

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6590471

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	AYMAN ALLIAN	02/03/2017
	THOMAS B. BORCHARDT	11/02/2017
	JAYANTHY JAYANTH	01/25/2017
	PATRICK J. MARROUM	02/19/2017
	PETER T. MAYER	01/26/2017
	MATHEW M. MULHERN	01/26/2017
	LARS F. NORDSTROEM	01/25/2017
	AHMAD Y. SHEIKH	10/26/2017
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	ABBVIE INC.	
<b>Street Address:</b>	1 NORTH WAUKEGAN ROAD	
<b>City:</b>	NORTH CHICAGO	
<b>State/Country:</b>	ILLINOIS	
<b>Postal Code:</b>	60064	
<b>PROPERTY NUMBERS Total: 1</b>		
<b>Property Type</b>	<b>Number</b>	
<b>Application Number:</b>	16905667	
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>		
<i>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.</i>		
<b>Phone:</b>	5086883268	
<b>Email:</b>	james.voter@abbvie.com	
<b>Correspondent Name:</b>	JAMES VOTER	
<b>Address Line 1:</b>	381 PLANTATION STREET	
<b>Address Line 4:</b>	WORCESTER, MASSACHUSETTS 01605	
<b>ATTORNEY DOCKET NUMBER:</b>	ABV12089USC15	
<b>NAME OF SUBMITTER:</b>	NICHOLAS M. LEONARD, PH.D.	
<b>SIGNATURE:</b>	/Nicholas M. Leonard/	

DATE SIGNED:	03/09/2021
<b>Total Attachments: 16</b> source=2021_03_09_ABV12089USC15_Assignment for Recordal#page1.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page2.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page3.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page4.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page5.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page6.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page7.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page8.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page9.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page10.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page11.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page12.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page13.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page14.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page15.tif source=2021_03_09_ABV12089USC15_Assignment for Recordal#page16.tif	

**ASSIGNMENT**

WHEREAS we,

- (1) Ayman Allian of 48 Secret Hollow Lane, Newbury Park, CA 91320,
- (2) Jayanthy Jayanth of 915 Pine Tree Circle, Buffalo Grove, IL 60089,
- (3) Mohamed-Eslam F. Mohamed of 1500 Almaden Lane, Gurnee, IL 60031,
- (4) Mathew M. Mulhern of 1009 Oaktree Terrace, Lake Villa, IL 60046
- (5) Lars F. Nordstroem of 1401 Sheridan Road, N. Chicago, IL 60064
- (6) Ahmed A. Othman of 14615 S Somerset Cir, Libertyville, IL 60048
- (7) Michael J. Rozema of 5215 41<sup>st</sup> St, Kenosha, WI 53144
- (8) Lakshmi Bhagavatula of 272 Noble Circle, Vernon Hills, IL 60061
- (9) Patrick J. Marroum of 9114 Blarney Stone Drive, Springfield, VA 22152
- (10) Peter T. Mayer of 1117 Avalon Lane, Libertyville, IL 60048

Hereinafter the "Assignors", have made certain new and useful inventions as described in:

United States Patent Application No. 15/295,561 filed on October 17, 2016 entitled "PROCESSES FOR THE PREPARATION OF (3S,4R)-3-ETHYL-4-(3H-IMIDAZO[1,2- $\alpha$ ]PYRROLO[2,3- $e$ ]-PYRAZIN-8-YL)-N-(2,2,2-TRIFLUOROETHYL)PYRROLIDINE-1-CARBOXAMIDE AND SOLID STATE FORMS THEREOF" {Atty. Docket No. ABV12089USO1};

WHEREAS, AbbVie Inc., a corporation organized and existing under the laws of Delaware having a place of business at 1 North Waukegan Road, North Chicago, Illinois 60064, hereinafter the "Assignee", desires to acquire the entire right, title and interest in and to the inventions and the patent application(s) identified above, and all patents, foreign and domestic, which may be obtained for said inventions, and Assignors desire to assign such rights to AbbVie Inc., as set forth below;

