504448528 07/10/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4495229

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HENRIK ALBERT	06/29/2017
JOHN LAWRENCE ANDREASSI II	07/10/2017
SEAN BERTAIN	06/29/2017
LINDA A CASTLE	06/30/2017
STEVEN GUTTERIDGE	06/29/2017
DANIEL L SIEHL	06/29/2017
KAY WALTER	06/29/2017

RECEIVING PARTY DATA

Name:	PIONEER HI-BRED INTERNATIONAL, INC.
Street Address:	7100 NW 62ND AVENUE
Internal Address:	P.O. BOX 1014
City:	JOHNSTON
State/Country:	IOWA
Postal Code:	50131-1014

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13915638

CORRESPONDENCE DATA

Fax Number: (302)355-4243

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.

using a lax humber, ii provided, ii that is diisuccessidi, it will be sent via o

Phone: 3029994278

Email: pto-legal.prc@dupont.com

Correspondent Name: PIONEER HI-BRED INTERNATIONAL, INC.

Address Line 1: 7100 NW 62ND AVENUE

Address Line 2: P.O. BOX 1014

Address Line 4: JOHNSTON, IOWA 50131-1014

ATTORNEY DOCKET NUMBER:	BB1913-US-NP
NAME OF SUBMITTER:	AHNALESE RUSHMANN
SIGNATURE:	/Ahnalese Rushmann/

504448528 REEL: 042947 FRAME: 0027

PATENT

DATE SIGNED:	07/10/2017		
Total Attachments: 7			
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WORLDWIDE ASSIGNMENT

office of any other country for recordation of the regarding application number and filing date when In Witness Whereof, I have executed this Worldwi	known. de Assignment on the o	date indicated by id application(s) f	my hand and or Letters Pa	d agree that this Worldwide
identification which may be necessary or desirable office of any other country for recordation of the regarding application number and filing date when In Witness Whereof, I have executed this Worldwi Assignment shall be effective as of the earliest prior	known. de Assignment on the o	date indicated by	my hand and	d agree that this Worldwide
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IV. Agree that my grants and obligations herein sh				_
III. Represent, warrant and covenant that I have th is not pre-dated by any grant, license, or other right	_		_	
with assignee;	ا عددالحد عامن الراكم	ا	+hio c!	
representatives to obtain, maintain, defend and en	force patent protection	for such Inventic	ons and/or se	cure title to such Invention
requested by said assignee and (D) generally to			_	
including petitions, specifications, oaths, assignm				-
by said assignee, its successors, assigns and legal				
should my country of residence prohibit such testir				
above, the location of that testimony to be in the c				_
Inventions or the rights described above, (B) to te		-	-	·
II. Agree, whenever assignee asks, without further(A) to communicate to said assignee, its succe				
assignment;	componentian but at	signoo's overess	for actual a-	d roaconable costs in surres -
said patents may be granted, as fully and entirely	as the same would have	e been held and	enjoyed by th	ne undersigned without thi
and damages for any and all infringements thereof				
transfer all of said patents to said assignee in acco				
and Trademarks of the United States of America ar			_	-
Convention or any other treaty or understanding,				
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(3) any and all of my inventions, whether joint or				
countries of the International Convention or other				
Property ("International Convention") and any ot				
rights derived from such aforesaid application(s) fo				
(A) the entire right, title, and interest in and				("Patent"). (2) any priority
State of Iowa in the United States of America and Johnston, Iowa 50131-1014, herein referred to as tl				2 Avenue, P.O. BOX 1014
I. Sell, assign, and transfer unto PIONEER HI-BRED I		-		_
obligation of assignment to assignee, which is herel	-		المراجعة	المراجع والمستراء والمستراء والمستراء
For valuable consideration, the receipt and	•	=	lged, and in f	ulfillment of my pre-existing
which claim(s) its earliest priority to Application S			, filed	
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M Officed States Of Afficility Pateri	t Application Serial No.	13/915638	, filed on	June 12, 2013 ,
☐ United States Of America Paten				
declaration executed on United States Of America				
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declaration executed on	<u>TE PREFERENCE</u> the su	bject matter of v	which is desc	ribed in the application fo

