# PATENT ASSIGNMENT

# Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
Adenosine Therapeutics, LLC	08/20/2008

### **RECEIVING PARTY DATA**

Name:	PGxHealth, LLC
Street Address:	One Gateway Center
Internal Address:	Suite 702
City:	Newton
State/Country:	MASSACHUSETTS
Postal Code:	02458

### PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12501750

### **CORRESPONDENCE DATA**

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ATTORNEY DOCKET NUMBER: 118553-11202

NAME OF SUBMITTER:

A. Jacqueline Wizeman, Ph.D.

**Total Attachments: 9** 

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## PATENT ASSIGNMENT AGREEMENT

WHEREAS, ADENOSINE THERAPEUTICS, L.L.C., a Virginia limited liability company (hereinafter referred to as "Assignor") has agreed that it will assign to Assignee (defined below) all of its right, title and interest in and to all of the patents and patent applications listed or described in <u>Schedule 1</u> attached hereto and incorporated herein by reference; and

WHEREAS, PGX HEALTH, LLC, a Delaware limited liability company (hereinafter referred to as "Assignee") and a wholly-owned subsidiary of Clinical Data, Inc., a Delaware Corporation, is desirous of acquiring all rights, title, and interest in and under the Intellectual Property (as defined below).

Now, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor assigns and transfers to Assignee and Assignee's legal representatives, successors and assigns all of its right, title and interest to those patents and applications identified as such in Schedule 1 hereto, and (i) all U.S. and foreign patents and patent applications that claim priority to such identified patents and applications and all U.S. and foreign patents and applications to which such identified patents and applications relate or claim priority, directly or indirectly, (ii) any provisionals, continuations, continuations-in-part, divisionals, reissue applications, re-examinations, substitutions, extensions, foreign counterparts, Patent Cooperation Treaty applications, or derivatives of any of the foregoing, both foreign and domestic, which have or may be filed, (iii) all patents (including, but not limited to reissues and re-examinations) which may be granted on the applications set forth in (i) and (ii) above, and (iv) all patentable inventions, in the U.S. and every foreign country, described or embodied in any of the foregoing, (the "Intellectual Property") and does hereby authorize and request the Commissioner of Patents to issue U.S. patents to the above-mentioned Assignee in accordance with the terms of this assignment document. Such full and exclusive rights shall include, without limitation, the right to sue upon and otherwise enforce the Intellectual Property and to recover all past damages and other potential relief arising from infringement of the Intellectual Property assigned by this agreement.

ASSIGNOR HEREBY AUTHORIZES Assignee and its attorney of record to insert on this assignment document, including <u>Schedule 1</u>, any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office and/or any foreign patent office for recordation of this document and Assignor hereby authorizes and requests the United States Patent and Trademarks Office to issue said Letter Patents in accordance with this agreement.

UPON SAID CONSIDERATION, Assignor conveys to Assignee the right to make application in its own behalf for protection of the Intellectual Property in the U.S. and countries foreign to the U.S. and to claim under the Patent Cooperation Treaty, the International Convention and/or other international arrangement for any such application the date of any earlier U.S. application (or any other application on the invention) to gain priority with respect to other applications.

IN WITNESS WHEREOF, Assignor has caused one of its authorized representatives to hereunder set his hand on the date shown below and Assignee has caused one of its officers to hereunder set his hand on the date shown below to signify its acceptance of this assignment.

[Signature page follows]

IN WITNESS WHEREOF, Assignor has caused this Patent Assignment Agreement to be signed by its duly authorized officer as of August 20, 2008.

# **ASSIGNOR**

ADENOSINE THERAPEUTICS, L.L.C.
ву:
Name: Robert S. Capón
Title: Chief Executive Officer
Title. Chief Excelline Childen
ASSIGNEE
PGx Health, LLC
By: Cogenics, Inc. (its Sole Member)
Ву:
Name: Caesar J. Belbel
Title: Executive Vice President, Chief
Legal Officer and Secretary

Commonwealth
State of Yinginia
State of Yingina ) ss. County of Unrishesville )
On August 2014, 2018, before me, 5000 Million, Notary Public, personally
appeared Robert S. Capia, 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.
WITNESS my hand and official seal.
Notary ID 7101431
Signature of Notary Public
My Commission Expires: Sono 20/1

