

ASSIGNMENT

WHEREAS I, the below-named inventor (hereinafter referred to as Assignor), of an invention entitled:

HETEROARYL COMPOUNDS FOR THE TREATMENT OF PAIN

as disclosed and claimed in:

Application Number	Country of Filing	Filing Date
63/333,875	United States	April 22, 2022

and in the applications identified in the table below claiming priority to U.S. Provisional Application No. 63/333,875:

Application Number	Country of Filing	Filing Date
20230100957	Argentina	April 21, 2023
12764	Lebanon	May 17, 2023
250/2023	Pakistan	April 26, 2023
PCT/US2023/019469	PCT	April 21, 2023
112114928	Taiwan	April 21, 2023
18/137,939	United States	April 21, 2023
40234	Uruguay	April 21, 2023
2023-000075	Venezuela	April 21, 2023

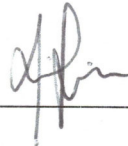
by virtue of my agreement with Vertex Pharmaceuticals (Europe) Limited, a corporation of the United Kingdom whose post office address is 2 Kingdom Street, London, W22 6BD, United Kingdom (hereinafter referred to as Assignee), confirm assignment and hereby assign to Assignee the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I, as Assignor, confirm that all rights in the inventions and applications listed above have already transferred to Assignee by virtue of my agreement. For the avoidance of doubt, Assignor hereby confirms having sold, assigned, transferred, and set over, and does hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my entire right, title, and interest in and to this invention, the above-referenced applications that disclose and/or claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, and continuations of any such application, and all patents which may be granted thereon, and all reissues thereof, and all rights to claim priority in any country on the basis of any such applications, and all extensions, renewals, and reissues thereof; and I hereby authorize and request that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I covenant that I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I further covenant and agree that I will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I have hereunto set my hands:



Iain SIMPSON

Date: 04/07/2023



Signed by Iain SIMPSON before me, Esmond Jenkins., Notary Public, at

BAMPTON, England on this 4th day of JULY, 2023.

Esmond Jenkins Notary Public
Clanfield House, Market Square
Bampton, Oxfordshire OX18 2JJ
Tel: 01993 852222



ACKNOWLEDGEMENT OF ASSIGNEE

On behalf of Vertex Pharmaceuticals (Europe) Limited:

Adrian G. Looney

Name: Adrian G. Looney

Title: Vice President, Chief Intellectual Property Officer

Sept. 14, 2023

Date

Commonwealth of Massachusetts

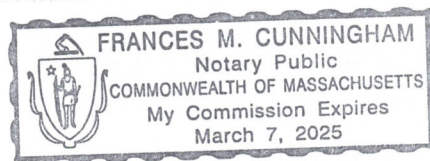
County of Suffolk

On this 14th day of September, 2023, before me, the undersigned notary public, personally appeared Adrian G. Looney (name of document signer), proved to me through satisfactory evidence of identification, which was/were ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose name is signed on this document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Frances M. Cunningham

Notary Public

My Commission Expires March 7, 2025



ASSIGNMENT

WHEREAS Vertex Pharmaceuticals (Europe) Limited (hereinafter referred to as Assignor), has acquired an interest in an invention entitled:

HETEROARYL COMPOUNDS FOR THE TREATMENT OF PAIN

as disclosed and claimed in the applications identified below this paragraph:

Application Number	Country of Filing	Filing Date
63/333,875	United States	April 22, 2022

and in the applications identified in the table below claiming priority to U.S. Provisional Application No. 63/333,875:

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112114928	Taiwan	April 21, 2023
18/137,939	United States	April 21, 2023
40234	Uruguay	April 21, 2023
2023-000075	Venezuela	April 21, 2023

WHEREAS Vertex Pharmaceuticals Incorporated, a corporation of Massachusetts whose post office address is 50 Northern Avenue, Boston, Massachusetts 02210, USA (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, Assignor has sold, assigned, transferred, and set over, and does hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, its entire right, title, and interest in and to this invention, the above-referenced applications that disclose and claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, continuations, extensions, renewals, reexaminations, and reissues of any application or patent claiming this invention, and all patents which may be granted thereon, and all rights to claim priority in any country on the basis of any such applications; and it hereby authorizes and requests that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, Assignor covenants that it has the full right to convey the interest assigned by this Assignment, and it has not executed and will not execute any agreement in conflict with this Assignment;