<u>v</u>	<u>VORLDWIDE ASSIGN</u>	<u>MENT</u>		
I, the undersigned JOHN LAWRENCE ANDREASSI II,				
COMPOSITIONS INVOLVING ALS VARIANTS WITH NA		<u>FERENCE</u> the subject	matter o	of which is described in the
application for patent (Attorney Docket No: <u>BB1913</u>	-US-NP)			
declaration executed on				
	Application Serial No.	13/915638 ,	filed on	June 12, 2013,
PCT Application Serial No.	filed on		C1 1	-
which claim(s) its earliest priority to Application Se	rial No.		, filed	
For valuable consideration, the receipt and			, and in fu	alfillment of my pre-existing
obligation of assignment to assignee, which is hereby				
I. Sell, assign, and transfer unto PIONEER HI-BRED IN				
State of Iowa in the United States of America and I Johnston, Iowa 50131-1014, herein referred to as the				2 Avenue, P.O. Box 1014,
(A) the entire right, title, and interest in and to				("Patent") (2) any priority
rights derived from such aforesaid application(s) for				
Property ("International Convention") and any oth				
countries of the International Convention or other t				
(3) any and all of my inventions, whether joint or				
arising out of such aforesaid application(s) for Paten				
in any country whatsoever, including all provisional,	non-provisional, divisi	ional, renewal, substi	tute, con	tinuation, continuations-in-
part, international and convention applications base				
Inventions, (5) any and all patents for any such Inventions				
extensions of any patent based in whole or in part u	•			
the entire right to (1) file such applications in its na				
Convention or any other treaty or understanding, (3 and Trademarks of the United States of America and				
transfer all of said patents to said assignee in accord				
and damages for any and all infringements thereof,				
said patents may be granted, as fully and entirely as				
assignment;			, ,	· · · · · · · · · · · · · · · · · · ·
II. Agree, whenever assignee asks, without further co	ompensation but at ass	signee's expense for a	actual and	d reasonable costs incurred,
(A) to communicate to said assignee, its success				
Inventions or the rights described above, (B) to tes				
above, the location of that testimony to be in the co				
should my country of residence prohibit such testime				
by said assignee, its successors, assigns and legal i				
including petitions, specifications, oaths, assignme				
requested by said assignee and (D) generally to d representatives to obtain, maintain, defend and enfo				
with assignee;	ree patent protection	ioi sacii ilivelitions a	ina, or sec	sare title to sach inventions
III. Represent, warrant and covenant that I have the	full right and lawful at	uthority to make this	assignme	ent, that such assigned right
is not pre-dated by any grant, license, or other right h				
IV. Agree that my grants and obligations herein sha				
assigns; and				
V. Agree that an authorized representative of ass				
dentification which may be necessary or desirable t				
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regarding application number and filing date when k				
In Witness Whereof, I have executed this Worldwid	=			
Assignment shall be effective as of the earliest priority date for the aforesaid application(s) for Letters Patent.				
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JOHN LAWRENCE ANDREASSI II	Jr. M	<u> </u>	-1/	10/1/
Name of Inventor 2	Signature of Inventor		Date/	(

