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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7957496

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KAMLESH JAGDIS BALA	05/13/2015
ANDREW BREARLEY	09/11/2014
JAMES DALE	04/02/2015
ANNE-MARIE EDWARDS	04/14/2015
MAHBUB AHMED	10/05/2014
DAVID PORTER	03/17/2015
LISA ANN ROONEY	03/25/2015
DAVID ANDREW SANDHAM	09/09/2014
DUNCAN SHAW	09/09/2014
NICHOLA SMITH	09/09/2014
JESSICA LOUISE TAYLOR	07/15/2015
ROGER JOHN TAYLOR	04/09/2015
JOE WRIGGLESWORTH	09/13/2014

RECEIVING PARTY DATA

Name:	NOVARTIS PHARMACEUTICALS UK LIMITED	
Street Address:	FRIMLEY BUSINESS PARK	
Internal Address:	FRIMLEY, CAMBERLEY	
City:	SURREY	
State/Country:	UNITED KINGDOM	
Postal Code:	GU16 7SR	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17089064

CORRESPONDENCE DATA

Fax Number: (617)871-3392

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.

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ATTORNEY DOCKET NUMBER: PAT056179-US-CNT04	
NAME OF SUBMITTER:	DIANA MABRY
SIGNATURE:	/Diana Mabry/
DATE SIGNED:	05/17/2023

Total Attachments: 88

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ASSIGNMENT

This Assignment Agreement is entered into by and between Kamlesh Jagdis BALA citizen of United Kingdom; Andrew BREARLEY citizen of United Kingdom; James DALE citizen of United Kingdom; Anne-Marie D'SOUZA citizen of United Kingdom; Mahbub AHMED citizen of United Kingdom; David PORTER citizen of United Kingdom; Lisa Ann ROONEY citizen of Australia; David Andrew SANDHAM citizen of United Kingdom; Duncan SHAW citizen of UK; Nichola SMITH citizen of United Kingdom; Jessica Louise TAYLOR citizen of United Kingdom; Roger John TAYLOR citizen of United Kingdom; Joe WRIGGLESWORTH citizen of United Kingdom; c/o Novartis Pharmaceuticals UK Limited, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, (hereinafter "Inventor(s)"), and NOVARTIS PHARMACEUTICALS UK LIMITED, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, a company organized under the laws of Great Britain.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, NOVARTIS PHARMACEUTICALS UK LIMITED is the true and lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to NOVARTIS PHARMACEUTICALS UK LIMITED and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

CARBOXAMIDE DERIVATIVES (Patent reference: PAT056179)

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14168363.7 and/or filed as a PCT International Application on	20	and
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(2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);

- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and divisionals such as, but not limited to, continuations of continuations and continuations of divisionals;
- (6) all patents, utility models, or other grants that issue from any of the applications referred to herein and all rights and remedies associated therewith including the right to sue for and recover past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting remedies for infringement prior to issuance of the patent;
- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and:
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

I/We the Inventor(s) hereby authorize ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

I/We the Inventor(s) hereby covenant and agree that I/We will, at any time, (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

Should any provision of this Assignment be deemed invalid or unenforceable by reason of any law, statute, regulation or judgment, existing now or in the future in any jurisdiction, such provision shall be modified in such jurisdiction so as to nearly approximate the intent of the Parties. If this cannot be done, such invalid or unenforceable provision shall be divisible and be deleted in any such jurisdiction, and all other provisions shall remain in full force and effect. The modification or deletion of any provision in one jurisdiction shall have no effect on this Assignment in any other jurisdiction.

This Assignment is effective as from the earliest priority date as stated above.

Executed this 1314 day of MAY	, 20 <u>يخ</u> .
BY Kamlesh Jagdis BALA	L.S.
Witnessed by:	Mortacoui
Name: Ryan WEST Address: 7 MULGERY CLOSE, HORSHAM, NEST SUSSEX RHIZ ZNH	Name: ALESSANBILO MARRACANI Address: 348 DITCHLING Rd BRIGHTON BN/ 6)G UK

