PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT8149989

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
THOMAS CATALINO GUBATAYAO	05/16/2014
KALYAN HANDIQUE	05/06/2014
KARTHIK GANESAN	02/24/2015
DANIEL M. DRUMMOND	01/27/2014

RECEIVING PARTY DATA

Name:	BECTON, DICKINSON AND COMPANY
Street Address:	1 BECTON DRIVE
City:	FRANKLIN LAKES
State/Country:	NEW JERSEY
Postal Code:	07417

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17026653

CORRESPONDENCE DATA

Fax Number: (949)760-9502

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

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 949-760-0404

Email: efiling@knobbe.com

KNOBBE MARTENS OLSON & BEAR LLP **Correspondent Name:**

Address Line 1: 2040 MAIN STREET

Address Line 2: 14TH FLOOR

Address Line 4: **IRVINE, CALIFORNIA 92614**

ATTORNEY DOCKET NUMBER:	HANLB.091D2
NAME OF SUBMITTER:	MARIA VICTORIA STOUT
SIGNATURE:	/Maria Victoria Stout/
DATE SIGNED:	09/05/2023

Total Attachments: 24

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ASSIGNMENT

Application No.: PCT/US2012/033667

Filing Date: April 13, 2012

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TCG tog

WHEREAS, Thomas Catalino Gubatayao, residing in Ipsilanti, Michigan, is a citizen of the United States, Kalyan Handique, residing in Ypsilanti, Michigan, is a citizen of India, Karthik Ganesan, residing in Ann Arbor, Michigan is a citizen of the United States, and Daniel M. Drummond, residing in Leander, TX, is a citizen of the United States, (hereinafter called "Assignors"), have made certain new and useful inventions or discoveries relating to:

SCANNING REAL-TIME MICROFLUIDIC THERMO-CYCLER AND METHODS FOR SYNCHRONIZED THERMOCYCLING AND SCANNING OPTICAL DETECTION

and

WHEREAS, BECTON, DICKINSON AND COMPANY, a Corporation, (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein.

NOW, THEREFORE, BE IT KNOWN that for and in consideration of the premises and in acknowledgment, confirmation and performance of obligations which arose out of the terms and conditions of Assignors' employment by Assignee at the time the invention was made, and other valuable considerations to them, the receipt and sufficiency of which are hereby acknowledged, Assignors have assigned, and transferred, and do hereby assign, and transfer unto said Assignee the entire right, title, and interest in and to all said inventions and discoveries disclosed in said application, whose identification above by serial number and filing date, is hereby authorized, and in and to said application, all substitutions, divisions, provisionals (including but not limited to U.S. Provisional Application Nos. 61/476,175 and 61/476,167, both filed on April 15, 2011), conversions of provisionals and continuations or continuations-in-part, thereof, and in and to all Letters Patents, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof, the same to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignors if this Assignment and sale had not been made; and

Assignors hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue said Letters Patent in accordance with this Agreement; and

Page 1 of 6

BD Docket No. P-9481 (HANLB.091WO)

For the consideration aforesaid, Assignors covenant and agree with said Assignee that they have a full and unencumbered title to the inventions and discoveries above described and hereby assigned, which title they warrant unto said Assignee, its successors and assigns; and

For the consideration aforesaid, Assignors further covenant and agree that they will, whenever requested, but without cost to them promptly communicate to said Assignee or its representatives any facts known to them relating to said inventions and discoveries, testify in any interference or legal proceedings involving said inventions and discoveries, and execute any additional papers that may be necessary to enable said Assignee or its representatives, successors, nominees, or assigns to secure full and complete protection of the inventions and discoveries or that may be necessary to vest in Assignee the complete title to the inventions and discoveries and patents hereby conveyed and to enable it to record title.