AND, Assignor further covenants and agrees that it will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to it respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

Adrian G. Looney

Name: Adrian G. Looney
Title: Vice President, Chief Intellectual Property Officer
On behalf of Vertex Pharmaceuticals (Europe) Limited

Date: Sept 14, 2023

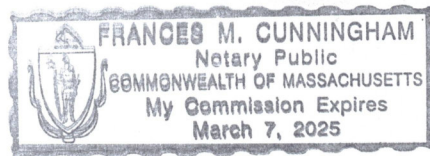
Commonwealth of Massachusetts
County of Suffolk

On this 14th day of September 2023, before me, the undersigned notary public, personally appeared Adrian G. Looney, proved to me through satisfactory evidence of identification, which was/were ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose name is signed on this document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Frances M. Cunningham

Notary Public

My Commission Expires March 7, 2025



ACKNOWLEDGEMENT OF ASSIGNEE

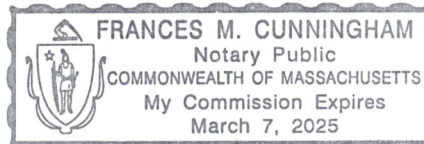
Adrian G. Looney
Name: Adrian G. Looney
Title: Vice President, Chief Intellectual Property Officer
On behalf of Vertex Pharmaceuticals Incorporated

Sept 14, 2023
Date

Commonwealth of Massachusetts
County of Suffolk

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Frances M. Cunningham
Notary Public
My Commission Expires March 7, 2025



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HETEROARYL COMPOUNDS FOR THE TREATMENT OF PAIN

as disclosed and claimed in:

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40234	Uruguay	April 21, 2023
2023-000075	Venezuela	April 21, 2023

* I authorize and request a patent practitioner of record in the above-referenced applications to insert the filing date and application number of the applications when known.

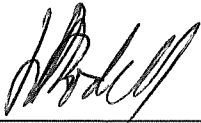
by virtue of my agreement with Vertex Pharmaceuticals (Europe) Limited, a corporation of the United Kingdom whose post office address is 2 Kingdom Street, London, W22 6BD, United Kingdom (hereinafter referred to as Assignee), confirm assignment and hereby assign to Assignee the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I, as Assignor, confirm that all rights in the inventions and applications listed above have already transferred to Assignee by virtue of my agreements. For the avoidance of doubt, Assignor hereby confirm having sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my entire right, title, and interest in and to this invention, the above-referenced applications that disclose and/or claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, and continuations of any such application, and all patents which may be granted thereon, and all reissues thereof, and all rights to claim priority in any country on the basis of any such applications, and all extensions, renewals, and reissues thereof; and I hereby authorize and request that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I covenant that I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I further covenant and agree that I will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I have hereunto set my hands:



James DODD

Signed by James DODD before me, Louisa Evelyn TAYLOR, Notary Public, at Abingdon, England on 19 April 2023.

Notarial Certification:

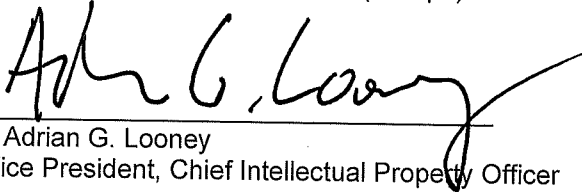


LOUISA EVELYN TAYLOR
Notary Public
44 Foliat Drive, Wantage
OX12 7AL, England
Tel: 07865 531871
Email: louisa@taylornotarypublic.co.uk
My Commission Expires at Death

134/2023

ACKNOWLEDGEMENT OF ASSIGNEE

On behalf of Vertex Pharmaceuticals (Europe) Limited:



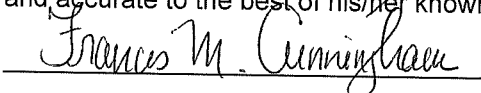
Name: Adrian G. Looney

Title: Vice President, Chief Intellectual Property Officer

Date April 19, 2023

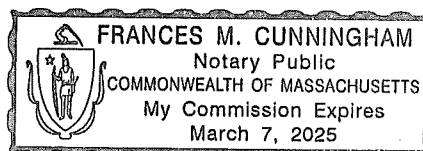
Commonwealth of Massachusetts
County of Suffolk

On this 19th day of April, 2023, before me, the undersigned notary public, personally appeared Adrian G. Looney (name of document signer), proved to me through satisfactory evidence of identification, which was/were ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose name is signed on this document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.