	WORLDWIDE ASSIGNA				
I, the undersigned <u>SEAN BERTAIN</u> , herel INVOLVING ALS VARIANTS WITH NATIVE					
patent (Attorney Docket No: BB1913-US-	-	ject matter or v	VIIICII IS GCSC	inca in the app	neacion for
declaration executed on	/				
☐ United States Of America	Patent Application Serial No. 3	13/915638	, filed on	June 12, 2013	,
PCT Application Serial No.	filed on				
which claim(s) its earliest priority to App	lication Serial No.		, filed	on	•
For valuable consideration, the re	eceipt and adequacy of which is he	reby acknowled	ged, and in fu	ılfillment of my p	re-existing
obligation of assignment to assignee, whic	•	•			
I. Sell, assign, and transfer unto PIONEER					
State of Iowa in the United States of Am				^{2nd} Avenue, P.O.	Box 1014,
Johnston, Iowa 50131-1014, herein referr				///D=+==+//\ /2\ -	
(A) the entire right, title, and interes rights derived from such aforesaid applica					
Property ("International Convention") ar					
countries of the International Convention					
(3) any and all of my inventions, whether					
arising out of such aforesaid application(s					
n any country whatsoever, including all p					
part, international and convention applica	ations based in whole or in part up	on such afores	aid applicatio	n(s) for Patent a	nd/or such
Inventions, (5) any and all patents for an					
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Convention or any other treaty or unders					
and Trademarks of the United States of A		•			
transfer all of said patents to said assigne and damages for any and all infringement					
said patents may be granted, as fully and	• •				
assignment;	chancily as the same would have t	occir ricia aria c	injoyed by in	e anacionanica ii	Terro de erno
I. Agree, whenever assignee asks, withou	t further compensation but at assig	gnee's expense	for actual and	l reasonable cost	s incurred,
(A) to communicate to said assignee,					
nventions or the rights described above,	(B) to testify in any legal proceed	ding respecting	such Invention	ons or the rights	described
above, the location of that testimony to b					
should my country of residence prohibit s					
by said assignee, its successors, assigns					
ncluding petitions, specifications, oaths,					· · · · · · · · · · · · · · · · · · ·
requested by said assignee and (D) gen					
representatives to obtain, maintain, defer with assignee;	id and enforce patent protection is	or such inventio	ns anu/or sec	ure title to such	mventions
II. Represent, warrant and covenant that	I have the full right and lawful aut	hority to make	this assignme	nt, that such ass	igned right
s not pre-dated by any grant, license, or o					
V. Agree that my grants and obligations					atives, and
assigns; and					
V. Agree that an authorized representa	itive of assignee is hereby grante	ed the power to	o insert in th	nis assignment a	ny further
dentification which may be necessary or					
office of any other country for recordat		the power to	insert on th	is assignment ir	ıformation
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In Witness Whereof, I have executed this	-		-	-	Worldwide
Assignment shall be effective as of the ear	liest priority date for the aforesaid a	ipplication(s) for	r Letters Pater	nt.	
	0		Pr	0/15	
SEAN BERTAIN			6/2	27/1	
Name of Inventor 3	Signature of Inventor		Date		

WORLDWIDE ASSIGNMENT

		AROUTOANIDE VOOIGIA				
	undersigned <u>LINDA A CASTLE</u> , herei VING ALS VARIANTS WITH <u>NATIVE</u> !					
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	declaration executed on					
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	assign, and transfer unto PIONEER I			zed and ex	disting under the law	s of the
State	of lowa in the United States of Ame	erica and having its principal pla	ice of business at 7	100 NW 6	2 nd Avenue, P.O. Bo	эх 1014
	ton, lowa 50131-1014, herein referre					
	A) the entire right, title, and interest				("Patent"), (2) any	priority
	derived from such aforesaid applical					
	rty ("International Convention") and					
count	ries of the International Convention	or other treaty or understanding	ig, including rights li	n any and	all provisional appli	cations
(3) as	ny and all of my inventions, whethe	r joint or sole, disclosed in such	aforesaid application	on(s) for t	Patent, and/or relate	ed to or
	gout of such aforesaid application(s)					
	country whatsoever, including all pr					
-	nternational and convention applica					
	tions, (5) any and all patents for any					
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	A) to communicate to said assignee,	the state of the s	· ·			
Invent	tions or the rights described above,	(8) to testify in any legal proce	eding respecting su	ch Invent	ions or the rights de	escribed
above	, the location of that testimony to be	e in the country in which I reside	or in the nearest co	ountry in w	which such testimony	/ is lega
should	d my country of residence prohibit su	uch testimony, (C) to execute all	applications, papers	or instru	nents necessary or r	equired
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	of any other country for recordat					
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	LINDA A CASTLE			****		
	Name of Inventor 4	Signature of Inventor		Date		

