PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Peter Williams	09/07/2011
Thomas J. Taylor	01/18/2011
Daniel J. B. Williams	04/15/2011
lan Gould	01/03/2011
Mark A. Hayes	05/03/2011

RECEIVING PARTY DATA

Name:	Arizona Board of Regents
Street Address:	P. O. Box 87511
City:	Tempe
State/Country:	ARIZONA
Postal Code:	85287-3511

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12969872

CORRESPONDENCE DATA

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Address Line 2: IP Department

Address Line 4: Boston, MASSACHUSETTS 02111

ATTORNEY DOCKET NUMBER:	HELI-035/07US 28526/405	

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Total Attachments: 7 source=HELI-035-07US_Executed_Assignment#page1.tif source=HELI-035-07US_Executed_Assignment#page2.tif source=HELI-035-07US_Executed_Assignment#page3.tif source=HELI-035-07US_Executed_Assignment#page4.tif source=HELI-035-07US_Executed_Assignment#page5.tif source=HELI-035-07US_Executed_Assignment#page6.tif source=HELI-035-07US_Executed_Assignment#page7.tif

Attorney Docket No.: HELI-035/07US 28526/405

ASSIGNMENT

WHEREAS We, the below named inventors,

Peter Williams, Thomas J. Taylor, Daniel J.B. Williams, Ian Gould, Mark A. Hayes

hereinafter referred to as "Assignor(s)" have made an invention(s) set forth in an applications for patent of the United States, entitled: METHOD OF DETERMINING THE NUCLEOTIDE SEQUNECE OF OLIGONUCLEOTIDES AND DNA MOLECULES

for which we filed a U.S. Nonprovisional patent application on **December 15, 2010** which bears U.S. Patent Application Serial No. **12/969,872** and is a continuation of Serial No. **11/929,141** filed **October 30, 2007**, which is a continuation of Serial No. **10/709,436** filed **May 5, 2004**, which is a continuation of Serial No. **09/941,882** filed **Aug. 28, 2001**, which is a continuation-in-part of Serial No. **09/673,544** filed **Feb. 26, 2001** and now abandoned, which is a continuation-in-part of **PCT/US99/09616** filed **Apr. 30, 1999** and claims the benefit of provisional application Ser. No. **60/083,840** filed **May 1, 1998**; and

WHEREAS, ARIZONA BOARD OF REGENTS, whose post office address is P.O. Box 87511, Tempe, Arizona 85287-3511 (the "Assignee"), is desirous of acquiring the entire right, title, and interest in: the Inventions; the applications for patent identified above; the right to file applications for patent of the United States or other countries on the Inventions; any application for patent of the United States or other countries claiming priority to these applications; any provisional or other right to recover damages, including royalties, for prior infringements of these applications; and any patent of the United States or other countries that may be granted therefor or thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee then in confirmation of any obligation to do so in said prior agreement, the Assignor has sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in:

- (a) the Invention(s);
- (b) the application for patent identified above;
- (c) the right to file applications for patent of the United States or other countries on the Invention(s), including all rights under the Paris Convention for the Protection of Industrial Property and under the Patent Cooperation Treaty;
- (d) any application(s) for patent of the United States or other countries claiming the Invention(s);

- (e) any application(s) for patent of the United States or other countries claiming priority to the application for patent identified above or any application(s) for patent claiming the Invention(s), including any division(s), continuation(s), and continuation(s)-in-part; and
- (f) any provisional or other right to recover damages, including royalties, for prior infringements of any application for patent identified in the preceding paragraphs (b)-(e); and
- (g) any patent(s) of the United States or other countries that may be granted for or on any application for patent identified in the preceding paragraphs (b) (e), including any reissue(s) and extension(s) of said patent(s).