Notary Public

My Commission Expires March 7, 2025



ASSIGNMENT

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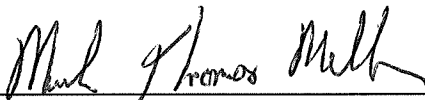
by virtue of my agreement with Vertex Pharmaceuticals (San Diego) LLC, a corporation of Delaware whose post office address is 3215 Merryfield Row, San Diego, CA 92121, USA (hereinafter referred to as Assignee), confirm assignment and hereby assign to Assignee the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I, as Assignor, confirm that all rights in the inventions and applications listed above have already transferred to Assignee by virtue of my agreements. For the avoidance of doubt, Assignor hereby confirm having sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my entire right, title, and interest in and to this invention, the above-referenced applications that disclose and/or claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, and continuations of any such application, and all patents which may be granted thereon, and all reissues thereof, and all rights to claim priority in any country on the basis of any such applications, and all extensions, renewals, and reissues thereof; and I hereby authorize and request that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I covenant that I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I further covenant and agree that I will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I have hereunto set my hands:


Mark Thomas MILLER

Date: April 18, 2023

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Diego

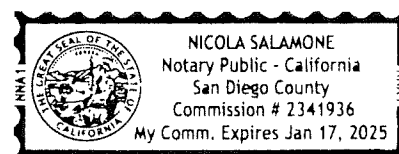
On April 18, 2023 before me, Nicola Salamone, Notary Public
(insert name and title of the officer)

personally appeared Mark Thomas MILLER, who proved to me on the basis of satisfactory evidence to be the person~~(s)~~ whose name~~(s)~~ is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity~~(ies)~~, and that by his/~~her/their~~ signature~~(s)~~ on the instrument the person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ 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  (Seal)



ACKNOWLEDGEMENT OF ASSIGNEE

On behalf of Vertex Pharmaceuticals (San Diego) LLC:

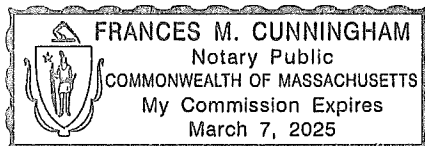
Adrian G. Looney
Name: Adrian G. Looney
Title: Vice President, Chief Intellectual Property Officer

April 19, 2023
Date

Commonwealth of Massachusetts
County of Suffolk

On this 19th day of April, 2023, before me, the undersigned notary public, personally appeared Adrian G. Looney (name of document signer), proved to me through satisfactory evidence of identification, which was/were ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose name is signed on this document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Frances M. Cunningham
Notary Public
My Commission Expires March 7, 2025



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WHEREAS WE, the below-named inventors (hereinafter referred to as Assignors), of an invention entitled:

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* WE authorize and request a patent practitioner of record in the above-referenced application to insert the filing date and application number of the application when known.

by virtue of our agreements with Vertex Pharmaceuticals (Europe) Limited, a corporation of the United Kingdom whose post office address is 2 Kingdom Street, London, W22 6BD, United Kingdom (hereinafter referred to as Assignee), confirm assignment and hereby assign to Assignee the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration, the receipt of which from Assignee is hereby acknowledged, WE, as Assignors, confirm that all rights in the inventions and applications listed above have already transferred to Assignee by virtue of our agreements. For the avoidance of doubt, Assignors hereby confirm having sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my entire right, title, and interest in and to this invention, the above-referenced applications that disclose and/or claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, and continuations of any such application, and all patents which may be granted thereon, and all reissues thereof, and all rights to claim priority in any country on the basis of any such applications, and all extensions, renewals, and reissues thereof; and WE hereby authorize and request that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, WE covenant that WE have not executed and will not execute any agreement in conflict with this Assignment;

AND, WE further covenant and agree that WE will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, WE have hereunto set our hands:

EmBeck
Elizabeth Mary BECK

Signed by Elizabeth Mary BECK before me, Louisa Evelyn TAYLOR, Notary Public, at Abingdon, England on

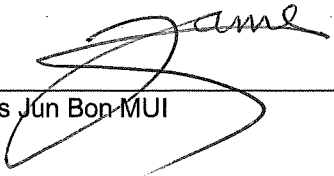
14th April 2023.

