506294625 10/08/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6341373

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
LEIGH BURDEN	06/07/2019
STEVEN D. HUME	06/07/2019
JOSHUA MORTON	06/07/2019
GREG POGUE	06/10/2019
BARRY BRATCHER	06/07/2019
HUGH A. HAYDON	06/10/2019
CARRIE A. SIMPSON	06/07/2019
NICK PARTAIN	06/07/2019
JOHN W. SHEPHERD	06/02/2020

RECEIVING PARTY DATA

Name:	KENTUCKY BIOPROCESSING, INC.
Street Address:	401 NORTH MAIN STREET, C/O REYNOLDS AMERICAN INC.
Internal Address:	A CORPORATION ORGANIZED UNDER THE LAWS OF NORTH CAROLINA
City:	WINSTON-SALEM
State/Country:	NORTH CAROLINA
Postal Code:	27101

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17063022

CORRESPONDENCE DATA

Fax Number: (502)589-0309

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: 5025627248

Email: Iminton@wyattfirm.com
Correspondent Name: MAX E. BRIDGES

Address Line 1: WYATT, TARRANT & COMBS, LLP

Address Line 2: 400 WEST MARKET STREET, SUITE 2000

Address Line 4: LOUISVILLE, KENTUCKY 40202

PATENT REEL: 054008 FRAME: 0692

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ATTORNEY DOCKET NUMBER:	611016.1	
NAME OF SUBMITTER:	MAX E. BRIDGES, REG. NO. 76099	
SIGNATURE:	/Max E. Bridges/	
DATE SIGNED:	10/08/2020	
Total Attachments: 10		
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ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATIONS, receipt of which is acknowledged, we, Leigh Burden, having a mailing address of 2033 Whispering Meadows Drive, Owensboro, Kentucky 42301 USA; Steven D. Hume, having a mailing address of 3153 Wood Valley Point, Owensboro, Kentucky 42303 USA; Joshua Morton, having a mailing address of 730 N. Peerless Rd., Evansville, Indiana 47712 USA; Greg Pogue having a mailing address of 5817 Tributary Ridge Road, Austin, Texas 78759 USA; Barry Bratcher, having a mailing address of 2 Hilltop Drive, Owensboro, Kentucky 42303 USA; Hugh A. Haydon, I Pin Oak Lane, Louisville, Kentucky 40207 USA, Carrie A. Simpson, having a mailing address of 3214 Vierling Drive, Evansville, Indiana 47715 USA and Nick Partain, having a mailing address of 3868 Thresher Street, Owensboro Kentucky 42301 USA, respectively, and Individually, do hereby sell, assign and transfer unto Kentucky BioProcessing, Inc., having a mailing address of 401 North Main Street, c/o Reynolds American Inc., Winston-Salem, North Carolina 27101 USA, referred to herein as "ASSIGNEE," being a corporation organized under the laws of North Carolina, the entire right, title and interest held by each of us in and to the invention(s) "Virus and Antigen Purification and Conjugation," as described and/or claimed in (i) U.S. Nonprovisional Patent Application No. 16/437,734, filed on June 11, 2019 (the "TAP U.S. Nonprovisional Application 1"); (ii) U.S. Nonprovisional Patent Application No. 16/437,770, filed on June 11, 2019 (the "TAP U.S. Nonprovisional Application 2")(together, TAP U.S. Nonprovisional Application 1 and 2 are referred to herein as the "TAP U.S. Nonprovisional Applications"); (iii) International Application PCT/US19/36559, filed June 11, 2019 (the "PCT International Application") (iv) all subsequent applications including without limitation any other nonprovisional, national stage, substitute, continuation, continuation-in-part, and/or divisional application(s) based in whole or in part on the U.S. Nonprovisional Applications or the PCT International Application, or any one or more of them, or any of the aforementioned subsequent applications; and (v) any and all applications for Letters Patent of all foreign countries based in whole or in part on the U.S. Nonprovisional Applications, the PCT International Application or subsequent applications described in sub-part (iv) above (collectively, the applications identified in sub-parts (i)-(v) being referred to herein as "the Applications"), further to include any and all Letters Patent issuing on any of the Applications, the same to be held and enjoyed by ASSIGNEE, its successors, assigns or other legal representatives, to the full ends of the terms of all said Letters Patent therefor which may be granted.

EACH OF US, INDIVIDUALLY, DOES HEREBY AUTHORIZE ASSIGNEE to make application for and to receive Letters Patent for said invention in any of said countries in ASSIGNEE's own name, or in our names, at its election, and to claim any and all priority rights as may exist.

EACH OF US, INDIVIDUALLY, DOES HEREBY COVENANT AND AGREE to execute or procure any further necessary assurance of the title to said invention, applications, and any Letters Patent which may issue therefore, and, at any time, upon request and at the expense of ASSIGNEE, to deliver any testimony in any legal proceedings and execute all papers that may be necessary or desirable to perfect the title to said invention, applications, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and, at any time, upon the request and at the expense of ASSIGNEE, to execute any nonprovisional, substitute, continuations,

continuations-in-part, divisionals, or any other additional applications of Letters Patent for said invention or any part or parts thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, and, to make all rightful oaths, and to do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns or other representatives.