IN WITNESS WHEREOF, Assignor signed by its duly authorized officer as of	r has caused this Patent Assignment Agreement to be August, 2008.
	ASSIGNOR
	ADENOSINE THERAPEUTICS, L.L.C.
	By:
	Name: Robert S. Capon Title: Chief Executive Officer
	ASSIGNEE
	PGx Health, LLC
	By: Cogenics, Inc. (its Sole Member)
	By: Name: Caesar J. Belbel Title: Executive Vice President, Chief Legal Officer and Secretary
State of Massachuse HS  ) ss.  County of Middle sex	
	Kathieen Polzelt, Notary Public, personally
1	, personally known to me or proved to me on the basis of
	ame(s) is/are subscribed to the within instrument and acknowledged
·	r/their authorized capacity(ies), and that by his/her/their
	entity upon behalf of which the person(s) acted, executed the
instrument.	
WITNESS my hand and official seal.	
Bauer Paget	_
Signature of Notary Public	Place Notary Seal Above

My Commission Expires: Feb. 7, 2014

# Seller Patents handled by Williams Mullen

2006109474	Substituted 8 - Heteroaryl Xanthines	P E Z	XP2	RC	ATL-002-RU	029514.0036
08/20/04	Substituted 8 Heteroaryl Xanthines	EXP	PCT	WO	ATL-002-PCT	029514.0015
03/03/06	Substituted 8-Heteroaryl Xanthines	PEN	XP2	NZ	ATL-002-NZ	029514.0016
02/24/06 645745	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	<b>∑</b>	ATL-002-MX	029514.0035
02/24/06	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	줐	ATL-002-KR	029514.0031
2006-524733 02/27/06	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	Ğ	ATL-002-JP	029514.0042
1014/CHENP/2006 03/24/06	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	Z	ATL-002-IN	029514.0041
02/14/06	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	F	ATL-002-IL	029514.0040
/103594./ 4/3/07	Substituted 8 - Heteroaryl Xanthines			<b>풎</b>	ATL-002-HK	029514.0069
02/14/06 7400504 7	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	핑	ATL-002-EP	029514.0044
200480037455.4	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	8	ATL-002-CN	029514.0043
2536553 02/22/06	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	S	ATL-002-CA	029514.0038
PI0413922-4 02/24/06	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	界	ATL-002-BR	029514.0037
03/03/06	Substituted 8 - Heteroaryl Xanthines	PEN	XP2	AU	ATL-002-AU	029514.0039
08/25/04 08/25/04	Substituted 8 - Heteroaryl Xanthines Pharmaceutical Compositions	PEN	XP2	AR	ATL-002-AR	029514.0045
App. No. App Date	Short Title	Status	Case Type	Ctry	Seller File No.	WM File No.

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S	WM File No.	Seller File No.	Ctry	Case Type	Status	Short Title	App. No. App Date
0	029514.0051	ATL-003-US	SU	NAT	REG	Utility - Selective Antagonists A2A Adenosine Receptors	11/097,251 04/04/05
2	029514 0077	ATL-004-PCT	§ o	PCT	PEN	Substituted Arylpiperidinylalkynladenosines as A2A Agonist	US2007012043 5/18/07
9 9	020514 0057	ATI-004-PR	SU	PRO	CLD CLD	Provisional 1 - Substituted Aryl  Provisional 1 - Substituted Aryl	60/794,843 04/26/06
5 6	020014.0007	ATI -004-PR1	SU	PRO	CP CP	Provisional 2 - Substituted Aryl  Provisional 2 - Substituted Aryl  Approximately provided the state of the s	60/747,625 05/18/06
	20544 0076	VII -007-118	<u> </u>	NAT	PEZ	Substituted Arylpiperidinylalkynladenosines as A2A	11/804,165 5/14/07
	029014.0070		5   9	7		Substituted 8 Heteroaryl Xanthines	US2007/013849
T 0	029514.0091	ATL-005-PCT	N C	FC.	ת ת צ		60/805,030
0	029514.0046	ATL-005-PR	SU	PRO	CLD	Provisional 1 - Substituted 8 - Heteroaryl Xanumes	06/16/06
0	029514.0047	ATL-005-PR1	SU	PRO	CLD	Provisional 2 - Substituted 8 - Heteroaryl Xanthines	06/22/06
$\overline{}$	029514.0090	ATL-005-US	SU	NAT	PEN	Substituted 8 Heteroaryl Xanthines	11/811,823 6/12/2007
<u>. T</u>	029514 0027	ATI -006-PCT	<b>∀</b> 0	PCT	PEN	Pyrazol YL Substituted Xanthines	US2006/06748 02/27/06
<u> </u>	020514 0065	ATI -006-PR	US	PRO	CP CP	Provisional - Pyrazolyl Substituted Xanthines	60/656,105 02/25/05
	020514 0088	ATI -006-US	SU	NAT	PEZ	Utility - Pyrazolyl Substituted Xanthines	11/362,393 02/27/06
	020544 0008	ATI _007_PCT	<b>∑</b>	PCT	PEZ	Pyridyl Substituted Xanthines	US2006/006745 02/27/06
	000544 0055	ATI _007_DB		PRO	CLD C	Provisional - Pyridyl Substituted Xanthines	60/656,087 02/25/05
	000511 0056	ATI -007-119		Z AZ	PEN	Utility - Pyridyl Substituted Xanthines	11/362,387 02/27/06
	029014.0000	VII -008-BCI	§ 6	PCT :	PEZ	Methods for the Synthesis of Unsymmetrical Cycloalkyl	US2006/006838 02/27/06
<del></del>	029514.0067		US	PRO	CLD	Provisional - Methods for the Synthesis of Unsymmetrical Cycloalkyl Substituted Xanthines	60/656,104 2/25/05
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Schedules Page 7

