505712795 10/08/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: CORRECTIVE ASSIGNMENT **NATURE OF CONVEYANCE:** Corrective Assignment to correct the SERIAL NUMBER previously

> recorded on Reel 044329 Frame 0142. Assignor(s) hereby confirms the APPLICANT IS ASSIGNEE.

EPAS ID: PAT5759605

RESUBMIT DOCUMENT ID: 505612329

CONVEYING PARTY DATA

Name	Execution Date
JENNIFER KARA BARRY	11/13/2017
JAMES J ENGLISH	11/13/2017
KEVIN A FENGLER	11/29/2017
ZHENGLIN HOU	09/21/2017
LU LIU	11/10/2017
ERIC JUDE SCHEPERS	11/13/2017
JEFFREY SCOTT SOPA	11/28/2017
INGRID UDRANSZKY	11/16/2017

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
PCT Number:	US1756517

CORRESPONDENCE DATA

Fax Number: (515)535-6883

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: 515-535-5859

Email: IPSUPPORT@PIONEER.COM

Correspondent Name: PIONEER HI-BRED INTERNATIONAL, INC.

Address Line 1: 7250 NW 62ND AVENUE

Address Line 2: PO BOX 552

Address Line 4: JOHNSTON, IOWA 50131-0552

REEL: 050834 FRAME: 0410 505712795

PATENT

ATTORNEY DOCKET NUMBER:	6473-WO-PCT	
NAME OF SUBMITTER:	S. CHRISTOPHER BAUER	
SIGNATURE:	/S. Christopher Bauer/	
DATE SIGNED: 10/08/2019		
Total Attachments: 14		
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source=20191008_6473WOPCT_Reco	dationFormCoverSheet#page2.tif	
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source=20171207_6473WOPCT_RecordedAssignment#page3.tif		
source=20171207_6473WOPCT_RecordedAssignment#page4.tif		
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504676255 12/07/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4722977

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JENNIFER KARA BARRY	11/13/2017
JAMES J ENGLISH	11/13/2017
KEVIN A FENGLER	11/29/2017
ZHENGLIN HOU	09/21/2017
LU LIU	11/10/2017
ERIC JUDE SCHEPERS	11/13/2017
JEFFREY SCOTT SOPA	11/28/2017
INGRID UDRANSZKY	11/16/2017

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
PCT Number:	US2016056517

CORRESPONDENCE DATA

Fax Number: (515)535-6883

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: 515-535-4827

Email: ipsupport@pioneer.com

Correspondent Name: PIONEER HI-BRED INTERNATIONAL, INC.

Address Line 1: 7250 NW 62ND AVENUE

Address Line 2: PO BOX 552

Address Line 4: JOHNSTON, IOWA 50131-0552

ATTORNEY DOCKET NUMBER: 6473-WO-PCT

NAME OF SUBMITTER: TONI K FARRIS

SIGNATURE: /Toni K. Farris/

PATENT

REEL: 050834 FRAME: 0412

WORLDWIDE ASSIGNMENT

i, the undersigned JENNIFER KARA BARRY, hereby declare that I am an inventor of an invention entitled INSECTICIDAL PROTEINS FROM PLANTS AND METHODS FOR THEIR USE the subject matter of which is described in the application for patent (Attorney
Docket No: 6473)
declaration executed on
United States Patent Application Serial No. 62/411318 filed on October 21, 2016
 ✓ United States Patent Application Serial No. 62/411318 filed on October 21, 2016 ✓ PCT Application Serial No. PCT/US17/56517 filed on October 13, 2017,
which claim(s) its earliest priority to Application Serial No. 62/411318, filed on October 21, 2016.
For valuable consideration, the receipt and adequacy of which is hereby acknowledged, and in fulfillment of my pre-existing
obligation of assignment to assignee, which is hereby acknowledged, I hereby:
I. Sell, assign, and transfer unto PIONEER HI-BRED INTERNATIONAL, INC., a corporation organized and existing under the laws of the
State of lows in the United States of America and having its principal place of business at 7100 NW 62 rd 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-in-
part, 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.
JENNIFER KARA BARRY O KR 7
JENNIFER KARA BARRY