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the Invention(s), said applications, and said patents, including interference proceedings, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Attorney Docket No.: HELI-035/07US 28526/405 Page 3

By: Peter Williams 55. before me, Sugadolus Public, personally appeared , personally known to me or proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. GWENDOLYN D. JOHNSON WITNESS my hand and official seal. NOTARY PUBLIC - AREZONA PINAL COUNTY April 21, 2012 Signature of Notary Public Place Notary Seal Above My Commission Expires:

Attorney Docket No.: HELI-035/07US 28526/405 Page 4

Date: 1/18/2011	By War A Cal
	Thomas J. Tayloy
State of ALIZONA	
County of MALICAPA Xs.	
On MANUARY 18, 2011, before	e me, <i>KHERA DOUGLASS</i> , Notary
Public, personally appeared Thomas	S U TAYLOR , personally known
to me or proved to me on the basis of sati	sfactory evidence, to be the person(s) whose name(s)
is/are subscribed to the within instrument a	and acknowledged to me that he/she/they executed the
same in his/her/their authorized capacity	(ies), and that by his/her/their signature(s) on the
instrument the person(s), or the entity upo	on behalf of which the person(s) acted, executed the
instrument.	
WITNESS-my-based and official seal.	KHERA DOUGLASS Notery Public - Arizona
X DAMOS	Mericope County My Commission Expires Way 15, 2014
Signature of Notary Public	Place Notary Scal Above
My Commission Expires: 5/15/20	<u>14</u>

Attorney Docket No.: HELI-035/07US 28526/405 Page 5

Date: 4/15/2011	By: 7-1 18 Va
State of Dregon	
Public, personally appeared <u>I/ANtel</u> to me or proved to me on the basis of sati is/are subscribed to the within instrument a same in his/her/their authorized capacity	e me, Arkemin Aguiles, Notary S. B. Williams? personally known isfactory evidence, to be the person(s) whose name(s) and acknowledged to me that he/she/they executed the v(ics), and that by his/her/their signature(s) on the on behalf of which the person(s) acted, executed the
WITNESS my hand and official scal.	AFTENIO AGUILAR ACTARY AVEL C-ORECTA COMMISSION IC. 44404 WY COMMISSION IC. 44404
Signature of Notary Public	Place Notary Seal Above
My Commission Expires: May 237	1 2014

Attorney Docket No.: HELI-035/07US 28526/405

Page 6

Date: 43/7011 By:) Jan Gould
State of ALIZONA	<u> </u>
County of MOUSCOPA	
On <u>JANUARY 3, 2011</u> , before me,	KHELA DOUGLASS , Notary
Public, personally appeared IAN GOULD	, personally known
to me or proved to me on the basis of satisfactory	evidence, to be the person(s) whose name(s)
is/are subscribed to the within instrument and acknowledge	wledged to me that he/she/they executed the
same in his/her/their authorized capacity(ies), an	d that by his/her/their signature(s) on the
instrument the person(s), or the entity upon behalf	of which the person(s) acted, executed the
instrument.	
WITNESS my hand and official seal.	KHEPA DOUGLASS Notary Public - Arizone Maricope County My Commission Expires May 15, 2014
Signature of Notary Public	Place Notary Seal Above
My Commission Evnisa 5/15/14	

Attorney Docket No.: HELI-035/07US 28526/405

Page 7

Date: $\sqrt{-3}$ - 70% By:	Mana 1/2
	Mark A. Hayes
State of 4,7/20na	
County of <u>Mariagos</u>) 88.	
On <u>3/1/1/4/2011</u> , before me, 6,	<i>enddyn</i> D Johnson Notary
Public, personally appeared Mark A Hay	ر , personally known
to me or proved to me on the basis of satisfactory evider	
is/are subscribed to the within instrument and acknowledg	ged to me that he/she/they executed the
same in his/her/their authorized capacity(ies), and that	t by his/her/their signature(s) on the
instrument the person(s), or the entity upon behalf of w	hich the person(s) acted, executed the
instrument.	
소리를 잃었다고 있다. 나는 그 그 말했다.	
WITNESS my hand and official seal.	Julianianianianianianianianianianianianiani
Generale and Jahren	GWENDOLYN D. JOHNSON bOTHEY FUEUC - ANEONA PINAL COLINTY by Commission Expline
Signature of Notary Public	Place Notary Seal Above
My Commission Expires: <u>Apri/21,2012</u>	

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RECORDED: 09/28/2011