Notarial Certification:



LOUISA EVELYN TAYLOR
Notary Public
44 Foliat Drive, Wantage
OX12 7AL, England
Tel: 07865 531871
Email: louisa@taylornotarypublic.co.uk
My Commission Expires at Death

128/2023


James Jun Bon MUI

Signed by James Jun Bon MUI before me, Louisa Evelyn TAYLOR, Notary Public, at Abingdon, England on 19
April 2023.

Notarial Certification: 

LOUISA EVELYN TAYLOR
Notary Public
44 Foliat Drive, Wantage
OX12 7AL, England
Tel: 07865 531871
Email: louisa@taylornotarypublic.co.uk
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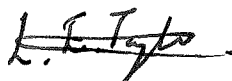
138/2023



Miranda Adele WRIGHT

Signed by Miranda Adele WRIGHT before me, Louisa Evelyn TAYLOR, Notary Public, at Abingdon, England on
19 April 2023.

Notarial Certification:



LOUISA EVELYN TAYLOR
Notary Public
44 Foliat Drive, Wantage
OX12 7AL, England
Tel: 07865 531871
Email: louisa@taylornotarypublic.co.uk
My Commission Expires at Death

145/2023



Ronald Marcellus Alphonsus KNEGTEL

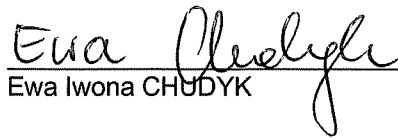
Signed by Ronald Marcellus Alphonsus KNEGTEL before me, Louisa Evelyn TAYLOR, Notary Public, at Abingdon,
England on 19th April 2023.

Notarial Certification:



LOUISA EVELYN TAYLOR
Notary Public
44 Foliat Drive, Wantage
OX12 7AL, England
Tel: 07865 531871
Email: louisa@taylornotarypublic.co.uk
My Commission Expires at Death

143/2023


Ewa Iwona CHUDYK

Signed by Ewa Iwona CHUDYK before me, Louisa Evelyn TAYLOR, Notary Public, at Abingdon, England on
19 April 2023.



Notarial Certification:

LOUISA EVELYN TAYLOR
Notary Public
44 Foliat Drive, Wantage
OX12 7AL, England
Tel: 07865 531871
Email: louisa@taylornotarypublic.co.uk
My Commission Expires at Death

124/2023



Joanne Louise PINDER

Signed by Joanne Louise PINDER before me, Louisa Evelyn TAYLOR, Notary Public, at Abingdon, England on
19th April 2023.

Notarial Certification: 

LOUISA EVELYN TAYLOR
Notary Public
44 Foliat Drive, Wantage
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My Commission Expires at Death

133/2023

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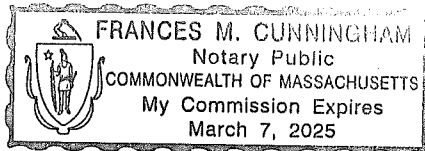
Adrian G. Looney
Name: Adrian G. Looney
Title: Vice President, Chief Intellectual Property Officer

April 19, 2023
Date

Commonwealth of Massachusetts
County of Suffolk

On this 19th day of April, 2023, before me, the undersigned notary public, personally appeared Adrian G. Looney (name of document signer), proved to me through satisfactory evidence of identification, which was/were ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose name is signed on this document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Frances M. Cunningham
Notary Public
My Commission Expires March 7, 2025



ASSIGNMENT

WHEREAS WE, the below-named inventors (hereinafter referred to as Assignors), of an invention entitled:

HETEROARYL COMPOUNDS FOR THE TREATMENT OF PAIN

as disclosed and claimed in:

Application Number	Country of Filing	Filing Date
63/333,875	United States	April 22, 2022

and in the applications identified in the table below claiming priority to U.S. Provisional Application No. 63/333,875:

Application Number*	Country of Filing	Filing Date*
20230100957	Argentina	April 21, 2023
12764	Lebanon	May 17, 2023
	Pakistan	April 26, 2023
PCT/US2023/019469	PCT	April 21, 2023
112114928	Taiwan	April 21, 2023
18/137,939	United States	April 21, 2023
40234	Uruguay	April 21, 2023
2023-000075	Venezuela	April 21, 2023

* WE authorize and request a patent practitioner of record in the above-referenced application to insert the filing date and application number of the application when known.