NOW, THEREFORE, in exchange for valuable and legally sufficient consideration, the receipt of which is hereby acknowledged:

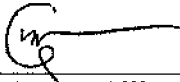
1. The Assignors have sold, conveyed, assigned and transferred, and by these presents do sell, convey, assign and transfer, to the Assignee their entire right, title and interest for the United States and all other jurisdictions in and to the inventions and the patent application(s) identified above, and any patents that may issue for said inventions, together with all patent applications, patents, utility models and designs therefore, including without limitation all continuations, divisions, renewals, revivals, reissues, reexaminations, extensions, supplementary protection certificates, and any substitute applications thereof, including the full right to claim all benefits and priority rights thereto under any applicable convention or treaty including without limitation the Paris

Convention, and all rights of action arising from the foregoing, including without limitation all claims for damages by reason of present, past and future infringement or violation of the foregoing and all present, past and future rights to sue and collect damages or seek injunctive relief for any such infringement or violation of the foregoing, in each case, to have and to hold for sole and exclusive use and benefit of the Assignee, its successors and assigns.

2. The Assignors hereby covenant and agree that Assignors have the full right to convey the interests granted by this Assignment; and that the Assignors will assist the Assignee (including prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by Assignee) in the prosecution of the patent applications identified above, in the making and prosecution of any other applications that the Assignee may elect to make covering the inventions identified above, in vesting in the Assignee with exclusive title in and to all such other patent applications and patents, in the prosecution of any interference which may arise involving said invention, or any such patent application or patent, and in assisting Assignee in the defense and enforcement of any rights arising out of such patent application or patent, or this Assignment; and that the Assignors will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

3. The terms and covenants of this Assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon the Assignors and their respective heirs, legal representatives and assigns.

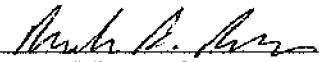
IN WITNESS WHEREOF, the Assignors have executed this Assignment.

(1)   
Ayman Allian


2/3/2017  
Date

**ACKNOWLEDGEMENT:**

On this 3<sup>rd</sup> day of February, 2017, Ayman Allian personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

  
Witness signature

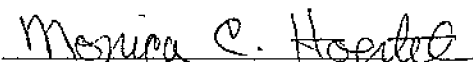
Derek B. Brown  
Witness name (please print)

(2)   
Jayanthi Jayanth

25<sup>th</sup> January 2017  
Date

**ACKNOWLEDGEMENT:**

On this 25<sup>th</sup> day of January, 2017, Jayanthi Jayanth personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

  
Witness signature

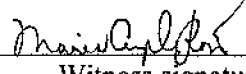
MONICA C. HOERTEL  
Witness name (please print)

(3)   
Mohamed-Eslam F. Mohamed

1/26/2017  
Date

**ACKNOWLEDGEMENT:**

On this 26th day of January, 2017, Mohamed-Eslam F. Mohamed personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

  
Witness signature

Maria A. Rano  
Witness name (please print)

(4) Mathew M. Mulhern  
Mathew M. Mulhern

26 Jan 17  
Date

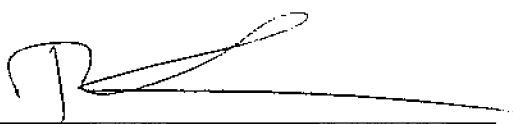
**ACKNOWLEDGEMENT:**

On this 26<sup>th</sup> day of JAN, 2017, Mathew M. Mulhern personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

[Signature]  
Witness signature

Tim Greene  
Witness name (please print)

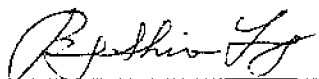


(5)   
Lars F. Nordstroem

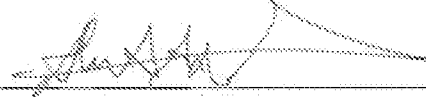
25 JAN 2017  
Date

**ACKNOWLEDGEMENT:**

On this 25<sup>th</sup> day of January, 2017, Lars F. Nordstroem personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

  
Witness signature


Bing-Shiou Yang  
Witness name (please print)

