Melveny
462	406US Electrode Based Patterning of Thin Film Self-Assembled Nano-Particles	US 11/233,486 US 2007-0138042-A1	Filed 9/21/05	Published	Nanogen O'Melveny
		MICRO ELECTROPHORESIS			
463	910US System and Method for Searching and Processing Databases Comprising Named Annotated Text Strings	US 6,249,784	Filed 5/19/99 Issued 6/19/01	Abandoned NC Granted	Nanogen O'Melveny
464	920C1US Method for Reducing the Linear Dimension Necessary for High Resolution Electrophoretic Separation	US 6,013,166	Filed 4/27/94 Issued 1/11/00	Granted	Nanogen O'Melveny
465	920C2USMethod for Reducing the Linear Dimension Necessary for High Resolution Electrophoretic Separation	US 6,488,832	Filed 8/12/99 Issued 12/3/02	Granted	Nanogen O'Melveny
		OPTICAL MEMORY			
466	930US Deoxyribonucleic Acid (DNA) Optical Storage Using Non-Radiative Energy Transfer Between a Donor Group, an Acceptor Group and a Quencher Group	US 5,787,032	Filed 6/10/94 Issued 7/28/98	Granted	Nanogen O'Melveny
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
467	930JP Deoxyribonucleic Acid (DNA) Optical Storage Using Non-Radiative Energy Transfer Between a Donor Group, an Acceptor Group and a Quencher Group	JP 4026847	Filed 6/7/95 Issued 10/19/07	Granted	Nanogen O'Melveny
468	930C1US Optical Storage Device Utilizing Non-Radiative Energy Transfer	US 5,835,404	Filed 8/5/97 Issued 11/10/98	Granted	Nanogen O'Melveny
469	930C2US DNA Optical Storage	US 6,067,246	Filed 8/5/98 Issued 5/23/00	Granted	Nanogen O'Melveny
470	930C3US DNA Optical Storage	US 6,385,080	Filed 5/9/00	Granted	Nanogen

			Issued 5/7/02		O'Melveny

Miscellaneous

471	054468-5005US Microstructure Apparatus and Method for Separating Differently Charged Molecules Using an Applied Electric Field	US 6,942,778	Filed 11/28/00 Issued 9/13/05	Abandoned NC Granted	Nanogen Morgan Lewis
472	054468-5005US01 Microstructure Apparatus and Method for Separating Differently Charged Molecules Using an Applied Electric Field	US 11/175,195	Filed 7/7/05	Published	Nanogen Morgan Lewis
473	8004US Isolation of Nucleic Acid Molecules Using Modified Solid Supports	US 12/221,750	Filed 8/5/08	Pending	Nanogen K&L/Gates
474	8004PC Isolation of Nucleic Acids Molecules Using Modified Solid Supports	PCT/US08/09427	Filed 8/5/08	Pending	Nanogen K&L/Gates
475	950US Apparatus and Method for Removing Small Molecules and Ions from Low Volume Biological Samples	US 6,284,117	Filed 12/22/99 Issued 9/4/01	Granted	Nanogen O'Melveny
476	37610-511001US Counter-Centrifugal Force Device	US 12/233,935	Filed 9/19/08	Pending	Nanogen Mintz Levin
	Title	**App/Patent No.**	**Filing/Issuance Dates**	**Status**	**Source**
477	37610-511001PCT Counter-Centrifugal Force Device	US2008-007087	Filed 9/19/08	Pending	Nanogen Mintz Levin
478	Method of Extraction of Nucleic Acids and Extraction Solution to be Used in Such Method	IT 1308663	Filed12/1/99 Issued 1/9/02	Granted	Amplimedical Spa
479	Use of DMT Group and Method to Reveal or Separate Molecules Marked with DMT Group	IT 1307060	Filed 11/5/99	Published	Amplimedical Spa
480	37610-510001US Fluidic Volume Dispense Verification Tool	US 11/948,627 2008-0233009	Filed 11/30/07	Published	Nanogen Mintz Levin
481	37610-510001PCT Fluidic Volume Dispense Verification Tool	US2007/086055 WO2008/070548	Filed 11/30/07	Published	Nanogen Mintz Levin