505977737 03/20/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6024445

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOHN P. TOSCANO	01/15/2014
FREDERICK ARTHUR BROOKFIELD	01/14/2014
STEPHEN MARTIN COURTNEY	01/14/2014
LISA MARIE FROST	01/14/2014
VINCENT JACOB KALISH	01/14/2014
JOHN REARDON	01/16/2014

RECEIVING PARTY DATA

Name:	CARDIOXYL PHARMACEUTICALS, INC.
Street Address: 1450 RALEIGH ROAD	
Internal Address: EXCHANGE EAST, SUITE 212	
City:	CHAPEL HILL
State/Country:	NORTH CAROLINA
Postal Code:	27517

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16779015

CORRESPONDENCE DATA

Fax Number: (212)931-8521

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: 2125098800

Email: info@byrnepoh.com
Correspondent Name: NINA R. HORAN
Address Line 1: 11 BROADWAY

Address Line 2: SUITE 760

Address Line 4: NEW YORK, NEW YORK 10004

ATTORNEY DOCKET NUMBER:	0301180.137-US5
NAME OF SUBMITTER:	NINA R. HORAN
SIGNATURE:	/Nina R. Horan/
DATE SIGNED:	03/20/2020

505977737 REEL: 052177 FRAME: 0727

Total Attachments: 5

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PATENT REEL: 052177 FRAME: 0728

ASSIGNMENT

WHEREAS, I, the undersigned,

John P. Toscano, resident of 18 Tree Farm, Glen Arm, Maryland 21057, USA;

have invented certain new and useful improvements in "PHARMACEUTICAL COMPOSITIONS COMPRISING NITROXYL DONORS" and have executed an application for PCT International Application, having Application No. PCT/US2014/012089 , filing date of January 17, 2014, and

WHEREAS, CARDIOXYL PHARMACEUTICALS, INC. (hereinafter termed "Assignee"), a corporation of the State of <u>Delaware</u>, having a place of business at <u>1450 Raleigh Road</u>, <u>Exchange East</u>, <u>Suite 212</u>, <u>Chapel Hill, NC 27517</u>, <u>USA</u>, desires to acquire the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered by me (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration, receipt and sufficiency of which is acknowledged by me to have been received in full from said Assignee:

- 1. I do hereby sell, assign, transfer and convey unto said Assignee, the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a division, substitution, or continuation of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.
- 2. I hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right title and interest herein conveyed in the United States and foreign countries. Such cooperation by me shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by me in providing such cooperation shall be paid for by said Assignee.
- 3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon me, my respective heirs, legal representatives and assigns.
- 4. I hereby warrant and represent that I have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. I hereby authorize and request the attorneys at Dechert LLP to insert the filing date and application number of said application when known, after this instrument has been executed.

	IN WITNESS WHEREOF, I have executed and delivered this instrument to said Assignee.	
Date:	1/15/14 By: John P. Toscano	
	<i>A</i> ,	
County of	Daltimore,	
State of	Maeyland ss.	
On this	15 Hay of January in the year 2014, before me, January	Notary Public
personal	y appeared John P. Toscano, who proved to me on the basis of satisfactory evidence to by the person whose name is subscrit	ed to the withi
instrume	it, and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instructity upon behalf of which the person acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws	ment, the person of the State c
Ma	that the foregoing paragraph is true and correct.	
	S my hand and official seal.	
	The state of the s	
Signatur	SEPT SEPT	
Signatur	(Notary Públic)	
	Page 1 of 1 MORE COUNTY	
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	" " " " " " " " " " " " " " " " " " "	

PATENT REEL: 052177 FRAME: 0729

ASSIGNMENT

WHEREAS, we, the undersigned,

Frederick Arthur Brookfield, resident of 114 Innovation Drive, Milton Park, Abingdon, Oxfordshire, United Kingdom OX14 4RZ;

Stephen Martin Courtney, resident of 114 Innovation Drive, Milton Park, Abingdon, Oxfordshire, United Kingdom OX14 4RZ; and

Lisa Marie Frost, resident of 114 Innovation Drive, Milton Park, Abingdon, Oxfordshire, United Kingdom OX14 4RZ;

have invented certain new and useful improvements in "PHARMACEUTICAL COMPOSITIONS COMPRISING NITROXYL DONORS" and have executed an application for PCT International Application, having Application No. PCT/US2014/012089 filing date of January 17, 2014, and

WHEREAS, <u>CARDIOXYL PHARMACEUTICALS</u>, <u>INC.</u> (hereinafter termed "Assignee"), an organization of the State of <u>Delaware</u>, having a place of business at <u>1450 Raleigh Road</u>, <u>Exchange East. Suite 212</u>, <u>Chapel Hill, NC 27517</u>, <u>USA</u>, desires to acquire the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered by us (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration, receipt and sufficiency of which is acknowledged by us to have been received in full from said Assignee:

- 1. We do hereby sell, assign, transfer and convey unto said Assignee, the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a division substitution, or continuation of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.
- We hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right title and interest herein conveyed in the United States and foreign countries. Such cooperation by us shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by us in providing such cooperation shall be paid for by said Assignee.
- 3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon us, our respective heirs, legal representatives and assigns.