(6)   
Ahmed A. Othman

Feb 27, 2017  
Date

**ACKNOWLEDGEMENT:**

On this 27th day of February, 2017, Ahmed A. Othman personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

  
Witness signature

Maria A. Rono  
Witness name (please print)

(7)   
Michael J. Rozema

1-25-17  
Date

**ACKNOWLEDGEMENT:**

On this 25 day of January, 2017, Michael J. Rozema personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

  
Witness signature


Albert Kruger  
Witness name (please print)

(8) Lakshmi Bhagavatula  
Lakshmi Bhagavatula

1/27/17  
Date

**ACKNOWLEDGEMENT:**

On this 27<sup>th</sup> day of January, 2017, Lakshmi Bhagavatula personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

  
Witness signature

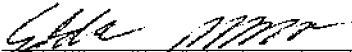
Jing Yang  
Witness name (please print)

(9)   
Patrick J. Marroum

2/19/2017  
Date

**ACKNOWLEDGEMENT:**

On this 19 day of February, 2017, Patrick J. Marroum personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

  
Witness signature

Eddie Marroum  
Witness name (please print)

(10) Peter T Mayer  
Peter T. Mayer

26 Jan 17  
Date

**ACKNOWLEDGEMENT:**

On this 26 day of January, 2017, Peter T. Mayer personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

M H  
Witness signature

Alex Rugales  
Witness name (please print)

## ASSIGNMENT

WHEREAS we,

- (1) Ahmad Y. Sheikh of 1020 Breckenridge Avenue, Lake Forest, IL 60045;
- (2) Thomas B. Borchardt of 2433 55<sup>th</sup> Avenue, Kenosha, WI 53144;

Hereinafter the "Assignors", have made certain new and useful inventions as described in:

United States Patent Application No. 62/242,797 filed on October 16, 2015 entitled "PROCESSES FOR THE PREPARATION OF (3S,4R)-3-ETHYL-4-(3H-IMIDAZO[1,2- $\alpha$ ]PYRROLO[2,3- $e$ ]-PYRAZIN-8-YL)-N-(2,2,2-TRIFLUOROETHYL)PYRROLIDINE-1-CARBOXAMIDE AND SOLID STATE FORMS THEREOF" {Atty. Docket No. ABV12089USL1};

United States Patent Application No. 62/267,672 filed on December 15, 2015 entitled "PROCESSES FOR THE PREPARATION OF (3S,4R)-3-ETHYL-4-(3H-IMIDAZO[1,2- $\alpha$ ]PYRROLO[2,3- $e$ ]-PYRAZIN-8-YL)-N-(2,2,2-TRIFLUOROETHYL)PYRROLIDINE-1-CARBOXAMIDE AND SOLID STATE FORMS THEREOF" {Atty. Docket No. ABV12089USL2};

United States Patent Application No. 62/301,537 filed on February 29, 2016 entitled "PROCESSES FOR THE PREPARATION OF (3S,4R)-3-ETHYL-4-(3H-IMIDAZO[1,2- $\alpha$ ]PYRROLO[2,3- $e$ ]-PYRAZIN-8-YL)-N-(2,2,2-TRIFLUOROETHYL)PYRROLIDINE-1-CARBOXAMIDE AND SOLID STATE FORMS THEREOF" {Atty. Docket No. ABV12089USL3};

United States Patent Application No. 62/352,380 filed on June 20, 2016 entitled "PROCESSES FOR THE PREPARATION OF (3S,4R)-3-ETHYL-4-(3H-IMIDAZO[1,2- $\alpha$ ]PYRROLO[2,3- $e$ ]-PYRAZIN-8-YL)-N-(2,2,2-TRIFLUOROETHYL)PYRROLIDINE-1-CARBOXAMIDE AND SOLID STATE FORMS THEREOF" {Atty. Docket No. ABV12089USL4};