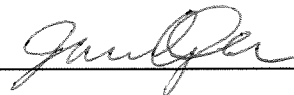
by virtue of our agreements with Vertex Pharmaceuticals Incorporated, a corporation of Massachusetts whose post office address is 50 Northern Avenue, Boston, Massachusetts 02210, USA (hereinafter referred to as Assignee), confirm assignment and hereby assign to Assignee the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration, the receipt of which from Assignee is hereby acknowledged, WE, as Assignors, confirm that all rights in the inventions and applications listed above have already transferred to Assignee by virtue of our agreements. For the avoidance of doubt, Assignors hereby confirm having sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my entire right, title, and interest in and to this invention, the above-referenced applications that disclose and/or claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, and continuations of any such application, and all patents which may be granted thereon, and all reissues thereof, and all rights to claim priority in any country on the basis of any such applications, and all extensions, renewals, and reissues thereof; and WE hereby authorize and request that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, WE covenant that WE have not executed and will not execute any agreement in conflict with this Assignment;

AND, WE further covenant and agree that WE will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, WE have hereunto set our hands:

Jaclyn CHAU 
Jaclyn CHAU

Date: 04/13/2023

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Diego

On April 13, 2023 before me, Amy Kaufman, notary public
(insert name and title of the officer)

personally appeared Jaclyn CHAU, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 Amy Kaufman (Seal)



Robert Martin Demoret
Robert Martin DEMORET

Date: April 13, 2023

ACKNOWLEDGMENT

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State of California
County of San Diego

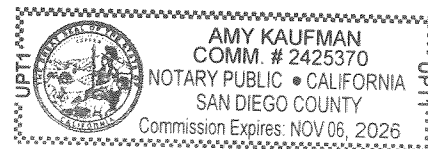
On April 13, 2023 before me, Amy Kaufman, notary public
(insert name and title of the officer)

personally appeared Robert Martin DEMORET, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 Amy Kaufman (Seal)



Senait G. GHIRMAI
Senait G. GHIRMAI

Date: 04/19/2023

ACKNOWLEDGMENT

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State of California
County of San Diego

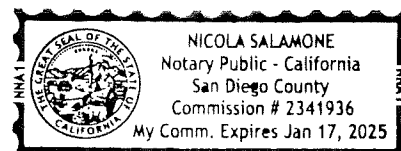
On April 19, 2023 before me, Nicola Salamone, Notary Public
(insert name and title of the officer)

personally appeared Senait G. GHIRMAI, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 Nicola Salamone (Seal)



R. Askatovich

Roman Askatovich VALIULIN

Date: April 18th 2023

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Diego

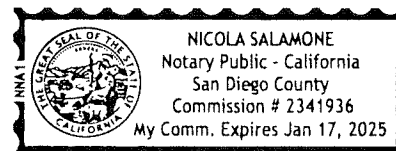
On April 18, 2023 before me, Nicola Salamone, Notary Public
(insert name and title of the officer)

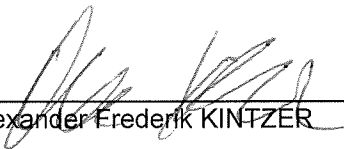
personally appeared Roman Askatovich VALIULIN, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 *N. Salamone* (Seal)




Alexander Frederik KINTZER

Date: April 13th, 2023

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Diego

On April 13, 2023 before me, Amy Kaufman, notary public
(insert name and title of the officer)

personally appeared Alexander Frederik KINTZER, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 Amy Kaufman (Seal)




David Robert SLOCHOWER

Date: 4/18/23

ACKNOWLEDGMENT

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State of California
County of San Diego

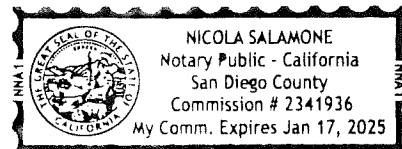
On April 18, 2023 before me, Nicola Salamone, Notary Public
(insert name and title of the officer)