Name of Inventor

PATENT REEL: 050834 FRAME: 0413

Date

WORLDWIDE ASSIGNMENT I, the undersigned JAMES J. ENGLISH, hereby declare that I am an inventor of an invention entitled INSECTICIDAL PROTEINS FROM

PLANTS AND METHODS FOR THEIR USE the subject matter of which is described in the application for patent (Attorney Docket No:

I. Sell, assign, and transfer unto PIONEER HI-BRED INTERNATIONAL, INC., a corporation organized and existing under the laws of the

filed on October 13, 2017,

For valuable consideration, the receipt and adequacy of which is hereby acknowledged, and in fulfillment of my pre-existing

United States Patent Application Serial No. 62/411318 filed on October 21, 2016

which claim(s) its earliest priority to Application Serial No. 62/411318, filed on October 21, 2016.

6473)

 \boxtimes

declaration executed on

PCT Application Serial No. PCT/US17/56517

obligation of assignment to assignee, which is hereby acknowledged, I hereby:

State of Iowa in the United States of America and	naving its principal place of busir	ness at 7100 NW 62 nd Avenue, P.O. Box 1014,
Johnston, Iowa 50131-1014, herein referred to as the		
		for Letters Patent ("Patent"), (2) any priority
rights derived from such aforesaid application(s) for		
Property ("International Convention") and any other		
countries of the International Convention or other	· ·	
(3) any and all of my inventions, whether joint or		
arising out of such aforesaid application(s) for Pater		
in any country whatsoever, including all provisional		
part, international and convention applications base		* * * * * * * * * * * * * * * * * * * *
Inventions, (5) any and all patents for any such Inv		
extensions of any patent based in whole or in part to	•	•
the entire right to (1) file such applications in its n	* * *	
Convention or any other treaty or understanding, (
and Trademarks of the United States of America an		
transfer all of said patents to said assignee in accor		·
and damages for any and all infringements thereof,		
said patents may be granted, as fully and entirely a	; the same would have been held	I and enjoyed by the undersigned without this
assignment;		
II. Agree, whenever assignee asks, without further of		
(A) to communicate to said assignee, its success		
Inventions or the rights described above, (B) to te		
above, the location of that testimony to be in the co	-	
should my country of residence prohibit such testing		
by said assignee, its successors, assigns and legal		
including petitions, specifications, oaths, assignment		· · · · · · · · · · · · · · · · · · ·
requested by said assignee and (D) generally to		
representatives to obtain, maintain, defend and enf	orce patent protection for such in	ventions and/or secure title to such inventions
with assignee;		
III. Represent, warrant and covenant that I have the	•	
is not pre-dated by any grant, license, or other right	-	-
IV. Agree that my grants and obligations herein sha	Il also bind all of my heirs, execut	tors, administrators, legal representatives, and
assigns; and		
V. Agree that an authorized representative of as		
identification which may be necessary or desirable		•
office of any other country for recordation of th		ver to insert on this assignment information
regarding application number and filing date when l		
In Witness Whereof, I have executed this Worldwig	a Assignment on the date indicat	ed by my hand and agree that this Worldwide
Assignment shall be effective as of the earliest prior	y date for the aforesaid application	on(s) for Letters Patent.
\wedge	16	
	/// = -	11/12/12
JAMES J. ENGLISH / / MW	1000	<u> </u>
Name of Inventor Signarure of Inve	nfor	Date /
1		