Executed this	day of	, 20	
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Andrew BREAR	LEY	L.S.	
Witnessed by:			
Name:		Name:	i-i-
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ВУ		L.S.	
James DALE			
Witnessed by:			
Name:		Name: Address:	
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Executed this	day of	, 20	
ву		L.S.	
Anne-Marie D'SC	JUZA		
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Executed this	day of	, 20	
		L.S.	
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BYNichola SMITH	L.S.
Witnessed by:	
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Executed this day of	, 20	
BYRoger John TAYLOR	L.S.	
Roger John TAYLOR		
Witnessed by:		
Name:	Name:	***************************************
Address:	Address:	
Executed this day of	, 20	
BY	L.S.	
Joe WRIGGLESWORTH		
Witnessed by:		
Name:	Name:	
Address:	Address:	

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NOVARTIS PHARMACEUTICALS UK LIMITED

Executed this <u>30.44</u> day of <u>1.7.14</u>, 20<u>.7.5</u>

BY Length Children LS

Name: Signatory

*

Witnessed by:

Name: Stephen Wolfolds
Address:

700 Main Street Cambridge, MA 02139 Name: Address:

Stephanie Geis 700 Main Street Cambridge, MA 02139

ASSIGNMENT

This Assignment Agreement is entered into by and between Kamlesh Jagdis BALA citizen of United Kingdom; Andrew BREARLEY citizen of United Kingdom; James DALE citizen of United Kingdom; Anne-Marie D'SOUZA citizen of United Kingdom; Ahmed MAHBUB citizen of United Kingdom; David PORTER citizen of United Kingdom; Lisa Ann ROONEY citizen of Australia; David Andrew SANDHAM citizen of United Kingdom; Duncan SHAW citizen of UK; Nichola SMITH citizen of United Kingdom; Jessica Louise TAYLOR citizen of United Kingdom; Roger John TAYLOR citizen of United Kingdom; Joe WRIGGLESWORTH citizen of United Kingdom; c/o Novartis Pharmaceuticals UK Limited, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, (hereinafter "Inventor(s)"), and NOVARTIS PHARMACEUTICALS UK LIMITED, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, a company organized under the laws of Great Britain.

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(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

CARBOXAMIDE DERIVATIVES (Patent reference: PAT056179)

and filed in the European Patent Office on 14 May 2014 and accorded Applic	ation Nu	mbei
14168303.7 and/or filed as a PCT International Application on	, 20	and
accorded International Patent Application Number PCT/	; and/or	filed
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accorded Application Number;		

(2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);

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- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
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Executed this	day of	, 20	
BY		L.S.	
Kamlesh Jagdis B	ALA		
Witnessed by:			
Name: Address:		Name: Address:	, A.

Executed this \(\frac{1}{2} \) day of	Semptonkeloou
BYAndrew BREARLEY	L.S.
Witnessed by:	
Name: DANE GACK PERW Address: I KGLY DONE LETTOHRE REGIS DIFFERDINGE ONIZ SIT	Name: SMEAH HATES Address: 73 PENLOW PLACE ABINGDON OXON OXIH 3QN
Executed this day of	
BY	L.S.
Name: Address:	Name: Address:
Executed thisday of	, 20
BY Anne-Marie D'SOUZA	L.S.
Witnessed by:	
Name: Address:	Name: Address:

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Executed this	day of	, 20,	
BYAhmed MAHBUB		L.S.	
Witnessed by:			
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Executed this	day of	, 20	
BY David PORTER		L.S.	
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Executed this	day of	, 20	
BY Lisa Ann ROONEY		L.S.	
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Executed this	day of		
BY		L.S.	
David Andrew SA	NDHAM	L.S.	
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BY Duncan SHAW		L.S.	
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BY Nichola SMITH		L.S.	
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Jessica Louise T	AYLOR		
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BY Name: Title: Authorized !	Signatory	L.S	(,	
Witnessed by:		and the state of t	lancif.	Janki
Name: Address:	Silvia Arender Lichistrasse 35 4056 Basili Switzerland	Name: Address:	Maria J. Fran Lichtstra 4056 Switze	nco Martins esse 35 Basel

ASSIGNMENT

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(2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);

- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and divisionals such as, but not limited to, continuations of continuations and continuations of divisionals:
- (6) all patents, utility models, or other grants that issue from any of the applications referred to herein and all rights and remedies associated therewith including the right to sue for and recover past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting remedies for infringement prior to issuance of the patent;
- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

I/We the Inventor(s) hereby authorize ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

I/We the Inventor(s) hereby covenant and agree that I/We will, at any time, (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

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This Assignment is effective as from the earliest priority date as stated above.