Page 1 of 2

18846345.1.BUSINESS

- 4. We hereby warrant and represent that we have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. We hereby authorize and request the attorneys at Dechert LLP to insert the filing date and application number of said application when known, after this instrument has been executed.

IN WITNESS WHEREOF, we have executed and delivered this instrument to said Assignee.

By: FA Shoot alc Frederick Arthur Brookfield Date: 14 TH JANUARY 2014	By: Stephen Martin Courtney Date: 14 h January 2014
WITNESSES: Signature: Muthatchins. Signature: Japania - Ich	WITNESSES: Signature: Palbain - Kalel
By: Lisa Marie Frost Date: 1474 JANUARY 2014	Signature: Valdain - Kalel
Signature: Faloria toles	

ASSIGNMENT

WHEREAS, I, the undersigned,

Vincent Jacob Kalish, resident of 344 Dubois Road, Annapolis, MD 21401, USA;

have invented certain new and useful improvements in "PHARMACEUTICAL COMPOSITIONS COMPRISING NITROXYL DONORS" and have executed an application for PCT International Application, having Application No. PCT/US2014/012089 , filing date of January 17, 2014, and

WHEREAS, CARDIOXYL PHARMACEUTICALS, INC. (hereinafter termed "Assignee"), a corporation of the State of Delaware, having a place of business at 1450 Raleigh Road, Exchange East. Suite 212, Chapel Hill, NC 27517, USA, desires to acquire the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered by me (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration, receipt and sufficiency of which is acknowledged by me to have been received in full from said Assignee:

- 1. I do hereby sell, assign, transfer and convey unto said Assignee, the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a division, substitution, or continuation of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.
- 2. I hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right title and interest herein conveyed in the United States and foreign countries. Such cooperation by me shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filling and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filling and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by me in providing such cooperation shall be paid for by said Assignee.
- 3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon me, my respective heirs, legal representatives and assigns.
- 4. I hereby warrant and represent that I have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. I hereby authorize and request the attorneys at Dechert LLP to insert the filing date and application number of said application when known, after this instrument has been executed.

	IN WITNESS WHEREOF, I have executed and delivered this instrument to said Assignee. Y Jan 2014 By: Vincent Jacob Kalish
County of	Ovarial SS
State of	NOTTY TOURS
On this_	4 day of bondary in the year 2014, before me, Jillian Kashi Notary Public,
personally	appeared Vincent Jacob Kalish, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the
within inst	rument, and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument, the hig entity upon behalf of which the person acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws that the laws the laws that the laws th
	that the foregoing paragraph is true and correct.
	my hand and official seal.
Signature	Tillian Vashi
	(Notary Public) (Seal)
	County, is
	Proc 1 of 1

PATENT REEL: 052177 FRAME: 0732

18846351, LBUSINESS

ASSIGNMENT

WHEREAS, I, the undersigned,

John Reardon, resident of Cardioxyl Pharmaceuticals, Inc., 1450 Raleigh Road, Exchange East. Suite 212, Chapel Hill, NC 27517, USA

have invented certain new and useful improvements in "PHARMACEUTICAL COMPOSITIONS COMPRISING NITROXYL DONORS" and have executed an application for PCT International Application, having Application No. PCT/US2014/012089 , filing date of January 17, 2014, and

WHEREAS, <u>CARDIOXYL PHARMACEUTICALS</u>, <u>INC.</u> (hereinafter termed "Assignee"), a corporation of the State of <u>Delaware</u>, having a place of business at <u>1450 Raleigh Road</u>, <u>Exchange East</u>, <u>Suite 212</u>, <u>Chapel Hill</u>, <u>NC 27517</u>, <u>USA</u>, desires to acquire the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered by me (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration, receipt and sufficiency of which is acknowledged by me to have been received in full from said Assignee:

- 1. I do hereby sell, assign, transfer and convey unto said Assignee, the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a division, substitution, or continuation of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.
- 2. I hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right title and interest herein conveyed in the United States and foreign countries. Such cooperation by me shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by me in providing such cooperation shall be paid for by said Assignee.
- 3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon me, my respective heirs, legal representatives and assigns.
- I hereby warrant and represent that I have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. I hereby authorize and request the attorneys at Dechert LLP to insert the filing date and application number of said application when known, after this instrument has been executed.

IN WITNESS WHERE	OF, I have executed and d	elivered this instrume	ent to said Assigned	3.	
Date: <u>Jan 16, 201</u>	<u> </u>	y: John Reardon	Kando		_
	•				
County of Ovange State of North Canada					
State of Morth Canaci	<u>nc.</u>)				
On this Warm day of Janu	and, in the year 2014, b	efore me, Khstin	W. Grahar	Notary name is subscribed to th	Public, e within
personally appeared John Reardon	, who proved to me on the basic	OI Satisfactory evidence	and that he his/her sign	ature on the instrument, th	e person State of
instrument, and acknowledged to me the or the entity upon behalf of which the NOAN CALOLINA that it	person acted, executed the mou	union. I certify onser.	W11, 120 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	() 211201 1110 12110 1110	
WITNESS my hand and official seal.			11		
Signature Wintu W. (Notary Put	greham	- (Notary Public My Commission 20	m) c)		
(Notary Put	(c)	- My Conings	No E (Seal)		
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RECORDED: 03/20/2020