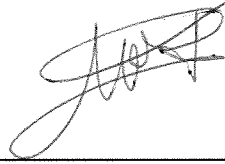
personally appeared David Robert SLOCHOWER, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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  (Seal)





Kathleen AERTGEERTS

Date: April 13, 2023

ACKNOWLEDGMENT

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State of California
County of San Diego

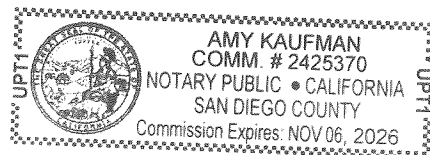
On April 13, 2023 before me, Amy Kaufman, notary public
(insert name and title of the officer)

personally appeared Kathleen AERTGEERTS, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 Amy Kaufman (Seal)



ACKNOWLEDGEMENT OF ASSIGNEE

On behalf of Vertex Pharmaceuticals Incorporated:

Adrian G. Looney
Name: Adrian G. Looney
Title: Vice President, Chief Intellectual Property Officer

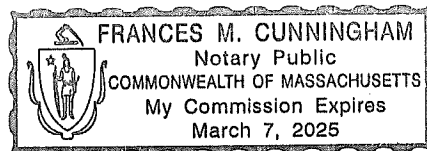
April 19, 2023
Date

Commonwealth of Massachusetts
County of Suffolk

On this 19th day of April, 2023, before me, the undersigned notary public, personally appeared Adrian G. Looney (name of document signer), proved to me through satisfactory evidence of identification, which was/were ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose name is signed on this document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Frances M. Cunningham

Notary Public
My Commission Expires March 7, 2025



ASSIGNMENT

WHEREAS WE, the below-named inventors (hereinafter referred to as Assignors), of an invention entitled:

HETEROARYL COMPOUNDS FOR THE TREATMENT OF PAIN

as disclosed and claimed in:

Application Number	Country of Filing	Filing Date
63/333,875	United States	April 22, 2022

and in the applications identified in the table below claiming priority to U.S. Provisional Application No. 63/333,875:

Application Number*	Country of Filing	Filing Date*
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18/137,939	United States	April 21, 2023
40234	Uruguay	April 21, 2023
2023-000075	Venezuela	April 21, 2023

* WE authorize and request a patent practitioner of record in the above-referenced application to insert the filing date and application number of the application when known.

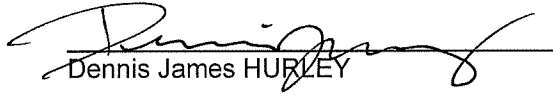
by virtue of our agreements with Vertex Pharmaceuticals (San Diego) LLC, a corporation of Delaware whose post office address is 3215 Merryfield Row, San Diego, CA 92121, USA (hereinafter referred to as Assignee), confirm assignment and hereby assign to Assignee the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration, the receipt of which from Assignee is hereby acknowledged, WE, as Assignors, confirm that all rights in the inventions and applications listed above have already transferred to Assignee by virtue of our agreements. For the avoidance of doubt, Assignors hereby confirm having sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my entire right, title, and interest in and to this invention, the above-referenced applications that disclose and/or claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, and continuations of any such application, and all patents which may be granted thereon, and all reissues thereof, and all rights to claim priority in any country on the basis of any such applications, and all extensions, renewals, and reissues thereof; and WE hereby authorize and request that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, WE covenant that WE have not executed and will not execute any agreement in conflict with this Assignment;

AND, WE further covenant and agree that WE will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, WE have hereunto set our hands:


Dennis James HURLEY

Date: 04/18/2023

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Diego

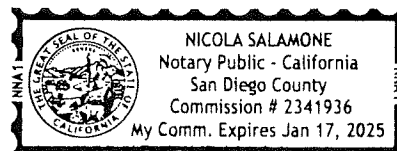
On April 18, 2023 before me, Nicola Salamone, Notary Public
(insert name and title of the officer)

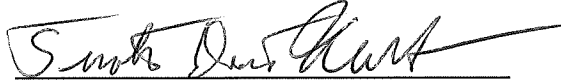
personally appeared Dennis James HURLEY, who proved to me on the basis of satisfactory evidence to be the person~~(s)~~ whose name~~(s)~~ is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity~~(ies)~~, and that by his/~~her/their~~ signature~~(s)~~ on the instrument the person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ 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  (Seal)