Executed thisday of	
BY:	L.S.
Kamlesh Jagdis BALA	
Witnessed by:	
Name:	Name:
Address;	Address:

Executed this day of	, 20
BY	L.S.
Andrew BREARLEY	
Witnessed by:	
Name: Address:	Name: Address;
Executed this 2.3 day of 10.1	, 20 <u>is</u> . LS.
James DALE	
Witnessed by:	D. Euro
Name: PICHARD S1077 Address:35 HALLETT ROAD FLITCH GREEN OUNMON ESSEX CM 6 3FR	Name: DAVID EVANS Address: 4 FIELD CRESCENT ROYSTON MERTS SOR 77Z
Executed this day of	, 20,
BY Anne-Marie D'SOUZA	L.S.
Witnessed by:	
Name: Address:	Name: Address:

Executed this	day of	, 20,	
BY Mahbub AHMED		L.S.	
Witnessed by:			
Name: Address:		Name: Address:	
Executed this	day of		
BY David PORTER Witnessed by:		L.S.	
Name: Address:		Name: Address:	
Executed this	day of	,20	
BY Lisa Ann ROONE	V.	L.S.	
Witnessed by:	s .		
Name:		Name:	

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Executed this day of	,20
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BY	3.3.
Witnessed by:	
Name: Address:	Name: Address:
Executed this day of	,20,
BY Duncan SHAW	E.S.
Witnessed by:	
Name: Address:	Name: Address:
Executed this day of	, 20
BY	L.S.
Nichola SMITH Witnessed by:	
Name: Address:	Name: Address:

Executed thisday of		
BY	L.S.	
Jessica Louise TAYLOR		
Witnessed by:		
Name:	Name:	********
Address:	Address:	
Executed this day of	. 20	
BY	L.S.	
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Witnessed by:		
Name:	Name:	
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Executed thisday of	, 20,	
BY	L.S.	
Joe WRIGGLESWORTH		
Witnessed by:		
Name:	Name:	
Name: Address:	Address:	

NOVARIIS PHARMACEU IICALS UK LIM	HED
Executed this day of	, 20
BY Name: Title: Authorized Signatory	L.S.
Witnessed by:	Mani C. Janhis
Name: Silvia Arenger Nan	ie:
Address: Lichtstrasse & Add 4056 Basel	ress: Maria J. Franco Martins Lichtstrasse 35 4056 Basel Switzerland

ASSIGNMENT

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For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, NOVARTIS PHARMACEUTICALS UK LIMITED is the true and lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to NOVARTIS PHARMACEUTICALS UK LIMITED and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

CARBOXAMIDE DERIVATIVES (Patent reference: PAT056179)

and filed in the European Patent Office on 14 May 2014 and accorded Appli	cation Nu	mber
14168303.7 and/or filed as a PCT International Application on	, 20	and
accorded International Patent Application Number PCT/	; and/or	filed
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Executed thisday of	, 20
BY Kamlesh Jagdis BALA	L.S.
Witnessed by:	
Name:	Name:
Address:	Address:

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БУ	L.S.	w.
Andrew BREARLEY		
Witnessed by:		
Name:	Name:	
Address:	Address:	
Executed thisday (of, 20,	
BY	L.S.	
James DALE		
Witnessed by:		
Name:	Name:	
Address:	Address:	
Executed this 14th day	of <u>APR/L</u> , 20 <u>/S</u> .	
BY <u>NOCOS 644 4</u> Anne-Marie D'SOUZA	L.S.	
Witnessed by:	-7a	
A Quiedord		
Name: 10 Cancercord Address: \$\int \lambda \text{30} 43	Address: 53 GAANG	ostroniec E NOAB, CHESSINGTON, SURNEY.
MARINEO SA	are ever pap	

Executed thisday of		
BY Mahbub AHMED	I.S.	
Witnessed by:		
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Executed this day of	, 20	
BY	L.S.	
Name: Address:	Name: Address:	Navaranana :
Executed this day of		
BY Lisa Ann ROONEY Witnessed by:	E.\$.	
Name: Address	Name: Address:	