Page 2 of 6

Wayne County
My Commission Expires May 12, 2018
Acting in the County of

THOMAS R GROZENSKI Notary Public - Michigan

BD Docket No. P-9481 (HANLB.091WO)

Kalyan Har	dique	
	DATE:	
STATE OF		
COUNTY OF	ss:	
	ED, that on this day of	
satisfied is the person named	blic, personally appeared Kalyan Handique, who I in and who executed the foregoing instrument in	my
	nade known to him/her the contents thereof, he/she l, sealed, and delivered the same as his/her voluntary oses therein expressed.	
	Notary Public	
	My Commission Expires:	

BD Docket No. P-9481 (HANLB.091WO)

Karthik Gand	esan
	DATE:
STATE OF	
COUNTY OF) ss:
2013, before me, a Notary Pu satisfied is the person named presence, I and having first m	D, that on this day of, blic, personally appeared Karthik Ganesan, who I am in and who executed the foregoing instrument in my eade known to him/her the contents thereof, he/she did sealed, and delivered the same as his/her voluntary act ses therein expressed.
	Notary Public
	My Commission Expires:

BD Docket No. P-9481 (HANLB.091WO)

IN TESTIMONY WHEREOF, Assignors have hereunto set their hands and seals on the dates subscribed below.

Daniel 1	Drummond	
	DATE:	
STATE OF		
COUNTY OF	ss:	
2013, before me, a Notary satisfied is the person na presence, I and having fi	RED, that on this day of day of ublic, personally appeared Daniel M. Drummond, who I ed in and who executed the foregoing instrument in t made known to him/her the contents thereof, he/she ned, sealed, and delivered the same as his/her voluntary rposes therein expressed.	my dia

ASSIGNMENT

Application No.: PCT/US2012/033667 Filing Date: April 13, 2012

WHEREAS, Thomas Catalino Gubatayao, residing in Westland, Michigan, is a citizen of the United States, Kalyan Handique, residing in Ypsilanti, Michigan, is a citizen of India, Karthik Ganesan, residing in Ann Arbor, Michigan is a citizen of the United States, and Daniel M. Drummond, residing in Livonia, Michigan, is a citizen of the United States, (hereinafter called "Assignors"), have made certain new and useful inventions or discoveries relating to:

SCANNING REAL-TIME MICROFLUIDIC THERMO-CYCLER AND METHODS FOR SYNCHRONIZED THERMOCYCLING AND SCANNING OPTICAL DETECTION

and

WHEREAS, BECTON, DICKINSON AND COMPANY, a Corporation, (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein.

NOW, THEREFORE, BE IT KNOWN that for and in consideration of the premises and in acknowledgment, confirmation and performance of obligations which arose out of the terms and conditions of Assignors' employment by Assignee at the time the invention was made, and other valuable considerations to them, the receipt and sufficiency of which are hereby acknowledged, Assignors have assigned, and transferred, and do hereby assign, and transfer unto said Assignee the entire right, title, and interest in and to all said inventions and discoveries disclosed in said application, whose identification above by serial number and filing date, is hereby authorized, and in and to said application, all substitutions, divisions, provisionals (including but not limited to U.S. Provisional Application Nos. 61/476,175 and 61/476,167, both filed on April 15, 2011), conversions of provisionals and continuations or continuations-in-part, thereof, and in and to all Letters Patents, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof, the same to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignors if this Assignment and sale had not been made; and

Assignors hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue said Letters Patent in accordance with this Agreement; and

Application No.: PCT/US2012/033667

For the consideration aforesaid, Assignors covenant and agree with said Assignee that they have a full and unencumbered title to the inventions and discoveries above described and hereby assigned, which title they warrant unto said Assignee, its successors and assigns; and

For the consideration aforesaid, Assignors further covenant and agree that they will, whenever requested, but without cost to them promptly communicate to said Assignee or its representatives any facts known to them relating to said inventions and discoveries, testify in any interference or legal proceedings involving said inventions and discoveries, and execute any additional papers that may be necessary to enable said Assignee or its representatives, successors, nominees, or assigns to secure full and complete protection of the inventions and discoveries or that may be necessary to vest in Assignee the complete title to the inventions and discoveries and patents hereby conveyed and to enable it to record title.

