PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Parayil K. Ajikumar	01/05/2011
Gregory Stephanopoulos	02/04/2011
Too Heng Phon	12/29/2010

RECEIVING PARTY DATA

Name:	Massachusetts Institute of Technology
Street Address:	77 Massachusetts Avenue
City:	Cambridge
State/Country:	MASSACHUSETTS
Postal Code:	02139

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12943477

CORRESPONDENCE DATA

Fax Number: (617)646-8646 Phone: 617-646-8000

Email: heather.mclennand@wolfgreenfield.com

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

via US Mail.

Correspondent Name: Wolf, Greenfield & Sacks, PC

Address Line 1: 600 Atlantic Avenue

Address Line 4: Boston, MASSACHUSETTS 02210

ATTORNEY DOCKET NUMBER:	M0656.70201US02
NAME OF SUBMITTER:	John R. Van Amsterdam

Total Attachments: 8

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PATENT REEL: 027601 FRAME: 0443 00 129434

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PATENT REEL: 027601 FRAME: 0444

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned Assignor, hereby:

- Sell, assign and transfer to Massachusetts Institute of Technology, a Massachusetts non-profit corporation having a place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, my entire right, title and interest for the United States and all foreign countries, in and to any and all inventions and designs which are disclosed in the application for United States Letters Patent filed in the United States Patent and Trademark Office on November 10, 2010 under No. 12/943,477, bearing Attorney Docket No. M0656,70201US02. and entitled MICROBIAL ENGINEERING FOR THE PRODUCTION OF CHEMICAL AND PHARMACEUTICAL PRODUCTS FROM THE ISOPRENOID PATHWAY, and in and to the application and all corresponding non-provisional, divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent, utility models, industrial designs or similar intellectual property rights which have been or shall be filed in the United States, internationally, and in any foreign country, including but not limited to China, Japan and Korea, on any of the inventions; and in and to all original and reissued patents which have been or shall be issued in the United States or any other jurisdiction on the inventions, including the right to apply for patent rights in each foreign country and all rights to priority, including the right to claim priority for China, Japan and Korea, as well as the right to sue in its own name and recover damages for past infringement of any United States Letters Patent and foreign patent;
- 2. Agree that the Assignee may apply for and receive Letters Patent and utility model and industrial design registrations for the inventions in its own name; and when requested, without charge to but at the expense of the Assignee, I agree to carry out in good faith the intent and purpose of this assignment, by executing all non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent, utility model and industrial design applications on any and all the inventions, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to the Assignee all facts known to me relating to the inventions and the history thereof, and generally by doing everything reasonably possible which the Assignee shall consider desirable for aiding in securing and maintaining proper protection for the inventions and for vesting title to the inventions and all applications for patents and all patents on the inventions, in the Assignee;
- 3. Request the Director of the United States Patent and Trademark Office and non-US patent authorities to issue the Letters Patent to the Assignee;
- 4. Authorize and request Wolf, Greenfield & Sacks, P.C. to supply any missing patent/application identification information or correct any errors in the patent/application identification information provided above, whether discovered prior to or after recordation;
- 5. Covenant with the Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me; and
- 6. Appoint Assignee, through its designee, my attorney-in-fact to execute, in my name and on my behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America.

Attorney Docket No. M0656.70201US02 2174516.1 Page 1 of 4

01/05/2011	Ajo 1 Sole
Date Inventor:	Parayil∕K. Ajikumar
Address:	227 Charles Street, No. 11
	Cambridge, MA 02141
Citizenship:	India
personally appeared Parayil K. Ajikuma	in the undersigned notary public, which is proved to me through satisfactory evidence of course document in my presence and swore or affirmed accurate to the best of (his) (her) knowledge
	AND THE WALL WAS DESCRIPTION OF THE PARTY OF
	PARTEM ARICO NA

SEAL

My commission expires:

2/4/2011	Gregor Trephanomb
Date Inventor:	Gregory Stephanopoulos
Address:	4 Russet Ľane
	Winchester, Massachusetts 01890
Citizenship:	US
STATE/COMMONWEALTH OF Massachuset	\$
COUNTY OF Modelesex:	
hila to 1	
On this day of tebruary , 30	, before me, the undersigned notary public,
personally appeared Gregory Stephanopoulos	, proved to me through satisfactory evidence of
identification, which were	
to be the person who signed the preceding or attached of	locument in my presence and swore or affirmed
to me that the contents of the document are truthful and	accurate to the best of (his) (her) knowledge
and belief and acknowledged to me that (he) (she) signe	ed it voluntarily for its stated purpose.
SEAL Notary Public	
i. / /	THE THE STATE OF T
My commission expires: 4/29/16	

Date	Inventor:	Too Heng Phon
	Address:	Blk A #12-04
		103 Clementi Road
		Kent Vale 129788
		REPUBLIC OF SINGAPORE
	Citizenship:	Malaysia
	•	,
Witness:		
Date	Signatu	re
	Name:	****
	Address	:
Witness:		
Date	Signature	
	Name:	
	Address:	