Executed this	day of	, 20	
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David Andrew SA	NDHAM	LS.	
Witnessed by:			
Name:		Name:	
Address:		Address:	
Executed this	day of	, 20	

BY		L,S,	
Duncan SHAW			
Witnessed by:			
Name:	·····	Name:	
Address:		Address:	
Executed this	day of	, 20	
BY		Ĺ,S.	
Nichola SMITH		***************************************	
Witnessed by:			
Name:		Name:	······································
Address:		Address:	

Executed this day of	20,	
BY	L.S.	
Jessica Louise TAYLOR		
Witnessed by:		
Name:	Name:	
Address:	Address:	
Executed this day of	, 20	
BY Roger John TAYLOR	L.S.	
Witnessed by:		
Name: Address:	Name: Address:	
Executed this day of		
BY Joe WRIGGLESWORTH	L.S.	
Joe WRIGGLESWORTH		
Witnessed by:		
Name:	Name:	

Switzerland

	FRAKBIACEULICAE	
Executed this	H day of Ma	
ву		L.S.
Name: S Title: Author	ized Signatory	
Witnessed by		
Name; Address:	Silvia Aregoes Lichtstrasse 35 4056 Basel Switzedand	Name: Address: Maria J. Franco Martins Lichtstrasse 35 4056 Rasel

ASSIGNMENT

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If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to NOVARTIS PHARMACEUTICALS UK LIMITED and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

 all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

CARBOXAMIDE DERIVATIVES (Patent reference: PAT056179)

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Executed this day o	f
BY	L.S.
Kamlesh Jagdis BALA	
Witnessed by:	
Name: Address:	Name: Address:

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Andrew BREARL	EY	L.S.	
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James DALE			
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BY		L.S.	
Anne-Marie D'SO	UZA	, T	
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BY David PORTER	1,003
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David Andrew SA	NDHAM		
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BY Duncan SHAW		L.S.	
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BY Nichola SMITH		L.S.	
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Executed this	day of	, 20	
BY		L.S.	
Jessica Louise TAYL	OR		
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Switzerland

MANAGER STORES	SAMMACEO I ICALO	UK Ling i Ed		
Executed this	the day of Star	,20_		
BY Name		LS.		
Title: Authorize	a Signatory			
Witnessed by:	Que	 } <u>Ha</u> w	a Comanda	السائد
Name:	Silvia Aregger	Name:	ia J. Franco Martin:	e
Address:	Lichtstrasse 35 / 4056 Basel Switzerland	Address: ***********************************	Lichtstrasse 35 4056 Basel	×

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in the United States Patent and Trademark Office on,	20	and
accorded Application Number		

(2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);

- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and divisionals such as, but not limited to, continuations of continuations and continuations of divisionals:
- (6) all patents, utility models, or other grants that issue from any of the applications referred to herein and all rights and remedies associated therewith including the right to sue for and recover past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting remedies for infringement prior to issuance of the patent:
- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

I/We the Inventor(s) hereby authorize ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

I/We the Inventor(s) hereby covenant and agree that I/We will, at any time, (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

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This Assignment is effective as from the earliest priority date as stated above.

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Executed this	day of	, 20	
BY	······	L.S.	
Andrew BREARL	EY		
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BY JWOLE.	L.S.
David PORTER	
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Executed this day of	
BY	L,S.
Lisa Ann ROONEY	
Witnessed by:	
Name:	Name:

Executed this	day of		
BY David Andrew SAN		L.S.	
David Andrew SAN	NDHAM		
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Name:		Name:	
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BY		L.S.	
Duncan SHAW			
Witnessed by:			
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BYNichola SMITH		L,S,	
Nichola SMITH			
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BY		L.S.	
Jessica Louise T	TAYLOR		
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Roger John TA'	YLOR	2300	
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Joe WRIGGLES	SWORTH		
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Name:	5 Salan 26	- Company	
Title: Authoria	zed Signatory		
Witnessed by:		The in the	antin 1
Name: Address:	Silvia Areituer Lichtstrass 935 4056 Basel Switzerland	Name: } Address:	Naria J. Franco Martins Lichtstrasse 35 4056 Basel Switzerland