WORLDWIDE ASSIGNMENT			
I, the undersigned KEVIN A. FENGLER, hereby declare that I am an inventor of an invention entitled INSECTICIDAL PROTEINS FROM			
PLANTS AND METHODS FOR THEIR USE the subject matter of which is described in the application for patent (Attorney Docket No:			
6473)			
declaration executed on			
 ✓ United States Patent Application Serial No. 62/411318 filed on October 21, 2016 ✓ PCT Application Serial No. PCT/US17/56517 filed on October 13, 2017. 			
which claim(s) its earliest priority to Application Serial No. 62/411318, filed on October 21, 2016.			
For valuable consideration, the receipt and adequacy of which is hereby acknowledged, and in fulfillment of my pre-existing			
obligation of assignment to assignee, which is hereby acknowledged, I hereby:			
I. Sell, assign, and transfer unto PIONEER HI-BRED INTERNATIONAL, INC., a corporation organized and existing under the laws of the			
State of lowa in the United States of America and having its principal place of business at 7100 NW 62 nd 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 for interlectual 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-in-			
part, 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.			
Assignment shall be effective as of the earliest priority date to the aforesald application(s) for Letters Faterit.			
V EN			
KEVIN A. FENGLER Kernty 2 11/29/17			
Name of Inventor Signature of Inventor Date			

	WORLDWIDE	<u>ASSIGNMENT</u>	
I, the undersigned ZHENGLIN H	OU, hereby declare that I am an	inventor of an invention ent	titled INSECTICIDAL PROTEINS FROM
PLANTS AND METHODS FOR TH	EIR USE the subject matter of whi	ch is described in the applica	tion for patent (Attorney Docket No:
6473-WO-PCT)			
declaration executed o			
United States Patent Ap	oplication Serial No	filed on	_
PCT Application Serial N	No. PCT/US17/56517	filed on October 13, 2017,	
which claim(s) its earliest priorit	v to Application Serial No. 62/4113	l8, filed on October	21, 2016.
For valuable considerat	ion, the receipt and adequacy of v	hich is hereby acknowledged	i, and in fulfillment of my pre-existing
obligation of assignment to assign	gnee, which is hereby acknowledge	ed, I hereby:	
I. Sell, assign, and transfer unto	PIONEER HI-BRED INTERNATIONA	L, INC., a corporation organiz	ed and existing under the laws of the
State of Iowa in the United Sta	ites of America and having its prin	cipal place of business at 7:	100 NW 62 nd Avenue, P.O. Box 1014,
Johnston, Iowa 50131-1014, her	rein referred to as the assignee, an	d to assignee's successors an	d assigns,
			rs Patent ("Patent"), (2) any priority
			ention for the Protection of Industrial
			al property for any and all member
			any and all provisional applications,
	•		on(s) for Patent, and/or related to or
			ons for Patent for any such Inventions
	•	* * * * * * * * * * * * * * * * * * * *	titute, continuation, continuations-in-
			application(s) for Patent and/or such
			ing any and all reexams, reissues and
	- · · · · · · · · · · · · · · · · · · ·	•	rs Patent and/or such Inventions; (B)
			ons under the aforesaid International
			r mine, the Commissioner of Patents
			e being hereby authorized to issue or
			nts and to sue for and recover profits
			ll end of the term or terms for which
			oyed by the undersigned without this
assignment;			,
II. Agree, whenever assignee as	ks, 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, an	y facts known to me respecting such
Inventions or the rights describ	ed above, (B) to testify in any ler	al proceeding respecting su	ch Inventions or the rights described
above, the location of that testing	mony to be in the country in which	I reside or in the nearest co	untry in which such testimony is legal
should my country of residence	prohibit such testimony. (C) to exc	ecute all applications, papers	or instruments necessary or required
by said assignee, its successors	assigns and legal representative	es, to carry into effect any	of the provisions of this instrument,
including petitions, specificatio	ns, oaths, assignments, disclaime	ers, and lawful affidavits in	form and substance which may be
requested by said assignee an	d (D) generally to do everything	possible to aid said assigne	ee, its successors, assigns, and legal
representatives to obtain, maint	tain, defend and enforce patent or	otection for such Inventions	and/or secure title to such Inventions
with assignee;	,		and of secure title to such myenitons
III. Represent, warrant and cover	enant that I have the full right and	lawful authority to make this	assignment, that such assigned right
is not pre-dated by any grant, lic	ense, or other right heretofore giv	en by me to any party other i	han the assigned hereto.
IV. Agree that my grants and ol	oligations herein shall also hind all	of my heirs executors admi	inistrators, legal representatives, and
assigns; and	one of the control of	o. my mens, exceptors, butil	mistrators, legar representatives, and
V. Agree that an authorized r	epresentative of assignee is here	hy granted the nowar to in	nsert in this assignment any further
identification which may be nec	essary or desirable to comply with	the rules of the LLC Patent	and Trademark Office or the patent
office of any other country for	recordation of this Assignment	including the nower to inc	sert on this assignment information
regarding application number an	id filing date when known	meloding the power to me	ert on this assignment information
		on the date indicated by	**************************************
Assignment shall be affective as	of the english priority data for the	of the date indicated by my	hand and agree that this Worldwide
	of the earliest priority date for the	aioresaid application(s) for L	etters Patent.
	A. A .		_
ZHENGLIN HOU_	Theres lusin	σI	2//2017
	W		
Name of Inventor	Signature of Inventor	Date	