WORLDWIDE ASSIGNMENT

STEVEN GUTTERIDGE, hereby declare that I am an inventor of an invention entitled METHODS AND

COMPO	<u>SITIONS INVOLVING ALS VARIAN</u>	<u>TS WITH NATIVE SUBSTRATE PRE</u>	FERENCE the s	subject matter o	of which is descri	bed in the
applicat	ion for patent (Attorney Docket N	lo: <u>BB1913-US-NP</u>)				
	declaration executed on					
\boxtimes	United States Of America	Patent Application Serial No.	13/915638	, filed on	June 12, 2013	
	PCT Application Serial No.	filed on		e.		
which	claim(s) its earliest priority to Ap	plication Serial No.		, filed	on	\$°
	For valuable consideration, the	eceipt and adequacy of which is h	ereby acknow	ledged, and in f	ulfillment of my p	re-existing
obligatio	on of assignment to assignee, wh	ch is hereby acknowledged, I here	by:			

I. Sell, assign, and transfer unto PIONEER HI-BRED INTERNATIONAL, INC., a corporation organized and existing under the laws of the State of Iowa in the United States of America and having its principal place of business at 7100 NW 62nd Avenue, P.O. Box 1014, Johnston, Iowa 50131-1014, herein referred to as the assignee, and to assignee's successors and assigns,

(A) the entire right, title, and interest in and to: (1) the aforesaid application(s) for Letters Patent ("Patent"), (2) any priority rights derived from such aforesaid application(s) for Patent by virtue of the International Convention for the Protection of Industrial Property ("International Convention") and any other treaty or understanding for intellectual property for any and all member countries of the International Convention or other treaty or understanding, including rights in any and all provisional applications, (3) any and all of my inventions, whether joint or sole, disclosed in such aforesaid application(s) for Patent, and/or related to or arising out of such aforesaid application(s) for Patent ("inventions"), (4) any and all applications for Patent for any such inventions in any country whatsoever, including all provisional, non-provisional, divisional, renewal, substitute, continuation, continuations-inpart, international and convention applications based in whole or in part upon such aforesaid application(s) for Patent and/or such Inventions, (5) any and all patents for any such Inventions in any country whatsoever, including any and all reexams, reissues and extensions of any patent based in whole or in part upon such aforesaid application(s) for Letters Patent and/or such Inventions; (B) the entire right to (1) file such applications in its name or in my name, (2) file such applications under the aforesaid International Convention or any other treaty or understanding, (3) have said patents granted in its name or mine, the Commissioner of Patents and Trademarks of the United States of America and any counterpart in any other patent office being hereby authorized to issue or transfer all of said patents to said assignee in accordance herewith, and (4) enforce said patents and to sue for and recover profits and damages for any and all infringements thereof, whether past, present or future, to the full end of the term or terms for which said patents may be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned without this assignment;

- II. Agree, whenever assignee asks, without further compensation but at assignee's expense for actual and reasonable costs incurred,

