

ASSIGNMENT

WHEREAS, I/WE, **Deepak BANDYOPADHYAY**, a citizen of India, **Patrick M. EIDAM** and **Clark A. SEHON**, both citizens of the United States, of King of Prussia, Pennsylvania 19406, United States, and **Philip Anthony HARRIS**, **Jae U. JEONG**, **Bryan W. KING** and **David Duff WISNOSKI**, all citizens of the United States, of Collegeville, Pennsylvania 19426, United States, (hereinafter called "the inventor(s)"), have invented or discovered certain improvements in '**HETEROCYCLIC AMIDES AS KINASE INHIBITORS**' (hereinafter referred to as "the invention and improvements") for which provisional applications under 35 U.S.C. §111(b) were filed in the United States of America on **19 May 2015**, **28 May 2015** and **28 July 2015**, respectively, under application numbers **62/163552**, **62/167359** and **62/197602** in the United States Patent and Trademark Office and for which a PCT international application is now being filed. I/We hereby authorize and request that the filing date and application number of said PCT application, when known be inserted in parentheses below.

(PCT/IB2016/052948 filed 19 May 2016)

WHEREAS, GLAXOSMITHKLINE LLC, a company incorporated in the State of Delaware, United States of America, whose registered address is 2711 Centerville Road, Suite 400, Wilmington, Delaware 19808, United States of America, is desirous of acquiring the whole right, title and interest in and to said invention and improvements, and in and to any applications for said invention and improvements, including the right to claim priority, and in and to and any Letters Patent to be obtained therefore, in all countries, including the United States, its territories and possessions, and

WHEREAS, GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED, a company incorporated in England, whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring from GLAXOSMITHKLINE LLC the whole right, title and interest in and to the invention and improvements and in and to the application, and

WHEREAS, **GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED**, a company incorporated in England, whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring the whole right, title and interest in and to the invention and improvements and in and to any applications for the invention and improvements and any Letters Patent to be obtained therefore, in all countries, including the United States of America, its territories and possessions;

NOW, THEREFORE, to all whom it may concern, be it known that I/we, **Deepak BANDYOPADHYAY, Patrick M. EIDAM, Philip Anthony HARRIS, Jae U. JEONG, Bryan W. KING, Clark A. SEHON and David Duff WISNOSKI**, for good and valuable consideration unto me/us moving, the receipt whereof is hereby acknowledged, have sold, assigned and transferred, and by these presents do sell, assign and transfer my/our whole right, title and interest in and to said invention and improvements to said **GLAXOSMITHKLINE LLC**, throughout the United States of America, its territories and possessions, and in and to said application, and any extensions, reissues, continuations, continuations-in-part, and any divisions thereof, and in and to any and all Letters Patent of the United States of America, including any priority rights under the International Convention,

AND, my/our whole right, title and interest in and to said invention and improvements to **GLAXOSMITHKLINE LLC**, in all other countries throughout the world, and in and to any applications in said other countries, and continuations-in-part, patents of addition, revalidation patents, patents of importation, registrations, and any renewals, extensions and divisions thereof, and in and to any and all Letters Patent of said all other countries which may be granted on said invention and improvements including any priority rights under the International Convention.

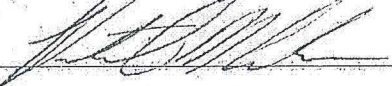
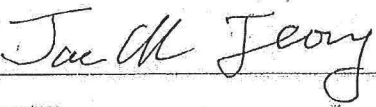
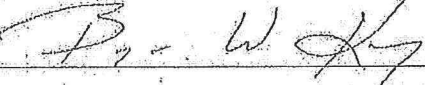
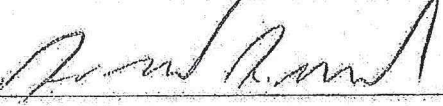
GLAXOSMITHKLINE LLC, in turn, hereby assigns and transfers to **GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED** its whole right, title and interest in all countries, including the United States of America, its territories and possessions in and to the invention and improvements and in and to the application including the right to claim priority from the application in respect of any subsequent applications, and in and to any divisional application, continuation or continuation in part application thereof, and in and to any Supplementary Protection Certificate,