United States Patent Application No. 15/295,561 filed on October 17, 2016 entitled "PROCESSES FOR THE PREPARATION OF (3S,4R)-3-ETHYL-4-(3H-IMIDAZO[1,2- $\alpha$ ]PYRROLO[2,3- $e$ ]-PYRAZIN-8-YL)-N-(2,2,2-TRIFLUOROETHYL)PYRROLIDINE-1-CARBOXAMIDE AND SOLID STATE FORMS THEREOF" {Atty. Docket No. ABV12089USO1};

PCT Patent Application No. PCT/US2016/057372 filed on October 17, 2016 entitled "PROCESSES FOR THE PREPARATION OF (3S,4R)-3-ETHYL-4-(3H-IMIDAZO[1,2- $\alpha$ ]PYRROLO[2,3- $e$ ]-PYRAZIN-8-YL)-N-(2,2,2-TRIFLUOROETHYL)PYRROLIDINE-1-CARBOXAMIDE AND SOLID STATE FORMS THEREOF" {Atty. Docket No. ABV12089WOO1};

WHEREAS, AbbVie Inc., a corporation organized and existing under the laws of Delaware having a place of business at 1 North Waukegan Road, North Chicago, Illinois 60064, hereinafter the "Assignee", desires to acquire the entire right, title and interest in and to the inventions and the patent application(s) identified above, and all patents, foreign and domestic, which may be obtained for said inventions, and Assignors desire to assign such rights to AbbVie Inc., as set forth below;

NOW, THEREFORE, in exchange for valuable and legally sufficient consideration, the receipt of which is hereby acknowledged:

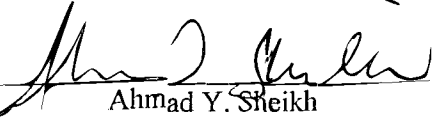
1. The Assignors have sold, conveyed, assigned and transferred, and by these presents do sell, convey, assign and transfer, to the Assignee their entire right, title and interest for the United States and all other jurisdictions in and to the inventions and the patent application(s) identified above, and any patents that may issue for said inventions, together with all patent applications, patents, utility models and designs therefore, including without limitation all continuations, divisions, renewals, revivals, reissues, reexaminations, extensions, supplementary protection certificates, and any substitute applications thereof, including the full right to claim all benefits and priority rights thereto under any applicable convention or treaty including without limitation the Paris Convention, and all rights of action arising from the foregoing, including without limitation all claims for damages by reason of present, past and future infringement or violation of the foregoing and all present, past and future rights to sue and collect damages or seek injunctive relief for any such infringement or violation of the foregoing, in each case, to have and to hold for sole and exclusive use and benefit of the Assignee, its successors and assigns.

2. The Assignors hereby covenant and agree that Assignors have the full right to convey the interests granted by this Assignment; and that the Assignors will assist the Assignee (including prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by Assignee) in the prosecution of the patent applications identified above, in the making and prosecution of any other applications that the Assignee may elect to make covering the inventions identified above, in vesting in the Assignee with exclusive title in and to all such other patent applications and patents, in the prosecution of any interference which may arise involving said invention, or any such patent application or patent, and in assisting Assignee in the defense and enforcement of any rights arising out of such patent application or patent, or this Assignment; and that the Assignors will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

3. The terms and covenants of this Assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon the Assignors and their respective heirs, legal representatives and assigns.



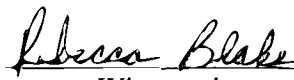
IN WITNESS WHEREOF, the Assignors have executed this Assignment.

(1)   
Ahmad Y. Sheikh

26 OCT 2017  
Date

**ACKNOWLEDGEMENT:**

On this 26 day of Oct., 2017, Ahmad Y. Sheikh personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

  
Witness signature

REBECCA BLAKE  
Witness name (please print)

(2) Thomas B. Borchardt  
Thomas B. Borchardt

02 NOV 2017  
Date

**ACKNOWLEDGEMENT:**

On this 2<sup>nd</sup> day of November, 2017, Thomas B. Borchardt personally appeared before me, executed the foregoing Assignment, and duly acknowledged to me that such Assignment was executed by his/her free act and deed for the uses and purposes therein expressed.

[Signature]  
Witness signature

Eric Schmitt  
Witness name (please print)