		WORLDWIDE AS	SSIGNIVIEN I		
				INSECTICIDAL PROTEINS FROM PL	
METHODS FOR THEIR USE the su	bject matter of wh	iich is described ir	n the application for	r patent (Attorney Docket No: 647	/3)
declaration executed o		_			
☐ United States Patent Ap ☐ PCT Application Serial N	•		on October 21, 2016	6	
			n <u>October 13, 2017</u> ,		
which claim(s) its earliest priority					
For valuable considerati	on, the receipt and	d adequacy of whi	ich is hereby acknov	wledged, and in fulfillment of my p	ore-existing
obligation of assignment to assig	nee, which is herel	by acknowledged,	I hereby:		
State of Iowa in the United Stat Johnston, Iowa 50131-1014, hero	es of America and ein referred to as th	l having its princi he assignee, and t	pal place of busines to assignee's success	organized and existing under the ss at 7100 NW 62 nd Avenue, P.O. sors and assigns, or Letters Patent ("Patent"), (2) a	. Box 1014
rights derived from such aforesa Property ("International Conver countries of the International Co (3) any and all of my invention arising out of such aforesaid app in any country whatsoever, inclu- part, international and convention Inventions, (5) any and all pate extensions of any patent based if the entire right to (1) file such a Convention or any other treaty and Trademarks of the United St transfer all of said patents to said	id application(s) for ation") and any ot convention or other s, whether joint or dication(s) for Pate adding all provisional on applications base ants for any such in applications in its re or understanding, cates of America and d assignee in accol	or Patent by virtue ther treaty or unders r sole, disclosed i ent ("Inventions") al, non-provisional sed in whole or in ventions in any coupon such afores name or in my na (3) have said patend any counterpard	e of the International derstanding for intanding, including romanding romand	al Convention for the Protection of tellectual property for any and a rights in any and all provisional application(s) for Patent, and/or resplications for Patent for any such all, substitute, continuation, continuation application(s) for Patent and including any and all reexams, respectively. The property of the property and patents and the Commissioner and office being hereby authorized the full end of the term or terms of the full end of the term or terms.	of Industria all member pplications elated to on Inventions nuations-in- ind/or such eissues and entions; (B eternationa of Patents to issue of pover profits
	rully and entirely a	as the same woul	a nave been neid a	and enjoyed by the undersigned w	vitnout this
(A) to communicate to said Inventions or the rights describe above, the location of that testin should my country of residence p by said assignee, its successors including petitions, specification requested by said assignee and	assignee, its succeed above, (B) to tenony to be in the corohibit such testing, assigns and legalins, oaths, assignmid (D) generally to	essors, assigns, an estify in any legal country in which I mony, (C) to execu I representatives, ents, disclaimers do everything po	d legal representati proceeding respect reside or in the nea ate all applications, to carry into effect , and lawful affidat ossible to aid said	nse for actual and reasonable cost ives, any facts known to me respetting such Inventions or the rights arest country in which such testime papers or instruments necessary of any of the provisions of this invits in form and substance which assignee, its successors, assigns, entions and/or secure title to such	ecting such s described ony is lega or required nstrument ch may be , and lega
III. Represent, warrant and cove is not pre-dated by any grant, lice	ense, or other right	t heretofore given	by me to any party	ake this assignment, that such ass other than the assignee hereto; rs, administrators, legal represent	
V. Agree that an authorized re identification which may be nec- office of any other country for regarding application number an	essary or desirable recordation of th d filing date when l	to comply with this Assignment, in known.	the rules of the U.S. ncluding the power	er to insert in this assignment a . Patent and Trademark Office or r to insert on this assignment in	the patent nformation
In Witness Whereof, I have exec	uted this Worldwid	de Assignment or	the date indicated	by my hand and agree that this	Worldwide
Assignment shall be effective as	of the earliest prior	ity date for the af	foresaid application	(s) for Letters Patent.	
	_	_			
LU LIU	Lu	2.		11-10-2017	
Name of Inventor	Signature of Inve	entor	_	Date	
	Signature Of IIIVE	511001		שוכ	