extension or re-issue thereof, and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED, in turn, hereby assigns and transfers to GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED its whole right, title and interest in all countries, including the United States of America, its territories and possessions in and to the invention and improvements and in and to the application including the right to claim priority from the application in respect of any subsequent applications, and in and to any divisional application, continuation or continuation in part application thereof, and in and to any Supplementary Protection Certificate, extension or re-issue thereof,

AND I/we the inventor(s) and GLAXOSMITHKLINE LLC and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby authorise and request any patent arising therefrom, in all countries, including the United States of America, its territories and possessions, be issued to GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED;

AND GLAXOSMITHKLINE SERVICES UNLIMITED and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby, and I/we, the inventor(s), for myself/ourselves and my/our respective executors and legal representatives hereby, agree at the request and cost of GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED to provide information and make execute and deliver any and all other instruments in writing, and any and all further acts, applications, papers, affidavits, assignments and other documents which may be possible and are necessary or desirable to more effectually secure to and vest in **GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED**, its successors and assigns, the whole right, title and interest in and to the invention and improvements and in and to the application hereby assigned and transferred in all countries, including the United States of America, its territories and possessions.

IN WITNESS whereof and with effect from **19 May 2015**, the inventor(s) and the Attorney & Authorised Official of GLAXOSMITHKLINE LLC and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED have hereunto set their respective hands.

Inventor Name	Signature	Date
Deepak BANDYOPADHYAY:		5/5/2016
Patrick M. EIDAM:		5/4/2016
Philip Anthony HARRIS:		5/4/2016
Jae U. JEONG:		5/9/2016
Bryan W. KING:		5/5/2016
Clark A. SEHON:		5/6/2016
David Duff WISNOSKI:		5/5/2016

SIGNED by Edward Rimm As the
Attorney & Authorised Official of GLAXOSMITHKLINE LLC and GLAXOSMITHKLINE RESEARCH
AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL PROPERTY
DEVELOPMENT LIMITED:


SignatureDate: may 9, 2016

ASSIGNMENT

WHEREAS, I/WE, **Niall Andrew ANDERSON** and **Gemma Victoria WHITE**, both citizens of the United Kingdom, of Stevenage, Hertfordshire SG1 2NY, United Kingdom, (hereinafter called "the inventor(s)") have invented or discovered certain improvements in '**HETEROCYCLIC AMIDES AS KINASE INHIBITORS**' (hereinafter referred to as "the invention and improvements") for which provisional applications under 35 U.S.C. §111(b) were filed in the United States of America on **19 May 2015**, **28 May 2015** and **28 July 2015**, respectively, under application numbers **62/163552**, **62/167359** and **62/197602** in the United States Patent and Trademark Office and for which a PCT international application is now being filed. I/We hereby authorize and request that the filing date and application number of said PCT application, when known be inserted in parentheses below.

(PCT/IB2016/052948 filed 19 May 2016)

WHEREAS, the invention and improvements, being made in the course of my employment, belong to my/our employer at that time, namely **GLAXOSMITHKLINE SERVICES UNLIMITED**, a company incorporated in England, whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, and

WHEREAS, **GLAXOSMITHKLINE SERVICES UNLIMITED** has authorised and requested our making the application, and

WHEREAS, **GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED**, a company incorporated in England, whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring from **GLAXOSMITHKLINE SERVICES UNLIMITED** the whole right, title and interest in and to the invention and improvements and in and to the application, and

WHEREAS, **GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED**, a company incorporated in England, whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring the whole right, title and interest in and to the invention and improvements and in and to any applications for the invention and improvements

and any Letters Patent to be obtained therefore, in all countries, including the United States of America, its territories and possessions;