Thomas Car	talino Gubatayao		
	DAT	E:	
STATE OF)		
COUNTY OF)	ss:	
BE IT REMEMBERS 2013, before me, a Notary Pi who I am satisfied is the perso my presence, I and having firs acknowledge that he/she signed and deed for the uses and purpe	ublic, personally appe on named in and who e of made known to him, d, sealed, and deliver	cared Thomas Catalino G executed the foregoing inst Ther the contents thereof, he and the same as his/her volu	rument in he/she did
		ry Public	
	My (Commission Expires:	

BD Docket No. P-9481 (HANLB.091WO)

Kalyan Handique	Hans	Ligue
	DATE:	05/06/2014
STATE OF)		
		SS:
COUNTY OF		
BE IT REMEMBERED, that or	n this	day of
2013, before me, a Notary Public, person satisfied is the person named in and we presence, I and having first made known acknowledge that he/she signed, sealed, and deed for the uses and purposes therein	onally appeared who executed the on to him/her the and delivered the	d Kalyan Handique, who I am he foregoing instrument in my he contents thereof, he/she did
	Notary P	
	My Comi	nission Expires:

Karthik Ganesan	
	DATE:
STATE OF) ss:
BE IT REMEMBERED, that 2013, before me, a Notary Public, pe satisfied is the person named in and presence, I and having first made kn	ersonally appeared Karthik Ganesan, who I am I who executed the foregoing instrument in my own to him/her the contents thereof, he/she did I, and delivered the same as his/her voluntary act
	Notary Public My Commission Expires:

IN TESTIMONY WHEREOF, Assignors have hereunto set their hands and seals on the dates subscribed below.

Daniel M. L	Drummond
	DATE:
STATE OF	
COUNTY OF)
2013, before me, a Notary Pub satisfied is the person named presence, I and having first n	ED, that on this day of, which personally appeared Daniel M. Drummond, who I amed in and who executed the foregoing instrument in my made known to him/her the contents thereof, he/she did does not and delivered the same as his/her voluntary act coses therein expressed.
	Notary Public
	My Commission Expires:

BD Docket No. P-9481

Application No.: PCT/US2012/033667 (HANLB.091WO)

ASSIGNMENT

Application No.: PCT/US2012/033667 Filing Date: April 13, 2012

WHEREAS, Thomas Catalino Gubatayao, residing in Westland, Michigan, is a citizen of the United States, Kalyan Handique, residing in Ypsilanti, Michigan, is a citizen of India, Karthik Ganesan, residing in Ann Arbor, Michigan is a citizen of the United States, and Daniel M. Drummond, residing in Livonia, Michigan, is a citizen of the United States, (hereinafter called "Assignors"), have made certain new and useful inventions or discoveries relating to:

SCANNING REAL-TIME MICROFLUIDIC THERMO-CYCLER AND METHODS FOR SYNCHRONIZED THERMOCYCLING AND SCANNING OPTICAL **DETECTION**

and

WHEREAS, BECTON, DICKINSON AND COMPANY, a Corporation, (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein.

NOW, THEREFORE, BE IT KNOWN that for and in consideration of the premises and in acknowledgment, confirmation and performance of obligations which arose out of the terms and conditions of Assignors' employment by Assignee at the time the invention was made, and other valuable considerations to them, the receipt and sufficiency of which are hereby acknowledged, Assignors have assigned, and transferred, and do hereby assign, and transfer unto said Assignee the entire right, title, and interest in and to all said inventions and discoveries disclosed in said application, whose identification above by serial number and filing date, is hereby authorized, and in and to said application, all substitutions, divisions, provisionals (including but not limited to U.S. Provisional Application Nos. 61/476,175 and 61/476,167, both filed on April 15, 2011), conversions of provisionals and continuations or continuations-in-part, thereof, and in and to all Letters Patents, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof, the same to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignors if this Assignment and sale had not been made: and

