Form PTO-1595 (Rev. 06-12)
OMB No. 0651-0027 (exp. 04/30/2015)

U.S. DEPARTMENT OF COMMERCE

RECORDATION E	Onited States Patent and Trademark Office ORM COVER SHEET				
	TS ONLY				
	se record the attached documents or the new address(es) below.				
Name of conveying party(ies)	Name and address of receiving party(ies)				
	Name: Theravance Biopharma R&D IP, LLC				
Theravance, Inc.	Internal Address:				
Additional many (1) of m					
Additional name(s) of conveying party(ies) attached? Yes No. 3. Nature of conveyance/Execution Date(s):	Street Address: 901 Gateway Boulevard				
Execution Date(s) June 1, 2014	Street Address: Out Catches Bodievard				
Assignment Merger					
Security Agreement Change of Name	City: South San Francisco				
Joint Research Agreement	State: California				
Government Interest Assignment					
Executive Order 9424, Confirmatory License	Country: USA Zip: 94080				
Other	Additional name(s) & address(es) attached? Yes				
4. Application or patent number(s):	document serves as an Oath/Declaration (37 CFR 1.63).				
A. Patent Application No.(s)	B. Patent No.(s)				
09457618 and 12145658	6576793, 6916961, 7217738 and 7427639				
	301 01 00, 00 10001, 7217736 and 7427639				
Additional numbers att	ached? Yes No				
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents				
Name: Jeffrey A. Hagenah	involved:_6				
Internal Address: Patent Department	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 240				
Theravance Biopharma US, Inc.	Authorized to be about 1				
Street Address: 901 Gateway Boulevard	Authorized to be charged to deposit account Enclosed				
	None required (government interest not affecting title)				
City: South San Francisco	8. Payment Information				
State: California Zip: 94080	•				
Phone Number: (650) 808-6406					
Docket Number: P-152	Deposit Account Number 500344 Authorized User Name Jeffrey A. Hagenah				
Email Address;_patent@theravance.com					
D. Signature: Rybuta P. Daylax	June 9, 2014				
Signature	Date				
Roberta P. Saxon, Reg. No. 43,087	Total number of pages including cover				
Name of Person Signing	sheet, attachments, and documents:				
Documents to be recorded (including cover sheet) Mail Stop Assignment Recordation Services, Director of t	siloulu de taxed to (571) 273-0140, or mailed to: he USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450				

PATENT REEL: 033181 FRAME: 0693

Patent Assignment

WHEREAS, Theravance, Inc., a corporation duly organized under and pursuant to the laws of Delaware and having its principal place of business at 951 Gateway Boulevard, South San Francisco, California 94080 (the "Assignor"), is the sole owner of the patents and patent applications listed in EXHIBIT A (such patents and patent applications and the inventions set forth therein are collectively the "Assigned Patents");

WHEREAS, Theravance Biopharma R&D IP, LLC, a limited liability company duly organized under and pursuant to the laws of Delaware and having its principal place of business at 901 Gateway Boulevard, South San Francisco, California 94080 (the "Assignee"), is desirous of acquiring Assignor's entire right, title and interest in and to the Assigned Patents, and in and to any subsequent patent applications and patents filed or granted thereon or therefrom, and Assignor is willing to assign its rights, title, and interest with respect thereto to the Assignee on the terms hereinafter set forth;

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignor does hereby sell, assign, transfer, set over and relinquishes exclusively unto the Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in and to: the Assigned Patents including, to the extent of Assignor's rights, the right to file patent applications on inventions set forth in the Assigned Patents; the right to claim priority to any of the Assigned Patents; the entire right, title and interest in and to any subsequent U.S. and foreign patent applications and patents claiming priority to any of the Assigned Patents, and in and to any U.S. and foreign patent applications and patents that claim priority to a patent application or patent arising from the Assigned Patents; any U.S. and foreign patents that may be granted on and from any of the Assigned Patents; any applications, divisionals, continuations, continuations-in-part, reexaminations, reissues, registrations, renewals, revalidations, substitutions, utility models, petty patents, extensions, and supplementary protection certificates that may be filed or granted on or for any of the Assigned Patents; all accrued causes of action for infringement of any of the foregoing; and all rights to and for the Assigned Patents under the Paris Convention for the Protection of Industrial Property; the same to be held and enjoyed by the Assignee, for its own use and behalf and for the use and behalf of its successors, legal representatives and assigns, to the full end of the term of the Assigned Patents and any such patents that may be granted thereon or therefrom as fully and entirely as if the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

AND for the same consideration, the Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives and assigns, that the Assignor has not executed and will not execute any assignment, sale, agreement or encumbrance in conflict with this assignment.