NOW, THEREFORE, to all whom it may concern be it known that I/we, the inventor(s), hereby confirm the ownership by GLAXOSMITHKLINE SERVICES UNLIMITED of the invention and improvements and the application by operation of law and, if under the law of the United States of America, I/we, the inventor(s), have any ownership right, title and interest in and to the invention and improvements and the application, (which I/we do not believe to be the case and claim no ownership right, title or interest in and to the invention and improvements and to the application based on the law of the United Kingdom), I/we, the inventor(s), nevertheless, hereby assign and transfer such ownership right, title and interest in and to the invention and improvements and to the application, including the right to claim priority from the application in respect of any subsequent applications, to GLAXOSMITHKLINE SERVICES UNLIMITED. GLAXOSMITHKLINE SERVICES UNLIMITED, in turn, hereby assigns and transfers to GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED its whole right, title and interest in and to the invention and improvements and in and to the application.

GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED, in turn, hereby assigns and transfers to **GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED** its whole right, title and interest in all countries, including the United States of America, its territories and possessions in and to the invention and improvements and in and to the application including the right to claim priority from the application in respect of any subsequent applications, and in and to any divisional application, continuation or continuation in part application thereof, and in and to any Supplementary Protection Certificate, extension or re-issue thereof, and I/we the inventor(s) and GLAXOSMITHKLINE SERVICES UNLIMITED and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby authorise and request any patent arising therefrom, in all countries, including the United States of America, its territories and possessions, be issued to **GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED;**

AND GLAXOSMITHKLINE SERVICES UNLIMITED and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby, and I/we the inventor(s) for myself/ourselves and my/our respective executors and legal representatives hereby, agree at the request and cost of GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED to provide information and make execute and deliver any and all other instruments in writing, and any and all

further acts, applications, papers, affidavits, assignments and other documents which may be possible and are necessary or desirable to more effectually secure to and vest in **GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED**, its successors

and assigns, the whole right, title and interest in and to the invention and improvements and in and to the application hereby assigned and transferred in all countries, including the United States of America, its territories and possessions.

IN WITNESS whereof and with effect from the **19 May 2015**, the inventor(s) and the Attorney & Authorised Official of GLAXOSMITHKLINE SERVICES UNLIMITED and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED have hereunto set their respective hands.

Inventor Name

Signature

Date

Niall ANDERSON:

NA

09/05/16

Gemma Victoria WHITE:

GWhite

09/05/16 (9TH MAY 2016)

SIGNED by Edward Gimmi As the Attorney & Authorised Official of GLAXOSMITHKLINE SERVICES UNLIMITED and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED:

Signature

[Signature]

Date:

may 9, 2016

ASSIGNMENT

WHEREAS, I/WE, **Alain Claude-Marie DAUGAN, Frederic G. DONCHE, Nicolas Eric FAUCHER** and **Nicolas S. GEORGE**, all citizens of France, of 25-27 avenue du Québec, 91951 Les Ulis Cedex, France (hereinafter called "the inventor(s)") have invented or discovered certain improvements in '**HETEROCYCLIC AMIDES AS KINASE INHIBITORS**' (hereinafter referred to as "the invention and improvements") for which provisional applications under 35 U.S.C. §111(b) were filed in the United States of America on **19 May 2015, 28 May 2015** and **28 July 2015**, respectively, under application numbers **62/163552, 62/167359** and **62/197602** in the United States Patent and Trademark Office and for which a PCT international application is now being filed. I/We hereby authorize and request that the filing date and application number of said PCT application, when known be inserted in parentheses below.