EACH OF US, INDIVIDUALLY, DOES HEREBY AUTHORIZE AND REQUEST the Commissioner of Patents to issue any and all Letters Patent of the United States or any other country or jurisdiction for said invention, resulting from any of the aforesaid Applications to said ASSIGNEE.

EACH OF US, INDIVIDUALLY, DOES HEREBY COVENANT that he has not executed, and will not execute, any agreement in conflict herewith, and that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with the full conveyance of entire right, title and interest to the invention and Application described herein.

AND EACH OF US, INDIVIDUALLY, DOES HEREBY GRANT the law firm of Wyatt, Tarrant & Combs, LLP, the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office or other patent office for recordation of this document, including serial numbers and filing dates.

(SIGNATURE AREAS AND NOTARY AREAS ARE ON THE NEXT PAGES)

REEL: 054008 FRAME: 0695

Ligh Burden Address: 20\3 Whispering Meadows Driv Owensboro, Kentucky 42301 USA	e.
STATE OF KENTUCKY Session COUNTY OF Daviess	
ACKNOWLEDGEMENT	
The foregoing instrument was subscribed, sworn to and acknowledged before me this day of JLYNC, 2019, by Leigh Burden. My commission expires: JAIME L BAKER NOTARY PUBLIC STATE AT LARGE, KENTUCKY ID. # 544189 MY COMMISSION EXPIRES OCT. 18, 2019 NOTARY PUBLIC	
Steven D. Hume Address: 3153 Wood Valley Point, Owensbork Keniucky 42303 USA	o,
ACKNOWLEDGEMENT	
STATE OF Kentucky) ss COUNTY OF Davies 5	
My commission expires:	WE L BAKER TARY PUBLIC LARGE, KENTUCK D. # 544189 HON EXPIRES OCT. 19, 21
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	Jos	hua Morton		
	Add	iress: 730 N. Pecrie	ss Rd., Evansville,	\$
	Ind	ana 47712		
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day of <u> </u>	19, by Joshua Morto	B.	JAIME L	BAKER
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day of, 20	19, by Greg Pogue.		1000 T	parameter:
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My commission expires:			::	
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NOTARY PUBLIC

Joshua Morton

Address: 730 N. Peerless Rd., Evansville, Indiana 47712

ACKNOWLEDGEMENT

STATE OF	
COUNTY OF	
The foregoing instrument was subscribed, s day of, 2019, by Joshua Mo	worn to and acknowledged before me this
My commission expires:	
)	VOTARY PUBLIC
i i	Gre g Pogue Address: 5817 Tributary Ridge Road, Austin, Texas 78759 USA
ACKNOWLED	GEMENT
STATE OF TEXAS ;ss	, , , , , , , , , , , , , , , , , , ,
The foregoing instrument was subscribed, s day of <u>June</u> , 2019, by Greg Pogue	worn to and acknowledged before me this 1921.
My commission expires: 11128/2	\$200 B(D)
	NOTARY PUBLIC
	* ,

Address: 2 Hinto 42303 USA	op Drive, Owensboro, Kentucky
ACKNOWLEDGEMENT	
COUNTY OF DOYLESS :88	
The foregoing instrument was subscribed, sworn to and acl day of	knowledged before me this 7 JAIME L BAKER NOTARY PUBLIC
My commission expires: ———————————————————————————————————	STATE AT LARGE, KENTUCKY ID. # 544189 MY COMMISSION EXPIRES OCT. 19, 2019
√ NOTARY PUBL	.XC)
Hugh A. Haydo Address: 1 Pin C 40207 USA	Dak Lane, Louisville, Kentucky
ACKNOWLEDGEMENT	
STATE OF KENTUCKY SES	
The foregoing instrument was subscribed, sworn to and acl day of June 2019, by Hugh A. Haydon.	JAIME L BAKER
My commission expires:	NOTARY PUBLIC STATE AT LARGE, KENTUCKY ID. # 544189 MY COMMISSION EXPIRES OCT. 19, 201
(Van Ra	La s 1

	Carrie A. Simpson Address: 3214 Vierlin Evansville, Indiana 47	2
STATE OF KENTUCKY) :ss	×	
ACKNOW	VLEDGEMENT	
The foregoing instrument was subscribed day of	yed, sworn to and acknowle & A. Simpson. Young Bake NOTARY PUBLIC	JAIME L BAKER NOTARY PUBLIC STATE AT LARGE, KENTUCKY ID. # 544189 MY COMMISSION EXPIRES OCT. 19, 2019
	Nick Partain Address: 3868 Thresh Owensboro Kentucky	
ACKNOW	/LEDGEMENT	
COUNTY OF DAYLESS :ss		
The foregoing instrument was subscrib day of <u>June</u> , 2019, by Nick My commission expires:		JAIME L BAKER NOTARY PUBLIC STATE AT LARGE, KENTUC ID. # 544189 MY COMMISSION EXPIRES OCT. 19.
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Assignment for Utility or Design Patent Application