ASSIGNMENT

This Assignment Agreement is entered into by and between Kamlesh Jagdis BALA citizen of United Kingdom; Andrew BREARLEY citizen of United Kingdom; James DALE citizen of United Kingdom; Anne-Marie D'SOUZA citizen of United Kingdom; Mahbub AHMED citizen of United Kingdom; David PORTER citizen of United Kingdom; Lisa Ann ROONEY citizen of Australia; David Andrew SANDHAM citizen of United Kingdom; Duncan SHAW citizen of UK; Nichola SMITH citizen of United Kingdom; Jessica Louise TAYLOR citizen of United Kingdom; Roger John TAYLOR citizen of United Kingdom; Joe WRIGGLESWORTH citizen of United Kingdom; c/o Novartis Pharmaceuticals UK Limited, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, (hereinafter "Inventor(s)"), and NOVARTIS PHARMACEUTICALS UK LIMITED, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, a company organized under the laws of Great Britain.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, NOVARTIS PHARMACEUTICALS UK LIMITED is the true and lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to NOVARTIS PHARMACEUTICALS UK LIMITED and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

CARBOXAMIDE DERIVATIVES (Patent reference: PAT056179)

and filed in the European Patent Office on 14 May 2014 and accorded Applica	ation Nu	mber
14168303.7 and/or filed as a PCT International Application on	, 20	and
accorded International Patent Application Number PCT/	; and/or	filed
in the United States Patent and Trademark Office on,	20	anđ
accorded Application Number;	a er Banandarian	

(2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);

- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and divisionals such as, but not limited to, continuations of continuations and continuations of divisionals;
- (6) all patents, utility models, or other grants that issue from any of the applications referred to herein and all rights and remedies associated therewith including the right to sue for and recover past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting remedies for infringement prior to issuance of the patent;
- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

I/We the Inventor(s) hereby authorize ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

I/We the Inventor(s) hereby covenant and agree that I/We will, at any time, (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

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This Assignment is effective as from the earliest priority date as stated above.

Executed this day (of
ВҮ	L.S.
Kamlesh Jagdis BALA	
Witnessed by:	
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Name: Address:	Name: Address:

Executed this	day of	, 20
BY		L.S.
Andrew BREARL	EY	do V
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BY	······································	L.S.	
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BY Lisa Ann ROE		<u></u> L.S.	
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BY Duncan SHAW		
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Nichola SMITH		
Witnessed by:		
Name: Address:		Name: Address:

BY	Executed this _	day of	, 20	
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Name: Address: Address: Executed this day of	Jessica Louise	TAYLOR		
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Roger John TAYLOR Witnessed by: Name: Address: Address: Executed this day of	Executed this _	day of	, 20	
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Name: Name: Address; Address; Executed this	Roger John TA	YLOR		
Address: Executed thisday of, 20, BYL.S. Joe WRIGGLESWORTH Witnessed by: Name: Name:	Witnessed by:			
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Joe WRIGGLESWORTH Witnessed by: Name: Name:	Executed this _	day of	, 20,	
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BY	XXX	L.S.	
Name:	S Salaine -		oo.
Title: Authoriz	ed Signatory		
Witnessed by:	Que	<u> </u>	lauis F. Markin,
Name:	Silvia Aregger	Name:	Maria J. Franco Martins
Address:	Lichtstrasse 35 (\$\infty\) 4056 Basel Switzerland	Address:	Uchtetrasse 35 4056 Basel Switzerland

ASSIGNMENT

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For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, NOVARTIS PHARMACEUTICALS UK LIMITED is the true and lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to NOVARTIS PHARMACEUTICALS UK LIMITED and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

CARBOXAMIDE DERIVATIVES (Patent reference: PAT056179)

and filed in the European Patent Office on 14 May 2014 and accorded Applic	ation l	Jumber
14168303.7 and/or filed as a PCT International Application on	, 20	and
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accorded Application Number;		

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- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
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This Assignment is effective as from the earliest priority date as stated above.