 (A) to communicate to said assignee, its successors, assigns, and legal representatives, any facts known to me respecting such Inventions or the rights described above, (B) to testify in any legal proceeding respecting such Inventions or the rights described above, the location of that testimony to be in the country in which I reside or in the nearest country in which such testimony is legal should my country of residence prohibit such testimony, (C) to execute all applications, papers or instruments necessary or required by said assignee, its successors, assigns and legal representatives, to carry into effect any of the provisions of this instrument, including petitions, specifications, oaths, assignments, disclaimers, and lawful affidavits in form and substance which may be requested by said assignee and (D) generally to do everything possible to aid said assignee, its successors, assigns, and legal representatives to obtain, maintain, defend and enforce patent protection for such Inventions and/or secure title to such Inventions with assignee;
- III. Represent, warrant and covenant that I have the full right and lawful authority to make this assignment, that such assigned right is not pre-dated by any grant, license, or other right heretofore given by me to any party other than the assignee hereto;
- IV. Agree that my grants and obligations herein shall also bind all of my heirs, executors, administrators, legal representatives, and assigns; and
- V. Agree that an authorized representative of assignee is hereby granted the power to insert in this assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office or the patent office of any other country for recordation of this Assignment, including the power to insert on this assignment information regarding application number and filing date when known.

In Witness Whereof, I have executed this Worldwide Assignment on the date indicated by my hand and agree that this Worldwide Assignment shall be effective as of the earliest priority date for the aforesaid application(s) for Letters Patent.

STEVEN GUTTERIDGE

Name of Inventor 5

I, the undersigned

Signature of Inventor

Jant 29 2017.

Date

	WOKLDWIDE ASSIGN	IMENT	
I, the undersigned <u>DANIEL SIEHL</u> , hereby declare	e that I am an inventor	of an invention en	titled METHODS AND COMPOSITION
INVOLVING ALS VARIANTS WITH NATIVE SUBSTR patent (Attorney Docket No: BB1913-US-NP)	<u>ATE PREFERENCE</u> the su	ibject matter of whi	ich is described in the application fo
declaration executed on			
	nt Application Carial Na	12/015020	Made 10 0040
		13/915638	, filed on <u>June 12, 2013</u> ,
PCT Application Serial No. which claim(s) its earliest priority to Application S	filed on		61 1
For valuable consideration, the receipt an		oroby zaknowlodao	, filed on
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I. Sell, assign, and transfer unto PIONEER HI-BRED			zed and existing under the laws of the
State of Iowa in the United States of America and	d having its principal pla	ace of business at 7	100 NW 62 nd Avenue, P.O. Box 1014
Johnston, lowa 50131-1014, herein referred to as t	the assignee, and to assig	gnee's successors an	d assigns,
(A) the entire right, title, and interest in and	to: (1) the aforesaid ap	plication(s) for Lette	ers Patent ("Patent"), (2) any priority
rights derived from such aforesaid application(s) for	or Patent by virtue of the	e International Conv	ention for the Protection of Industria
Property ("International Convention") and any o	ther treaty or understa	nding for intellectu	al property for any and all member
countries of the International Convention or othe	r treaty or understandir	g, including rights in	any and all provisional applications