- FOR GOOD AND VALUABLE CONSIDERATIONS, receipt of which is acknowledged, I, John W. Shepherd, having a mailing address of 4169 Hayden Road, Owensboro, Kentucky 42303 USA, do hereby sell, assign and transfer unto Kentucky BioProcessing, Inc., having a mailing address of 401 North Main Street, c/o Reynolds American Inc., Winston-Salem, North Carolina 27101 USA, referred to herein as "ASSIGNEE," being a corporation organized under the laws of North Carolina, the entire right, title and interest held by me in and to the applications referenced below:
 - (i) U.S. Provisional Patent Application serial number 62/683,865, with a filing date of June 12, 2018 (the "'865 Provisional");
 - (ii) PCT Patent Application PCT/US19/36559, with a filing date of June 11, 2019 (the "PCT Application"), which claims the benefit of and priority under 35 U.S.C. § 119(e) to the '865 Provisional;
 - (iii) U.S. Application No. 16/437,734, with a filing date of June 11, 2019 (the "'734 Application"), which claims the benefit of and priority under 35 U.S.C. § 119(e) to the '865 Provisional;
 - (iv) U.S. Application No. 16/437,770, with a filing date of June 11, 2019 (the "'770 Application") which claims the benefit of and priority under 35 U.S.C. § 119(e) to the '865 Provisional;
 - (v) U.S. Continuation-in-Part Application No. 16/709,063, with a filing date of Dec. 10, 2019 (the "'063 CIP Application"), which under 35 U.S.C. § 120, claims the benefit of and priority to, at least, the copending '734 Application;
 - (vi) U.S. Provisional Patent Application No. 63/013,284, with a filing date of April 21, 2020 (the "284 Provisional"); and,
 - (vii) U.S. Provisional Patent Application No. 63/047,629, filed on July 2, 2020 (the "-629 Provisional").
- (viii) all subsequent applications including without limitation any other nonprovisional, national stage, substitute, continuation, continuation-in-part, and/or divisional application(s) based in whole or in part on the '865 Provisional, the PCT Application, the '734 Application, the '770 Application, the '063 CIP Application, the '284 Provisional, or the '629 Provisional; and

(ix) any and all applications for Letters Patent of all foreign countries or PCT International Applications based in whole or in part on the '865 Provisional, the PCT Application, the '734 Application, the '770 Application, the '063 CIP Application, the '284 Provisional, or the '629 Provisional or subsequent applications described in sub-part (ix)

above and the applications to which priority is claimed in sub-parts (i)-(vii), to the full extent of ASSIGNEE's ownership (collectively, the applications identified in sub-parts (i)-(ix) being referred to herein as the "Applications"), further to include any and all Letters Patent issuing on any of the Applications, the same to be held and enjoyed by ASSIGNEE, its successors, assigns or other legal representatives, to the full ends of the terms of all said Letters Patent therefor which may be granted.

I AUTHORIZE ASSIGNEE to make application for and to receive Letters Patent for said invention in any of said countries in ASSIGNEE's own name, or in my name, at its election, and to claim any and all priority rights as may exist.

I DO HEREBY COVENANT AND AGREE to execute or procure any further necessary assurance of the title to said invention, applications, and any Letters Patent which may issue therefore, and, at any time, upon request and at the expense of ASSIGNEE, to deliver any testimony in any legal proceedings and execute all papers that may be necessary or desirable to perfect the title to said invention, applications, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and, at any time, upon the request and at the expense of ASSIGNEE, to execute any nonprovisional, substitute, continuations, continuations-in-part, divisionals, or any other additional applications of Letters Patent for said invention or any part or parts thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, and, to make all rightful oaths, and to do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns or other representatives.

I DO HEREBY AUTHORIZE AND REQUEST the Commissioner of Patents to issue any and all Letters Patent of the United States or any other country or jurisdiction for said invention, resulting from any of the aforesaid Applications to said ASSIGNEE.

I DO HEREBY COVENANT that I have not executed, and will not execute, any agreement in conflict herewith, and that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with the full conveyance of entire right, title and interest to the invention and Application described herein.

AND I DO HEREBY GRANT the law firm of Wyatt, Tarrant & Combs, LLP, the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office or other patent office for recordation of this document, including serial numbers and filing dates.

John W. Shapherd

Address: 4169 Hayden Road Owensboro, Kentucky 42303 USA

COMMONWEALTH OF)	
KENTUCKY)	SS
COUNTY OF TAXABLE)	

ACKNOWLEDGEMENT

day		scribed, sworn to and acknowledged before me this good John W. Shepherd.	0.2
	My commission expires:		
	Jeime L. Baker	Saine Bakeo	
	Jeime L. Baker Notary Public, ID No. 692735 Stelle at Large, Kentucky	NOTÁŘY PUBLIC	