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned Assignor, hereby:

- Sell, assign and transfer to Massachusetts Institute of Technology, a Massachusetts non-profit corporation having a place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, my entire right, title and interest for the United States and all foreign countries, in and to any and all inventions and designs which are disclosed in the application for United States Letters Patent filed in the United States Patent and Trademark Office on November 10, 2010 under No. 12/943,477, bearing Attorney Docket No. M0656.70201US02, and entitled MICROBIAL ENGINEERING FOR THE PRODUCTION OF CHEMICAL AND PHARMACEUTICAL PRODUCTS FROM THE ISOPRENOID PATHWAY, and in and to the application and all corresponding non-provisional, divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent, utility models, industrial designs or similar intellectual property rights which have been or shall be filed in the United States, internationally, and in any foreign country, including but not limited to China, Japan and Korea, on any of the inventions; and in and to all original and reissued patents which have been or shall be issued in the United States or any other jurisdiction on the inventions, including the right to apply for patent rights in each foreign country and all rights to priority, including the right to claim priority for China, Japan and Korea, as well as the right to sue in its own name and recover damages for past infringement of any United States Letters Patent and foreign patent;
- 2. Agree that the Assignee may apply for and receive Letters Patent and utility model and industrial design registrations for the inventions in its own name; and when requested, without charge to but at the expense of the Assignee, I agree to carry out in good faith the intent and purpose of this assignment, by executing all non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent, utility model and industrial design applications on any and all the inventions, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to the Assignee all facts known to me relating to the inventions and the history thereof, and generally by doing everything reasonably possible which the Assignee shall consider desirable for aiding in securing and maintaining proper protection for the inventions and for vesting title to the inventions and all applications for patents and all patents on the inventions, in the Assignee;
- 3. Request the Director of the United States Patent and Trademark Office and non-US patent authorities to issue the Letters Patent to the Assignee;
- 4. Authorize and request Wolf, Greenfield & Sacks, P.C. to supply any missing patent/application identification information or correct any errors in the patent/application identification information provided above, whether discovered prior to or after recordation;
- 5. Covenant with the Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me; and
- 6. Appoint Assignee, through its designee, my attorney-in-fact to execute, in my name and on my behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America.

Attorney Docket No. M0656.70201US02 2174516.1

Page 1 of 4

Date		Inventor:	Parayil K. Ajikumar
		Address:	227 Charles Street, No. 11
			Cambridge, MA 02141
		Citizenship:	India
STATE/COMMONWE			
COUNTY OF		<u> </u>	
On this	day of		, before me, the undersigned notary public,
	Parayil K.	, Ajikumar	, proved to me through satisfactory evidence of
identification, which we	ere		
to be the person who s	signed the preced	ding or attached d	locument in my presence and swore or affirmed
o me that the contents	s of the documen	t are truthful and	accurate to the best of (his) (her) knowledge
and belief and acknow	ledged to me tha	t (he) (she) signe	d it voluntarily for its stated purpose.
SEAL			
SEAL	Not	ary Public	
	NOL	ary Fublic	
My commission exp	oires:		

Attorney Docket No. M0656.70201US02 2174516.1

Page 2 of 4

Date	Inventor:	Gregory Stephanopoulos
	Address:	4 Russet Lane
		Winchester, Massachusetts 01890
	Citizenship:	
STATE/COMMONWE		
COUNTY OF	•	
On this	day of	, before me, the undersigned notary public,
personally appeared	Gregory Stephanopoulos	_, proved to me through satisfactory evidence of
identification, which we	ere	_, provos to mo unough satisfactory evidence of
to be the person who s	igned the preceding or attached o	document in my presence and swore or affirmed
to me that the contents	s of the document are truthful and	accurate to the best of (his) (her) knowledge
and belief and acknow	ledged to me that (he) (she) signe	d it voluntarily for its stated purpose.
SEAL		
OLITE	Notary Public	******
	rectary r done	
My commission exp	oires:	

Attorney Docket No. M0656.70201US02 2174516.1

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29/12/10/0	(orthograph)	
Date	Inventor: Too Heng Phon	
	Address: Blk A #12-04	
	103 Clementi Road	
	Kent Vale 129788	
	REPUBLIC OF SINGAPORE	
	Citizenship: Malaysia	
	Sitt 2010111p. Walaysia	
Witness: 29 / 12 / 2010	Jan	
Date	Signature	
	Name: Tang Ber-Leen Address: MD7, 8 Medral Drive Spere 117597	
	Address: Mn7, 8 Medical Drive	
	Spere 117597	
Witness:		
29.12.2010	Cantinelle	
Date	Signature	-
	Name: Tar Pin WEE	

Address:

Attorney Docket No. M0656.70201US02 2174516.1

RECORDED: 01/26/2012

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