Assignors hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue said Letters Patent in accordance with this Agreement; and

Page 1 of 6

Application No.: PCT/US2012/033667

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Thomas C	Catalino Gubatayao	
	DATE:	
STATE OF)	
COUNTY OF)	SS:
BE IT REMEMBE	RED , that on this da	y of
2013, before me, a Notary who I am satisfied is the permy presence, I and having fi	Public, personally appeared Thosson named in and who executed to the rst made known to him/her the caned, sealed, and delivered the san	omas Catalino Gubatayao, The foregoing instrument in Contents thereof, he/she did

BD Docket No. P-9481 (HANLB.091WO)

Kalyan Han	lique	
	DATE:	
STATE OF		
COUNTY OF) ss:	
	ED, that on this day of	,
satisfied is the person named presence, I and having first t	blic, personally appeared Kalyan Handique, who I a in and who executed the foregoing instrument in n nade known to him/her the contents thereof, he/she a l, sealed, and delivered the same as his/her voluntary a	ny lia
and deed for the uses and purp	·	
	Notary Public	
	My Commission Expires:	

BD Docket No. P-9481 (HANLB 091WO)

Karthik Ganese	an
	DATE: 2/24/2015
STATE OF	
COUNTY OF	ss:
2013, before me, a Notary Publi satisfied is the person named in presence, I and having first mad	that on this day of, c. personally appeared Karthik Ganesan, who I am and who executed the foregoing instrument in my e known to him/her the contents thereof, he/she did ealed, and delivered the same as his/her voluntary act therein expressed.
	Notary Public
	My Commission Expires:

BD Docket No. P-9481 (HANLB.091WO)

IN TESTIMONY WHEREOF, Assignors have hereunto set their hands and seals on the dates subscribed below.

 Daniel N	1. Drummond	
	<i>DATE</i> :	
STATE OF		
COUNTY OF	ss:	
2013, before me, a Notary satisfied is the person nat presence, I and having fir	ERED, that on this day of	ny lia

Filing Date: April 13, 2012

Application No.: PCT/US2012/033667

ASSIGNMENT

Application No.: PCT/US2012/033667

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Page 1 of 6

Application No.: PCT/US2012/033667

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BD Docket No. P-9481 (HANLB.091WO)

IN TESTIMONY WHERE seals on the dates subscribed below	_	rs have h	ereunto se	et their	hands	and
Thomas Catalin	o Gubatayao		<u></u>			
	DA	ATE:				
STATE OF)					
COUNTY OF)		ss:			
BE IT REMEMBERED, 2013, before me, a Notary Public who I am satisfied is the person namy presence, I and having first macknowledge that he/she signed, seand deed for the uses and purposes	c, personally ap amed in and who ade known to ha ealed, and deliv	opeared To o executed im/her the ered the s	Thomas Co d the fores c contents	atalino going in thereof	Gubata strume he/she	yao, nt in e did
		otary Publ	lic sion Expir			

BD Docket No. P-9481 (HANLB.091WO)

BD Docket No. P-9481

(HANLB.091WO)

BD Docket No. P-9481

(HANLB.091WO)

IN TESTIMONY WHEREOF, Assignors have hereunto set their hands and seals on the dates subscribed below.

Daniel M. Drummond

DATE: 27-Jan-2014

STATE OF TEXAS

COUNTY OF TRAVIS

ss:

2019 BE IT REMEMBERED, that on this I day of Tawary 2013, before me, a Notary Public, personally appeared Daniel M. Drummond, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, I and having first made known to him/her the contents thereof, he/she did acknowledge that he/she signed, sealed, and delivered the same as his/her voluntary act and deed for the uses and purposes therein expressed.

Notary Public

My Commission Expires:

KATHLEEN M. SANDVIG MY COMMISSION EXPIRES December 13, 2014