Executed this day of	, 20,
BY Kamlesh Jagdis BALA	L.\$,
Witnessed by:	
Name: Address:	Name: Address:

Executed this	day of		
BY		L.S.	
Andrew BREARLE	Y	L.Ś.	
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Anne-Marie D'SOU	ZA		
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BY		I.,S.	
Ahmed MAHBUB			
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Executed this	day of	, 20,	
BY David PORTER		L.S.	
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Executed this	day of	, 20	
BY		L.S.	
Lisa Ann ROONEY	Č		
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Executed thisday ofCFTUTING	<u>snc.</u> 2014
BY Dank Andrew SANDHAM	L.S.
Witnessed by:	
MIL	-4VVV
Name: Y Mile La	Name: 445min malik
Address: 100 february Square Carboda, MA 02139	Address: 100 Tent St. MA 02139
Executed this 9th day of Septembe	<u>5</u> , 20 <u>/4</u> ,
BY	
BY Duncan SHAW My	L.S.
Witnessed by:	
All to	4. Malik
Name Philip Lan	Name: Hasham Mark.
Address: 100 Technology Square Cantrodge, MA 02158	Address: 100 Tach. Sy. MA 02139
Executed this 4th day of SEPTEMS	<u>El, 20.14</u> .
BY <u>Ui dola Sudh</u> Nichola SMITH	L.S.
Witnessed by:	
The to	
Name: Philp Lan	Name: Hagania Malik. Address: 180 Tall S
Address: 1 et Telatory Square Cookey, Mi Vaist	Composition Law 23134

Executed this	day of	, 20,	
BY		L.S.	
Jessica Louise TA	YLOR		
Witnessed by:			
Name:		Name:	
Address:		Address:	
Executed this	day of	, 20,	
BYRoger John TAVI	OR	L.S.	
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Name:	***************************************	Name:	
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Executed this	day of	, 20	
BY		L.S.	
Joe WRIGGLESW	ORTH		
Witnessed by:			
Name:		Name:	
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NOVARTIS	PHARMACEUTICALS	UKLIMITED		
Executed this	day of 16	<u>~</u>	*	
BY —	200	L.S	`	
Name: Title: Authori	ized Signatory	Zecana D		
Witnessed by		The state of the s	10wi	Fitalia
Name: Address:	Silvia Aregger Lichtstrasse 35 4056 Basel Switzerland	Name: Address:	Maria 1. Lic	Franco Martins htstrasse 35 1056 Basel Witzerland

ASSIGNMENT

This Assignment Agreement is entered into by and between Kamlesh Jagdis BALA citizen of United Kingdom; Andrew BREARLEY citizen of United Kingdom; James DALE citizen of United Kingdom; Anne-Marie D'SOUZA citizen of United Kingdom; Mahbub AHMED citizen of United Kingdom; David PORTER citizen of United Kingdom; Lisa Ann ROONEY citizen of Australia; David Andrew SANDHAM citizen of United Kingdom; Duncan SHAW citizen of UK; Nichola SMITH citizen of United Kingdom; Jessica Louise TAYLOR citizen of United Kingdom; Roger John TAYLOR citizen of United Kingdom; Joe WRIGGLESWORTH citizen of United Kingdom; c/o Novartis Pharmaceuticals UK Limited, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, (hereinafter "Inventor(s)"), and NOVARTIS PHARMACEUTICALS UK LIMITED, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, a company organized under the laws of Great Britain.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, NOVARTIS PHARMACEUTICALS UK LIMITED is the true and lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to NOVARTIS PHARMACEUTICALS UK LIMITED and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

 all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

CARBOXAMIDE DERIVATIVES (Patent reference: PAT056179)

and filed in the European Patent Office on 14 May 2014 and accorded Applic		
14168303.7 and/or filed as a PCT International Application on	, 20	and
accorded International Patent Application Number PCT/	; and/or	
in the United States Patent and Trademark Office on,	20	and
accorded Application Number		

(2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);

- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and divisionals such as, but not limited to, continuations of continuations and continuations of divisionals:
- (6) all patents, utility models, or other grants that issue from any of the applications referred to herein and all rights and remedies associated therewith including the right to sue for and recover past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting remedies for infringement prior to issuance of the patent;
- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

I/We the Inventor(s) hereby authorize ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

I/We the Inventor(s) hereby covenant and agree that I/We will, at any time. (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

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This Assignment is effective as from the earliest priority date as stated above.

