PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Peter Williams	09/07/2011
Thomas J. Taylor	09/06/2011
Daniel J. B. Williams	09/02/2011
lan Gould	09/06/2011

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:	13008392

CORRESPONDENCE DATA

Fax Number: (617)289-0535 617 856 8200 Phone:

Email: ip@brownrudnick.com

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

via US Mail.

Correspondent Name: Brown Rudnick LLP Address Line 1: One Financial Center Address Line 2: **IP** Department

Address Line 4: Boston, MASSACHUSETTS 02111

ATTORNEY DOCKET NUMBER: HELI-035/09US 28526/413 NAME OF SUBMITTER: **Thomas Meyers**

REEL: 026980 FRAME: 0191

PATENT

Total Attachments: 7

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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 January 18, 2011 which bears U.S. Patent Application Serial No. 13/008,392 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);

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- (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 bereby 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.

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Date:	7,100
	Peter Williams
State of Argona)	
County of <u>Managa</u>) ss.	
On Sylvaber 7, 2011, before me, 6	***************************************
Public, personally appeared Feter Willia	⊬≤, personally known
to me or proved to me on the basis of satisfactory evi	idence, to be the person(s) whose name(s)
is/are subscribed to the within instrument and acknow	ledged 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 o	f which the person(s) acted, executed the
instrument,	
	GWENDOLYN D. JOHNSON
WITNESS my hand and official seal.	ACTARY PUBLIC AND ACTARY
	Ally Commission Explines April 91, 2019
Loudolp Dokuson	
Signature of Notary Public	Place Notary Seal Above
My Commission Expires: $\sqrt{2/3/2/2}$	

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Date:	By: Louis Land
Public, personally appeared THOMAS to me or proved to me on the basis of satisfatis/are subscribed to the within instrument and same in his/her/their authorized capacity(ie:	me, KHERA DOUG (ASS., Notary TAY LOR., personally known ctory evidence, to be the person(s) whose name(s) acknowledged to me that he/she/they executed the s), and that by his/her/their signature(s) on the behalf of which the person(s) acted, executed the
WITNESS my hand and official seal. Signature of Notary Public My Commission Expires: 5 //5 //4	KHERA DOUGLASS Notary Public - Arizons Maricopa County My Commission Expires May 15 2014 Place Notary Seal Above

Page 5

Date: $\triangle / 2 / 1$	By: 7-1-
	Daniel J.B. Williams
State of Ove Co	
County of Manifold 3 ss.	
On Sapkinstal 2,2011, before	me, <u>Jung Guterme</u> , Notary
Public, personally appeared \(\sum_{\OmegaV\V} \in \sum_{\sum} \)	<u> R. Williaws</u> , personally known
to me or proved to me on the basis of satisfa	ictory 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(ie	s), 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	
WITNESS my hand and official seal.	OFFICIAL SEAL AUANA GUTTERMEZ HOTARY PUBLIC - OREGON COMMISSION NO. 427864
	MY COMMISSION EXPIRES MAY 2, 2012
Signature of Notary Public	Place Notary Seal Above
My Commission Expires: $N(U_1, Q_1, 2)$	

Date: <u>9/4/11</u>	Ву:
	\(\) Ian Gould
State of ARIZONA	
) 53, County of <u>MARICAPA</u>	
	e, <u>KHERA DOUG (ASS.,</u> Notary
Public, personally appeared IAN QO	<u>ULD</u> , personally known
to me or proved to me on the busis of satisfact	ory evidence, to be the person(s) whose name(s)
is/are subscribed to the within instrument and a	cknowledged 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 be	chalf of which the person(s) acted, executed the
instrument.	
WITNESS my hand and official seal.	KHERA DOUGLASS Notary Public - Arizona
	Maricope County My Commission Expires May 15, 2014
Signature of Notary Public	Bloom Matom: Cond Alexand
	Place Notary Seal Above
My Commission Expires: <u> </u>	

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	Mark A Hayes
State of <u>ARIZONA</u>) ss. County of <u>MARICOPA</u>)	
Public, personally appeared MAKK	me, <u>KHERA DOUG (ASS</u> , Notary <u>CA-HAYES</u> , personally known
is/are subscribed to the within instrument as same in his/her/their authorized capacity(sfactory evidence, to be the person(s) whose name(s) and acknowledged to me that he/she/they executed the (ies), and that by his/her/their signature(s) on the behalf of which the person(s) acted, executed the
WHTNESS my hand and official seal.	KHERA DOUGLASS Notary Public - Arizona Maricopa County
	My Commission Expires May 15, 2014
Signature of Notary Public My Commission Expires: 5/15/14	Place Notary Seal Above

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RECORDED: 09/28/2011