AND for the same consideration, the Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives and assigns that, at the Assignee's expense and reasonable request, the Assignor will take action and execute documents necessary to perfect the interest assigned herein.

AND for the same consideration, the Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives and assigns that whenever counsel for the Assignee, or the counsel for its successors, legal representatives and assigns, shall advise that any proceeding, filing or other legal action in connection with the Assigned Patents or any patent applications and patents resulting therefrom is lawful and desirable, Assignor will, to the extent reasonable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of the Assigned Patents and patent applications and patents resulting therefrom, without charge to the Assignor, its successors, legal representatives and assigns, but at the cost and expense of the Assignee, its successors, legal representatives and assigns.

AND the Assignor hereby requests the Director of the United States Patent and Trademark Office, and all foreign patent offices, to issue any and all patents resulting from the Assigned Patents or from any patent applications filed thereon or therefrom to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives and assigns.

IN WITNESS WHEREOF, the Assignor hereby has executed this assignment on this 184 day of 2014, at South San Francisco, California, USA.

Theravance, Inc. (Assignor)

Vice President & Chief Patent Counsel

& Assistant Secretary

Theravance, Inc. 951 Gateway Blvd. South San Francisco, CA 94080 USA

CERTIFICATE OF ACKNOWLEDGEMENT OF NOTARY PUBLIC

STATE OF CALIFORNIA COUNTY OF SAN MATEO

On June , 2014, before me, Maria Chuakay, Notary Public, personally appeared Jeffrey A. Hagenah, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Notary Public (Seal)

MARIA CHUAKAY
Commission # 2050270
Notary Public - California
San Mateo County
My Comm. Expires Dec 24, 2017

EXHIBIT A

Docke No.	Country	Case	THE AT	Application Number	Filing Date	Patent Number	Grant Date
P-152	AE	01	Abandoned	P160/2002	12/06/2000		
P-152	AM	01	Abandoned	200200647	12/06/2000	004263	02/26/2004
P-152	AT	01	Abandoned	00986271.5	12/06/2000	E253039	10/29/2003
P-152	AU	01	Abandoned	22546/01	12/06/2000	781466	09/08/2005
P-152	AZ	01	Abandoned	200200647	12/06/2000	004263	02/26/2004
P-152	BA	01	Abandoned	BAP021077A	12/06/2000		02/20/2004
P-152	BE	01	Granted	00986271.5	12/06/2000	1235787	10/29/2003
P-152	BR	01	Abandoned	PI0015962-0	12/06/2000		10/25/2003
P~152	BY	01	Abandoned	200200647	12/06/2000	004263	02/26/2004
P-152	CA	01	Abandoned	2,391,293	12/06/2000	2,391,293	12/30/2008
P-152	СН	01	Abandoned	00986271.5	12/06/2000	1235787	10/29/2003
P-152	CN	01	Abandoned	00816436.3	12/06/2000	1223737	10/25/2005
P-152	CN	02	Abandoned	200810134949.5	12/06/2000		
P-152	CY	01	Abandoned	CY04/1100018	12/06/2000	1235787	10/29/2003
P-152	CZ	01	Abandoned	0000	12/06/2000	12337.67	12/30/2008
P-152	DE	01	Granted	00986271.5	12/06/2000	60006280.5	10/29/2003
P-152	DK	01	Abandoned	00986271.5	12/06/2000	1235787	10/29/2003
P-152	EA	01	Abandoned	200200647	12/06/2000	004263	02/26/2004
P-152	EP	01	Abandoned	00 986 271.5	12/06/2000	1235787	10/29/2003
P-152	ES	01	Granted	00986271.5	12/06/2000	1235787	10/29/2003
P-152	FI	01	Abandoned	00986271.5	12/06/2000	1235787	10/29/2003
P-152	FR	01	Granted	00986271.5	12/06/2000	1235787	10/29/2003
P-152	GB	01	Granted	00986271.5	12/06/2000	1235787	10/29/2003
P-152	GR	01	Abandoned	20030405223	12/06/2000	3047415	10/29/2003
P-152	нк	01	Abandoned	03101047.8	12/06/2000	1048803	01/30/2004
P-152	HR	01	Abandoned	P20020381A	12/06/2000		01/30/2004
P-152	HU	01	Abandoned	P0203638	12/06/2000		
P-152	ID	01	Abandoned	W-00 2002 01267	12/06/2000	ID 0 021 780	08/22/2008
P-152	ΙE	01	Abandoned	00986271.5	12/06/2000	1235787	10/29/2003
P-152	IL	01	Abandoned	149317	12/06/2000	149317	03/30/2009
2-152	IN	01	Abandoned	2002/00829	12/06/2000		00/00/2005
2-152	IS	01	Abandoned	6350	12/06/2000	2164	11/15/2006
P-152	IT	01	Granted	00986271.5	12/06/2000	1235787	10/29/2003
2-152	JP	01	Granted	2001-543495	12/06/2000	4703081	03/18/2011
-152	JP	02	Abandoned	2010-36664	12/06/2000		-0, -0, 5011
-152	KG	01	Abandoned	200200647	12/06/2000	004263	02/26/2004
-152	KR	01	Abandoned	2002-7007322	12/06/2000	718944	05/10/2007
-152	KR	02	Abandoned	2007-7004447	02/23/2007		// 20/