Executed this day of	, 20,	
ВУ	L.S.	
Kamlesh Jagdis BALA		
Witnessed by:		
D.X.		
Name:	Name:	
Address:	Address:	

Executed this	day of	, 20	
RV		T 6	
Andrew BREARI	EY	L.S.	
Witnessed by:			
Name: Address:		Name: Address:	
Executed this	day of	, 20	
BY		L.S.	
James DALE		**************************************	
Witnessed by:			
Name: Address:		Name: Address:	***************************************
Executed this	day of	, 20	
BY Anne-Marie D'SOI	JZA	L.S.	
Witnessed by:			
Name: Address:	<u> </u>	Name: Address:	

Executed this	day of	, 20
BY	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	L.S.
Mahbub AHMED		
Witnessed by:		
Name:		Name:
Address:		Address:
Executed this	day of	, 20
BY David PORTER		L.S.
Witnessed by:		
Name: Address:	***	Name: Address:
Executed this	isy of	, 20
ву		L.S.
Lisa Ann ROONEY		
Witnessed by:		
Name: Address:		Name: Address:

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L.S.
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Name:
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Name: Address:

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Executed this 15 day of J	20 <u>15.</u>
BY Jessica Louise TAYLOR	Ls.
Witnessed by:	
A:Hm >	_ Ollings
Name: Natable Harman Address: Answers investige	Name: Olivia Ellenger Lion Address: Anguers investigation
Swite 2. The Orcharo	Stute 2. The Orchard Stute 2. The Orchard Studdingfold road Sturey 608 4PR
Executed this day of	20
BYRoger John TAYLOR Witnessed by:	L.S.
Name:	Name:
Address:	Address:
Executed this day of	
BY	L.S.
Witnessed by:	
Name: Address:	Name: Address:

NOVARTIS PHARMACEUTICALS UK LIMITED

Executed this 2/16 day of 1/1/1/20/

BY Ls.

Name: Samuel Color, well a Title: Authorized Signatory

Witnessed by:

Name: Supten Wolfolds

700 Main Street Gembridge, MA 02139 Name:

Address: Stephanie Geis 700 Main Street Cambridge, MA 02139

ASSIGNMENT

This Assignment Agreement is entered into by and between Kamlesh Jagdis BALA citizen of United Kingdom; Andrew BREARLEY citizen of United Kingdom; James DALE citizen of United Kingdom; Anne-Marie D'SOUZA citizen of United Kingdom; Mahbub AHMED citizen of United Kingdom; David PORTER citizen of United Kingdom; Lisa Ann ROONEY citizen of Australia; David Andrew SANDHAM citizen of United Kingdom; Duncan SHAW citizen of UK; Nichola SMITH citizen of United Kingdom; Jessica Louise TAYLOR citizen of United Kingdom; Roger John TAYLOR citizen of United Kingdom; Joe WRIGGLESWORTH citizen of United Kingdom; c/o Novartis Pharmaceuticals UK Limited, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, (hereinafter "Inventor(s)"), and NOVARTIS PHARMACEUTICALS UK LIMITED, Frimley Business Park, Frimley, Camberley, Surrey GU16 7SR, UK, a company organized under the laws of Great Britain.

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If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to NOVARTIS PHARMACEUTICALS UK LIMITED and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

CARBOXAMIDE DERIVATIVES (Patent reference: PAT056179)

and filed in the European Patent Office on 14 May 2014 and accorded Appl	ication	Number
14168303.7 and/or filed as a PCT International Application on	_ , 20_	and
accorded International Patent Application Number PCT/	; and	l/or filed
	, 20	and
accorded Application Number;	9,	

(2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);

- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
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Executed thisday of	, 20	
BY Kamlesh Jagdis BALA	L.\$.	
Witnessed by:		
Name: Address:	Name: Address:	

Executed this	day of	, 20	
BY		L.S.	
Andrew BREARL	ÆΥ		
Witnessed by:			
Name:		Name:	
Address:		Address:	
Executed this	day of		
BY		LS,	
James DALE			
Witnessed by:			
Name:		Name:	······································
Address:		Address:	
Executed this	day of	; ;20;	
BY		L.S.	
Anne-Marie D'SO	UZA	5.3.	
Witnessed by:			
Name: Address:		Name: Address:	