(3) any and all of my inventions, whether joint of arising out of such aforesaid application(s) for Pate	ent ("Inventions") (1)	aroresaid applications	on(s) for Patent, and/or related to of
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extensions of any patent based in whole or in part	upon such aforesaid ap	plication(s) for Lette	rs Patent and/or such Inventions; (B)
the entire right to (1) file such applications in its	name or in my name, (2	.) file such application	ons under the aforesaid International
Convention or any other treaty or understanding,	(3) have said patents gr	anted in its name o	r mine, the Commissioner of Patents
and Trademarks of the United States of America at	nd any counterpart in ar	y other patent offic	e being hereby authorized to issue or
transfer all of said patents to said assignee in acco and damages for any and all infringements thereo	fuance nerewith, and (4)	+) enforce said patei	nts and to sue for and recover profits
said patents may be granted, as fully and entirely	as the same would have	been held and enic	nend of the term or terms for which
assignment;	as the same weath have	. Deen neid and enje	yed by the undersigned without this
I. Agree, whenever assignee asks, without further	compensation but at ass	ignee's expense for	actual and reasonable costs incurred.
(A) to communicate to said assignee, its succe	essors, assigns, and legal	representatives, an	y facts known to me respecting such
nventions or the rights described above, (B) to to	estify in any legal proce	eding respecting suc	ch Inventions or the rights described
above, the location of that testimony to be in the c	ountry in which I reside	or in the nearest co	untry in which such testimony is legal
should my country of residence prohibit such testin	nony, (C) to execute all a	applications, papers	or instruments necessary or required
by said assignee, its successors, assigns and legal	representatives, to car	ry into effect any o	of the provisions of this instrument,
ncluding petitions, specifications, oaths, assignm equested by said assignee and (D) generally to	do overething possible	to aid said assigns	form and substance which may be
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II. Represent, warrant and covenant that I have th	e full right and lawful au	thority to make this	assignment, that such assigned right
s not pre-dated by any grant, license, or other right	: heretofore given by me	to any party other t	han the assignee hereto;
V. Agree that my grants and obligations herein sh	all also bind all of my he	eirs, executors, admi	inistrators, legal representatives, and
assigns; and			
/. Agree that an authorized representative of a	ssignee is hereby grant	ed the power to in	isert in this assignment any further
dentification which may be necessary or desirable	to comply with the rule	s of the U.S. Patent	and Trademark Office or the patent
office of any other country for recordation of the egarding application number and filing date when	ns Assignment, includin known	g the power to ins	ert on this assignment information
n Witness Whereof, I have executed this Worldwi		ata indicated has asse	hand and accorded to the tax of the
Assignment shall be effective as of the earliest prior	the data for the eferenced	are indicated by my	nand and agree that this worldwide
Assignment shall be effective as of the earliest prior	ty take for the aforesaid	application(s) for Le	enters Patent.
	(/ / () /	CAA)	
DANIEL L SIEHL	Louis H	Jul -	29 Jun 2017
Name of Inventor 6	Signature of Inventor	<u> </u>	
TIMILIA OF HILLAHOOF A	orginature of inventor		Date