Docket No.	Country	Sub Case	Status	Application Number	Filing Date	Patent Number	Grant Date
P-152	KZ	01	Abandoned	200200647	12/05/2000	004263	02/26/2004
P-152	LU	01	Abandoned	00986271.5	12/06/2000	1235787	10/29/2003
P-152	MC	01	Abandoned	00986271.5	12/06/2000	1235787	10/29/2003
P-152	MD	01	Abandoned	200200647	12/06/2000	004263	02/26/2004
P-152	MX	01	Abandoned	2002/005599	12/06/2000	226185	
P-152	NL	01	Abandoned	00986271.5	12/06/2000	1235787	02/09/2005
P-152	NO	01	Abandoned	20022655	12/06/2000	327630	10/29/2003
P-152	NZ	01	Abandoned	518453	12/06/2000	518453	12/06/2000
P-152	PL	01	Abandoned	P-356171	12/06/2000	010400	03/29/2004
P-152	PT	01	Abandoned	00986271.5	12/06/2000	1235787	05/04/2009
P-152	RS	01	Abandoned	P-423/02	12/06/2000	1233787	10/29/2003
P-152	RU	01	Abandoned	200200647	12/06/2000	004263	02/25/2004
P-152	SE	01	Abandoned	00986271.5	12/06/2000	1235787	02/26/2004
P-152	SG	01	Abandoned	200203030-2	12/06/2000	89133	10/29/2003
P-152	SI	01	Abandoned	P 2000 3 0265	12/06/2000	1235787	06/30/2005
P-152	SK	01	Abandoned	PV 0992-2002	12/06/2000	287036	10/29/2003
P-152	TJ	01	Abandoned	200200647	12/06/2000	004263	08/11/2009
P-152	TM	01	Abandoned	200200647	12/06/2000	004263	02/26/2004
P-152	TR	01	Abandoned	00986271.5	12/06/2000	TR200302010	
P-152	UA	01	Abandoned	2002075567	12/06/2000	73965	10/29/2003
P-152	US	01	Abandoned	09/457,618	12/08/1999	73903	07/08/2005
P-152	US	02	Granted	09/637,899	08/14/2000	6,576,793	05/10/2002
P-152	US	03	Granted	10/108,945	03/28/2002	6,916,961	06/10/2003
P-152	US	04	Granted	11/049,447	02/02/2005	7,217,738	07/12/2005 05/15/2007
-152	US	05	Granted	11/784,148	04/05/2007	7,427,639	
2-152	US	06	Abandoned	12/145,658	06/25/2008	1,741,000	09/23/2008
-152	wo		Nat Phase	PCT/US00/33057	12/06/2000		
· 1 52	ZA	01	Abandoned	2002/3450	12/06/2000	2002/3450	07/30/2003

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