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WM File No.	Seller File No.	Ctry	Case Type	Status	Short Title	App. No. App Date
029514.0054	ATL-008-US	SU	NAT	PEN	Utility - Methods for the Synthesis of Unsymmetrical Cycloalkyl Substituted Xanthines	11/362,390 10/13/06
029514.0026	ATL-009-PCT	80	PCT	PEN	Derivatives of 8-Substituted Xanthines	US2006/06746 02/27/06
029514.0063	ATL-009-PR	SU	PRO	CLD	Provisional - Derivatives of 8 - Substituted Xanthines	60/656,086 02/25/06
029514.0064	ATL-009-US	S	NAT	PEN	Utility - Derivatives of 8 - Substituted Xanthines	11/362,392 02/27/06
029514.0093	ATL-010-PCT	<b>₩</b> 0	PCT	PEN	Selective Antagonist of A2A Adenosine Receptors	PCT/US2007/016164 7/17/07
029514 0050	ATI -010-PR	SU	PRO	CLD	Provisional 2 - Selective Antagonists A2A Adenosine	60/807,545 07/17/06
030514 0003	ATI _010_1 IS	<u> </u>	NAT	PEZ	Selective Antagonists of A2A Adenosine Receptors	11/879,133 7/16/07
029514.0059	ATL-011-PR	S	PRO	CLD	Provisional - New Compositions and Methods for the	60/704,433 08/02/05
029514.0060	ATL-011-US	S	NAT	PEN	Utility - New Compositions and Methods for the Treatment of Inflammation	11/497,280 08/02/06
029514.0061	ATL-012-PR	S	PRO	CLD	Provisional - Methods for the Synthesis of Substituted Amino Uracils	60/711,422 08/26/05
029514.0062	ATL-012-US	CS	NAT	PEN	Utility - Methods for the Synthesis of Substituted Amino Uracils	11/510,632 08/28/06
029514.0097	ATL-014-PCT	WO	PCT	PEN	Pyrrolo[3,2-D]Pryimidines That Are Selective Antagonists of A2B Adenosine Receptors	US2007/019266 9/4/07
029514.0052	ATL-014-PR	S	PRO	CFD	Provisional - Selective Antagonists A2B Adenosine Receptors	60/824,316 09/01/06
029514.0096	ATL-014-US	S	NAT	PE Z	PYRROLO[3,2-D]PYRIMIDINES THAT ARE SELECTIVE ANTAGONISTS OF A2B ADENOSINE RECEPTORS	11/897,678 8/31/07
029514.0053	ATL-015-PR	SU	PRO	CFD	Provisional - Antagonists of A2B Adenosine Receptors for Treatment of Ulcerative Colitis	60/829,369 10/13/06
029514.0014	ATL-015-PR	US	PRO	CLD	Antagonists of A2B Adenosine Receptors for Treatment of Inflammatory Bowel Disease	60/878,613 01/04/07