(PCT/IB2016/052948 filed 19 May 2016)

WHEREAS, **LABORATOIRE GLAXOSMITHKLINE S.A.S.**, a company incorporated in France, whose registered address is 100 Route de Versailles, Marly le Roi 78160, France, is desirous of acquiring the whole right, title and interest in and to said invention and improvements, and in and to any applications for said invention and improvements, including the right to claim priority, and in and to any Letters Patent to be obtained therefore, in all countries, including the United States, its territories and possessions, and

WHEREAS, **GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED**, a company incorporated in England, whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring from **LABORATOIRE GLAXOSMITHKLINE S.A.S.** the whole right, title and interest in and to the invention and improvements and in and to the application, and

WHEREAS, **GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED**, a company incorporated in England, whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring the whole right, title and interest in and to

the invention and improvements and in and to any applications for the invention and improvements and any Letters Patent to be obtained therefore, in all countries, including the United States of America, its territories and possessions;

NOW, THEREFORE, to all whom it may concern, be it known that I/we, **Alain Claude-Marie DAUGAN, Frederic G. DONCHE, Nicolas Eric FAUCHER and Nicolas S. GEORGE**, for good and valuable consideration unto me/us moving, the receipt whereof is hereby acknowledged, have sold, assigned and transferred, and by these presents do sell, assign and transfer my/our whole right, title and interest in and to said invention and improvements to said LABORATOIRE GLAXOSMITHKLINE S.A.S., throughout the United States of America, its territories and possessions, and in and to said application, and any extensions, reissues, continuations, continuations-in-part, and any divisions thereof, and in and to any and all Letters Patent of the United States of America, including any priority rights under the International Convention AND, my/our whole right, title and interest in and to said invention and improvements to LABORATOIRE GLAXOSMITHKLINE S.A.S., in all other countries throughout the world, and in and to any applications in said other countries, and continuations-in-part, patents of addition, revalidation patents, patents of importation, registrations, and any renewals, extensions and divisions thereof, and in and to any and all Letters Patent of said all other countries which may be granted on said invention and improvements including any priority rights under the International Convention.

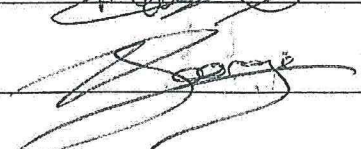
LABORATOIRE GLAXOSMITHKLINE S.A.S., in turn, hereby assigns and transfers to **GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED** its whole right, title and interest in all countries, including the United States of America, its territories and possessions in and to the invention and improvements and in and to the application including the right to claim priority from the application in respect of any subsequent applications, and in and to any divisional application, continuation or continuation in part application thereof, and in and to any Supplementary Protection Certificate, extension or re-issue thereof,

AND I/we, the inventor(s), and LABORATOIRE GLAXOSMITHKLINE S.A.S. and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby authorise and request

any patent arising therefrom, in all countries, including the United States of America, its territories and possessions, be issued to GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED;

AND GLAXOSMITHKLINE SERVICES UNLIMITED and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby, and I/we, the inventor(s), for myself/ourselves and my/our respective executors and legal representatives hereby, agree at the request and cost of GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED to provide information and make execute and deliver any and all other instruments in writing, and any and all further acts, applications, papers, affidavits, assignments and other documents which may be possible and are necessary or desirable to more effectually secure to and vest in GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED, its successors and assigns, the whole right, title and interest in and to the invention and improvements and in and to the application hereby assigned and transferred in all countries, including the United States of America, its territories and possessions.

IN WITNESS whereof and with effect from the **19 May 2015**, the inventor(s) and the Attorney & Authorised Official of LABORATOIRE GLAXOSMITHKLINE S.A.S. and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED have hereunto set their respective hands.

Inventor Name	Signature	Date
Alain Claude-Marie DAUGAN:		09/05/2016
Frederic G. DONCHE:		09/05/2016
Nicolas Eric FAUCHER:		9/05/2016
Nicolas S. GEORGE:		9.5.16

SIGNED by Edward Cimmer As the Attorney &
Authorised Official of LABORATOIRE GLAXOSMITHKLINE S.A.S. and GLAXOSMITHKLINE
RESEARCH AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL
PROPERTY DEVELOPMENT LIMITED:


Signature

Date: May 9, 2016