WORLDWIDE ASSIGNMENT

I, the undersigned ERIC JUDE SCHEPERS, hereby declare that I am an inventor of an invention entitled INSECTICIDAL PROTEINS FROM PLANTS AND METHODS FOR THEIR USE the subject matter of which is described in the application for patent (Attorney
Docket No: 6473)
declaration executed on
United States Patent Application Serial No. 62/411318 filed on October 21, 2016
PCT Application Serial No. PCT/US17/56517 filed on October 13, 2017,
which claim(s) its earliest priority to Application Serial No. <u>62/411318</u> , filed on <u>October 21, 2016</u> .
For valuable consideration, the receipt and adequacy of which is hereby acknowledged, and in fulfillment of my pre-existing
obligation of assignment to assignee, which is hereby acknowledged, I hereby:
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 62 nd 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,
\cdot
(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-in-
part, 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.
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Eric Jude Schepers November 13,2017

Name of Inventor

Signature of Inventor

WORLDWIDE ASSIGNMENT I, the undersigned JEFFREY SCOTT SOPA, hereby declare that I am an inventor of an invention entitled INSECTICIDAL PROTEINS

FROM PLANTS AND METHODS FOR THEIR USE the subject matter of which is described in the application for patent (Attorney

United States Patent Application Serial No. 62/411318 filed on October 21, 2016

Docket No: 6473)

declaration executed on

PCT Application Serial	No. PCT/US17/56517	filed on October 13, 201	7,	
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obligation of assignment to ass			ownerson, and an animal or my pro-cause	0
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			ness at 7100 NW 62 nd Avenue, P.O. Box 10:	
Johnston, Iowa 50131-1014, he				47/
			for Letters Patent ("Patent"), (2) any prior	rit.
rights derived from such afore	said application(s) for Patent b	v virtue of the Internation	inal Convention for the Protection of Industr	riol
Property ("International Conve	ention") and any other treats	or understanding for i	intellectual property for any and all members	har
countries of the International	Convention or other treaty or	understanding including	g rights in any and all provisional application	ישכו
(3) any and all of my invention	ons, whether joint or sole, disc	closed in such aforesaid:	application(s) for Patent, and/or related to	"112, "O'
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in any country whatsoever, inc	duding all provisional, non-pro	visional divisional renev	wal, substitute, continuation, continuations-	Jila Lin.
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transfer all of said natents to s	aid assignee in accordance he	rewith and M enforce	said patents and to sue for and recover prof	: OI
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said patents may be granted a	as fully and entirely as the sam	past, present or ruture, so would have been held	and enjoyed by the undersigned without t	HUIT.
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(A) to communicate to sai	d assignee its successors assi	ans and legal represents	atives, any facts known to me respecting su	ea,
inventions or the rights descri	hed above. (R) to testify in ar	ny legal nrocoeding roche	ecting such inventions or the rights describ	ıcn
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in witness whereor, I have exe	cuted this Worldwide Assignn	nent on the date indicate	ed by my hand and agree that this Worldwi	ide
Assignment shall be effective as	s of the earliest priority date fo	or the aforesaid application	n(s) for Letters Patent.	
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JEFFREY SCOTT SOPA	July Dath Dipo	1	11/28/2017	
Name of Inventor	✓ signature of Inventor		Daté /	
	V			