Timothy Donald NEUBERT

Date: 4/18/2023

ACKNOWLEDGMENT

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State of California
County of San Diego)

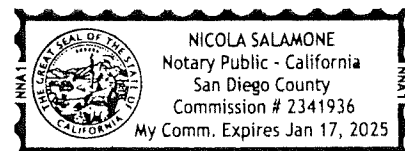
On April 18, 2023 before me, Nicola Salamone Notary Public
(insert name and title of the officer)

personally appeared Timothy Donald NEUBERT, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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  (Seal)



A. Vijayalakshmi
Vijayalakshmi ARUMUGAM

Date: 04/13/2023

ACKNOWLEDGMENT

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State of California
County of San Diego

On April 13, 2023 before me, Amy Kaufman, notary public
(insert name and title of the officer)

personally appeared Vijayalakshmi ARUMUGAM, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 Amy Kaufman (Seal)



Sara Sabina HADIDA RUAH
Sara Sabina HADIDA RUAH

Date: 04/13/2023

ACKNOWLEDGMENT

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State of California
County of San Diego

On April 13, 2023 before me, Amy Kaufman, notary public
(insert name and title of the officer)

personally appeared Sara Sabina HADIDA RUAH, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 Amy Kaufman (Seal)



Jason McCartney
Jason McCARTNEY

Date: 4/13/2023

ACKNOWLEDGMENT

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State of California
County of San Diego

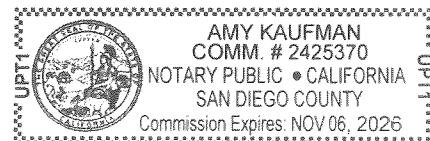
On April 13, 2023 before me, Amy Kaufman, notary public
(insert name and title of the officer)

personally appeared Jason McCARTNEY, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 Amy Kaufman (Seal)





Jinglan ZHOU

Date: 04/13/2023

ACKNOWLEDGMENT

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State of California
County of San Diego

On April 13, 2023 before me, Amy Kaufman, notary public
(insert name and title of the officer)

personally appeared Jinglan ZHOU, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 Amy Kaufman (Seal)



ACKNOWLEDGEMENT OF ASSIGNEE

On behalf of Vertex Pharmaceuticals (San Diego) LLC:

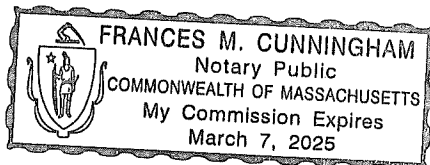
Adrian G. Looney
Name: Adrian G. Looney
Title: Vice President, Chief Intellectual Property Officer

April 19, 2023
Date

Commonwealth of Massachusetts
County of Suffolk

On this 19th day of April, 2023, before me, the undersigned notary public, personally appeared Adrian G. Looney (name of document signer), proved to me through satisfactory evidence of identification, which was/were ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose name is signed on this document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Frances M. Cunningham
Notary Public
My Commission Expires March 7, 2025



ASSIGNMENT

WHEREAS Vertex Pharmaceuticals (San Diego) LLC (hereinafter referred to as Assignor), has acquired an interest in an invention entitled:

HETEROARYL COMPOUNDS FOR THE TREATMENT OF PAIN

as disclosed and claimed in the application(s) identified below this paragraph:

Application Number	Country of Filing	Filing Date
63/333,875	United States	April 22, 2022

and in the applications identified in the table below claiming priority to U.S. Provisional Application No. 63/333,875:

Application Number*	Country of Filing	Filing Date*
20230100957	Argentina	April 21, 2023
12764	Lebanon	May 17, 2023
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18/137,939	United States	April 21, 2023
40234	Uruguay	April 21, 2023
2023-000075	Venezuela	April 21, 2023

*We authorize and request a patent practitioner of record in the above-referenced application(s) to insert the filing date and application number of the application(s) when known.