Executed this day of	, 20,
BY Mahbub AHMED	L.S.
Mahbub AHMED	
Witnessed by:	
Name:	Name:
Address:	Address:
Executed this day of	
BY	L.S.
David PORTER	
Witnessed by:	
Name:	Name:
Address:	Address:
Executed thisday of	
BY	L.S.
Lisa Ann ROONEY	
Witnessed by:	
Name:	Name:
Address:	Address:

Executed this	day of	, 20	
BY		· 1.8-	
David Andrew SA	NDHAM	L.S.	
Witnessed by:			
Name: Address:		Name: Address:	
Executed this	day of	, <u>20 </u>	
BY Duncan SHAW		L.S.	
Witnessed by:			
Name: Address:		Name: Address:	
Executed this	day of	, 20	
BY Nichola SMITH		L.S.	
Witnessed by:			
Name; Address:		Name: Address:	

Executed thisday of	, 20
BY	L.S.
Jessica Louise TAYLOR	
Witnessed by:	
Name:	Name:
Address:	Address:
Executed this $\frac{S^{th}}{}$ day of $\frac{APRIL}{}$	
BY (ソコマッ)の Roger John TAYLOR	L.S.
Witnessed by:	-lup
Name: Reference Address: Solid of Comist, Animal	Name: !JURASTIKIN HAMSAH Address: SCHOOL OF CHEMSTRY, UNIVERSITY OF LEEDS:
Executed this day of	, 20 <u>/\</u> \.
BY	L.S.
HIMOW CLLDODAW JOS	
Witnessed by:	
Name:	Name:
Address:	Address:

Switzerland

MOAWETT	3 PHAKMACEUTICAL	S UK LIMITED	
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ву		i.s.	
Name: 🔷	ilino Zeri	~ /2	
	rized Signatory		
Witnessed b	(prima		,
Name: Address:	Silvia Aregger Lichtstrasse 35 4056 Basel	Name:	<u> 1901と - よって (なた</u> みな) ria J. Franco Martins
	Switzerland		Lichtstrasse 35 4056 Basel

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Executed this day of		
ВУ	L.S.	
Kamlesh Jagdis BALA		
Witnessed by:		
Name: Address:	Name: Address:	

Executed this	day of	, 20,	
BY	·	L.S.	
Andrew BREARL	EY		
Witnessed by:			
		Name:	***************************************
Name: Address:		Name: Address:	
Executed this	day of	, 20	
BY James DALE		L.S.	
Witnessed by:			
Name:	<u> </u>	Name:	
Address:		Address:	
Executed this	day of	, 20	
BY		L.S.	
Anne-Marie D'SO	UZA		
Witnessed by:			
Name: Address:		Name: Address:	

Executed this day of	, 20	
BYAhmed MAHBUB		
Witnessed by:		
Name: Address:	Name: Address:	······································
Executed this day of	, 20,	
BY	L.S.	
Name: Address:	Name: Address:	
Executed this day of		
BY_ Lisa Ann ROONEY	L.S.	
Witnessed by:		
Name: Address:	Name: Address:	

Executed thisday of	, 20,	
BY	L,S.	
BY		
Witnessed by:		
Name: Address:	Name: Address:	
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BY Duncan SHAW	L.S	
Witnessed by:		
Name: Address:	Name: Address:	
Executed thisday of		
BY Nichola SMITH	L.S.	
Witnessed by:		
Name: Address:	Name: Address:	

Executed this	day of	, 20,
BY		· L.S.
Jessica Louise TA	YLOR	
Witnessed by:		
Name:	vii	Name:
Address:		Address:
Executed this	day of	, 20
BY		L.S.
Roger John TAY	LOR	
Witnessed by:		
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Name:		Name:
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BY	VVVV VORTS	L.S.
Witnessed by:		
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Name: MEGAN		Name: MICHAEL COOKE
Address: 74 VIC	TORIA ROMO	Address: SYEWMURG DISCOURS
	CANARA N	BONNALOGI TIBREL
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		nai 16f

NOVARTIS	PHĄRMACEUTICALS	UK LIMITED	
Executed this	day of ha	, 20	
BY Name: Title: Authorit	zed Signatory	L.S.	
Witnessed by:	ALCONOMIC STATES	Tlane C. Thenh	patri
Name: Address:	Silvia Aregger Lichistrasse 35 4056 Basel Switzerland	Name: Maria J. Franco Martins Address: Lichtstrasse 35 4056 Basel Switzerland	