	WORLDWIDE ASSIGN	<u>IMENT</u>			
I, the undersigned KAY WALTER, hereby decla	re that I am an inventor	of an invention er	ntitled <u>METI</u>	HODS AND COM	<u>POSITIONS</u>
INVOLVING ALS VARIANTS WITH NATIVE SUBST patent (Attorney Docket No: <u>BB1913-US-NP</u>)	<u>RATE PREFERENCE</u> the su	bject matter of wh	nich is desci	ribed in the app	ication for
declaration executed on					
	tent Application Serial No.	13/915638	_, filed on	June 12, 2013	,
PCT Application Serial No.	filed on				
which claim(s) its earliest priority to Application	n Serial No.		, filed o	on	
For valuable consideration, the receipt a	and adequacy of which is h	ereby acknowledge	ed, and in fu	ılfillment of my p	re-existing
obligation of assignment to assignee, which is he	reby acknowledged, I here	by:			
I. Sell, assign, and transfer unto PIONEER HI-BRE	D INTERNATIONAL, INC., a	corporation organi	ized and exi	isting under the I	aws of the
State of Iowa in the United States of America a Johnston, Iowa 50131-1014, herein referred to a	nu naving its principal pla	ice of business at 7	/100 NW 62	^{2™} Avenue, P.O.	Box 1014,
(A) the entire right, title, and interest in an	d to: (1) the aforesaid and	dication(s) for Lott	na assigns, ore Batont /	("Dotont") (2) -	and and another
rights derived from such aforesaid application(s)	for Patent by virtue of the	International Con	vention for	the Protection of	ny priority
Property ("International Convention") and any	other treaty or understa	nding for intellectu	ual property	v for any and al	I member
countries of the international Convention or oth	ier treaty or understandin	g, including rights i	in anv and a	all provisional an	nlications
(3) any and all of my inventions, whether joint	or sole, disclosed in such	aforesaid applicati	ion(s) for Pa	atent, and/or rel	ated to or
arising out of such aforesaid application(s) for Pa	tent ("Inventions"), (4) a	any and all applicati	ons for Pate	ent for any such	nventions
in any country whatsoever, including all provisio	nal, non-provisional, divisi	onal, renewal, subs	stitute, cont	inuation continu	iations-in-
part, international and convention applications be	ased in whole or in part u	ipon such aforesaid	l application	n(s) for Patent ar	id/or such
Inventions, (5) any and all patents for any such	inventions in any country	whatsoever, includ	ling any and	d all reexams, rei	ssues and
extensions of any patent based in whole or in pa the entire right to (1) file such applications in its	rt upon such aforesaid app	olication(s) for Lette	ers Patent a	nd/or such Inver	tions; (B)
Convention or any other treaty or understanding	z. (3) have said natents or	nte such applicati	ons under t	the aforesaid into	ernational
and Trademarks of the United States of America	and any counterpart in an	v other natent offic	re heing her	e Commissioner (of Patents
transfer all of said patents to said assignee in acc	cordance herewith, and (4) enforce said pate	ents and to	sue for and reco	o issue of er profits
and damages for any and all intringements there	of, whether past, present	or future, to the fu	ıll end of th	e term or terms	for which
said patents may be granted, as fully and entirely	y as the same would have	been held and enj	oyed by the	undersigned wi	thout this
assignment;					
II. Agree, whenever assignee asks, without furthe	r compensation but at assi	ignee's expense for	actual and	reasonable costs	incurred,
(A) to communicate to said assignee, its succ	essors, assigns, and legal	representatives, ar	ny facts kno	wn to me respec	ting such
Inventions or the rights described above, (B) to	testify in any legal procee	ding respecting su	ch Inventio	ns or the rights	described
above, the location of that testimony to be in the	imony (C) to execute all a	or in the nearest co	untry in wh	ich such testimo	ny is legal
should my country of residence prohibit such test by said assignee, its successors, assigns and leg	al representatives to care	pplications, papers	or instrume	ents necessary or	required
including petitions, specifications, oaths, assigni	ments, disclaimers, and I	awful affidavite in	or the prov	visions of this in:	strument,
requested by said assignee and (D) generally to	o do everything possible	to aid said assign	PA its succ	substance Which	may be
representatives to obtain, maintain, defend and e	nforce patent protection f	or such Inventions	and/or secu	ire title to such li	anu legal Nentions
with assignee;					
III. Represent, warrant and covenant that I have t	he full right and lawful aut	thority to make this	assignmen	t, that such assig	ned right
is not pre-dated by any grant, license, or other righ	nt heretofore given by me	to any party other t	than the ass	ignee hereto:	
IV. Agree that my grants and obligations herein s	hall also bind all of my he	irs, executors, adm	inistrators,	legal representat	ives, and
assigns; and					
V. Agree that an authorized representative of identification which may be pecessary or desirable	assignee is hereby grante	ed the power to in	nsert in this	s assignment an	y further
identification which may be necessary or desirable office of any other country for recordation of	e to comply with the rules	3 of the U.S. Patent	and Tradei	mark Office or th	ie patent
office of any other country for recordation of regarding application number and filing date wher	ins Assignment, including	; the power to ins	sert on this	assignment int	ormation
		to indicated here.	. 1. 1. 1.		
In Witness Whereof, I have executed this Worldv Assignment shall be effective as of the earliest prior	rite data for the aforesside	ne indicated by my	nand and a	agree that this W	orldwide
priorition of officerive as of the earliest prior	ing date for the aforesald a	ipplication(s) for Le	eners Patent		
	1 - 1	1 .	1	1	
_ KAY WALTER	VAINAA.	pl	6/20	7/2017	
Name of Inventor 7	Signature of Inventor		Det	.1201	
- ITTALE OF ALL I MILLOI /	orguature or miventor		Date		

RECORDED: 07/10/2017