WORLDWIDE ASSIGNMENT I, the undersigned INGRID UDRANSZKY, hereby declare that I am an inventor of an invention entitled INSECTICIDAL PROTEINS

FROM PLANTS AND METHODS FOR THEIR USE the subject matter of which is described in the application for patent (Attorney

filed on October 13, 2017,

United States Patent Application Serial No. 62/411318 filed on October 21, 2016

which claim(s) its earliest priority to Application Serial No. 62/411318, filed on October 21, 2016.

Docket No: 6473)

INGRID UDRANSZKY
Name of Inventor

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declaration executed on

PCT Application Serial No. PCT/US17/56517

For valuable consideration, the receipt and adequacy of which is hereby acknowledged, and in fulfillment of my pre-existing
obligation of assignment to assignee, which is hereby acknowledged, I hereby:
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 62 nd 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-in-
part, 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.

RECORDED: 08/08/2019

RECORDATION FORM COVER SHEET					
PATENTS ONLY					
To the Director of the U.S. Patent and Trademark Office: Pleas	e record the attached documents or the new address(es) below.				
1. Name of conveying party(ies) JENNIFER KARA BARRY; JAMES J ENGLISH; KEVIN A FENGLER; ZHENGLIN HOU; LULIU; ERIC JUDE SCHEPERS; JEFFREY SCOTT SOPA; INGRID UDRANSZKY	2. Name and address of receiving party(ies) Name: PIONEER HI-BRED INTERNATIONAL, INC. Internal Address:				
Additional name(s) of conveying party(ies) attached? Yes XNo 3. Nature of conveyance/Execution Date(s): 1/1/3/2017; 11/13/2017; 11/29/2017; 09/21/2017; Execution Date(s) 11/10/2017; 11/13/2017; 11/28/2017; 11/16/2017 X Assignment Merger Security Agreement Change of Name Joint Research Agreement Government Interest Assignment Executive Order 9424, Confirmatory License	Street Address:7100 NW 62ND AVENUE PO BOX 1014 City:JOHNSTON State:IOWA Zip:50131-1014				
4. Application or patent number(s):	Additional name(s) & address(es) attached? Yes XNo				
A. Patent Application No.(s) CORRECTING PCT SERIAL NUMBER FROM: PCT/US2016/056517	document serves as an Oath/Declaration (37 CFR 1.63). B. Patent No.(s) ached? Yes XNo				
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1				
Name: PIONEER HI-BRED INTERNATIONAL, INC.	7. Total fee (37 CFR 1.21(h) & 3.41) \$				
Internal Address: Street Address: PO BOX 552	X Authorized to be charged to deposit account Enclosed None required (government interest not affecting title)				
City: JOHNSTON	8. Payment Information				
State: IOWAZip:50131-0552					
Phone Number: 515-535-5859	Deposit Account Number <u>16-1852</u>				
D. J. (N C470 MO DOT	Deposit Account Number 10-1002				
Docket Number: 6473-WO-PCT	TIEFANY PROTHERSON				
Email Address: IPSUPPORT@PIONEER.COM	Authorized UserName <u>TIFFANY BROTHERSON</u>				
9. Signature: /S. Christopher Bauer/ Signature S. CHRISTOPHER BAUER Name of Person Signing Documents to be recorded (including cover sheet)	October 8, 2019 Date Total number of pages including cover sheet, attachments, and documents:				