WHEREAS Vertex Pharmaceuticals Incorporated, a corporation of Massachusetts whose post office address is 50 Northern Avenue, Boston, Massachusetts 02210, USA (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, Assignor has sold, assigned, transferred, and set over, and does hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, its entire right, title, and interest in and to this invention, the above-referenced applications that disclose and claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, continuations, extensions, renewals, reexaminations, and reissues of any application or patent claiming this invention, and all patents which may be granted thereon, and all rights to claim priority

in any country on the basis of any such applications; and it hereby authorizes and requests that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, Assignor covenants that it has the full right to convey the interest assigned by this Assignment, and it has not executed and will not execute any agreement in conflict with this Assignment;

AND, Assignor further covenants and agrees that it will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to it respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

Adrian G. Looney

Name: Adrian G. Looney
Title: Vice President, Chief Intellectual Property Officer
On behalf of Vertex Pharmaceuticals (San Diego) LLC

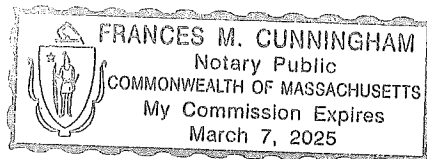
Date: April 19, 2023

Commonwealth of Massachusetts
County of Suffolk

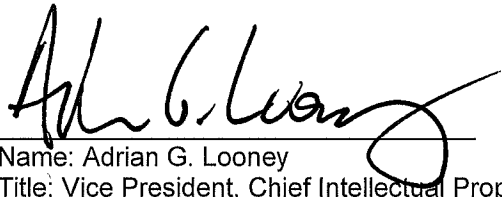
On this 19th day of April 2023, before me, the undersigned notary public, personally appeared Adrian G. Looney, proved to me through satisfactory evidence of identification, which was/were ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose name is signed on this document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Frances M. Cunningham

Notary Public
My Commission Expires March 7, 2025



ACKNOWLEDGEMENT OF ASSIGNEE

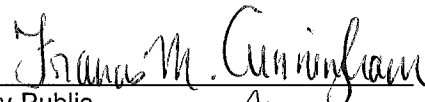


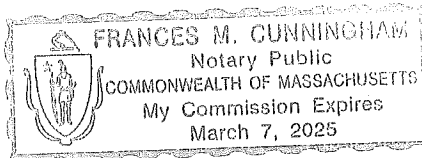
Name: Adrian G. Looney
Title: Vice President, Chief Intellectual Property Officer
On behalf of Vertex Pharmaceuticals Incorporated

April 19, 2023
Date

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Notary Public
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ASSIGNMENT

WHEREAS Vertex Pharmaceuticals (Europe) Limited (hereinafter referred to as Assignor), has acquired an interest in an invention entitled:

HETEROARYL COMPOUNDS FOR THE TREATMENT OF PAIN

as disclosed and claimed in the applications identified below this paragraph:

Application Number	Country of Filing	Filing Date
63/333,875	United States	April 22, 2022

and in the applications identified in the table below claiming priority to U.S. Provisional Application No. 63/333,875:

Application Number*	Country of Filing	Filing Date*
20230100957	Argentina	April 21, 2023
12764	Lebanon	May 17, 2023
	Pakistan	April 26, 2023
PCT/US2023/019469	PCT	April 21, 2023
112114928	Taiwan	April 21, 2023
18/137,939	United States	April 21, 2023
40234	Uruguay	April 21, 2023
2023-000075	Venezuela	April 21, 2023

*We authorize and request a patent practitioner of record in this application, to insert the filing date and application number of the above-referenced application(s) when known.

WHEREAS Vertex Pharmaceuticals Incorporated, a corporation of Massachusetts whose post office address is 50 Northern Avenue, Boston, Massachusetts 02210, USA (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, Assignor has sold, assigned, transferred, and set over, and does hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, its entire right, title, and interest in and to this invention, the above-referenced applications that disclose and claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, continuations, extensions, renewals, reexaminations, and reissues of any application or patent claiming this invention, and all patents which may be granted thereon, and all rights to claim priority

Adrian G. Looney

Name: Adrian G. Looney
Title: Vice President, Chief Intellectual Property Officer
On behalf of Vertex Pharmaceuticals (Europe) Limited

Date: April 19, 2023

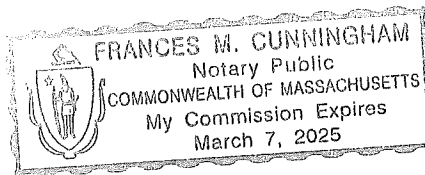
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Frances M. Cunningham

Notary Public

My Commission Expires March 7, 2025



ACKNOWLEDGEMENT OF ASSIGNEE

Adrian G. Looney

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