Schedules Page 8

12/19/06	Methods for Preparing 2-Alkynyladenosine Derivatives	PEN	XP2	풎	ATL-7224-HK	029514.0086
04752741.1 11/14/05	Methods for Preparing 2-Alkynyladenosine Derivatives	PEZ	XP2	m P	ATL-7224-EP	029514.0085
200480020486X 1/10/06	Methods for Preparing 2-Alkynyladenosine Derivatives	PEN	XP2	2	ATL-7224-CN	029514.0084
11/18/05	Methods for Preparing 2-Alkynyladenosine Derivatives	PEN	XP2	S	ATL-7224-CA	029514.0083
61/075,096	Alkoxy-Carbonyl-Amino-Alkynyl-Adenosine Compounds and Derivatives Thereof as A2AR Agonists	PEN	PRO	SU	ATL-023-P1	029514.0113
12/014,949 1/16/2008	Adenosine Derivative Formulations for Medical Imaging	PEN	NAT	SU	ATL-022-US	029514.0104
60/885,489 1/18/07	Adenosine Derivative Formulations for Medical Imaging	EXP	PRO	SU	ATL-022-PR	029514.0079
US2008/00549 1/16/2008	Adenosine Derivative Formulations for Medical Imaging	PEN	PCT	W <sub>O</sub>	ATL-022-PCT	029514.0105
61/046,568 4/21/08	Substituted 8-[Carbonylamine -3-Pyrildyl] Xanthines	PEN	PRO	SU	ATL-021-P1	029514.0109
12/17/2007	SUBSTITUTED 8-[6-AMINO-3-PYRIDYL]XANTHINES	PEN	PRO	SU	ATL-019-P1	029514.0101
1/09/2008	INTRATHECAL TREATMENT OF NEUROPATHIC PAIN WITH A2AR AGONISTS	PEN	PRO	SU	ATL-018-P1	029514.0103
61/015,303 12/20/2007	SUBSTITUTED 4-{3-[6-AMINO-9-(3, 4-DIHYDROXY-TETRAHYDRO-FURAN-2-YL)-9H-PURIN-2-YL]-PROP-2-YNYL}-PIPERIDINE-1-CARBOXYLIC ACID ESTERS AS A2AR AGONISTS	PEZ	PRO	SU	ATL-017-P1	029514.0102
12/102,185 4/14/08	Agonists of A2A Adenosine Receptors for Treating Recurrent Tumor Growth in the Liver Following Resection	PE N	NAT	SU	ATL-016-US	029514.0106
60925736 4/23/07	Agonists of A2A Adenosine Receptors for Treating Recurrent Tumor Growth in the Liver Following Resection	CLD	PRO	S	ATL-016-PR	029514.0072
US2008/060304 4/15/08	Agonists of A2A Adenosine Receptors for Treating Recurrent Tumor Growth in the Liver Following Resection	PEZ	PCT	₩ O	ATL-016-PCT	029514.0107
App. No. App Date	Short Title	Status	Case Type	Ctry	Seller File No.	WM File No.

Schedules Page 9

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RECORDED: 12/21/2010

Methods for Preparing 2-Alkynyladenosine Derivatives  Methods for Preparing 2-Alkynyladenosine Derivat	EXP   Methods for Preparing 2-Alkynyladenosine Delivatives	PCT	<b>§</b> 0	ATL-7224-WO	029514.0082
nosine Derivatives nosine Derivatives nosine Derivatives nosine Derivatives nosine Derivatives				CNI	
nosine Derivatives nosine Derivatives nosine Derivatives nosine Derivatives	PEN Methods for Preparing 2-Alkynylade	CONT	SU	ATL-7224-US-	029514.0098
nosine Derivatives nosine Derivatives nosine Derivatives nosine Derivatives	CLD Methods for Preparing 2-All	NAT	SU	ATL-7224-US	029514.0081
nosine Derivatives nosine Derivatives nosine Derivatives	CLD Methods for Preparing 2-All	PRO	S	ATL-7224-PR	029514,0080
nosine Derivatives	PEN Methods for Preparing 2-Alk	XP2	X X	ATL-7224-MX	029514.0088
nosine Derivatives	PEN Methods for Preparing 2-Alk	XP2	Ų.	ATĻ-7224-JP	029514.0078
nosine Derivatives	+	+	]		023014.0007
	PEN Methods for Preparing 2-Alkynylade	XP2	z	ATI -7224-IN	020514 0087
Short Title  App. No.  App Date	Status Short	Case S Type	Ctry	Seller File No.	WM File No.