T U.S. Department of Commerce
Patent and Trademark Office Docket No.:A-832
d original documents or copy thereof.
Name and address of receiving party(ies): Name: Amgen Inc.
Internal Address: Mail Stop 27-4-A
Street Address: One Amgen Center Drive
City: Thousand Oaks State: CA Zip: 91230
Additional name(s) & address(es) attached?
n, the execution date of the application is:
B. Patent No.(s)
ached? Yes No 6. Total number of applications and patents involved: 1
7. Total fee (37 CFR 3.41)\$ 40.00
☐ Enclosed
Authorized to be charged to deposit account.
8. Deposit account number: 01-0519
The Commissioner is hereby authorized to charge any additional filing fees which may be required or credit any overpayment to Deposit Account No. 01-0519
JSE THIS SPACE
ation is true and correct and any attached copy is a true copy of
Signature 10/18/04 Date

PATENT REEL: 015911 FRAME: 0043

ASSIGNMENT

Wherea	s, we, <u>Joseph J. Nunes, 70 Elm Street,</u>	Andover, MA 01810	
	Xiaotian Zhu, 137 Temple Street	Newton MA 02465	
	Patricia Amouzegh, 4 Merton Clo	se, Didcot, Oxfordshire, (X11 8UJ U.K.
	Chiara Ghiron, 149 Cumnor Road	i, Wootton, Oxford OX1 5	JS U.K.
	David N. Johnston, 111 Milton Pa	ırk, Abingdon, Oxfordshire	e, OX14 4SD U.K.
	Eoin Christopher Power, 135 Jac	kman Close, Abingdon, C	exfordshire OX14 3GB U.K.
have made an inve	ntion which is the subject of an application	for Letters Patent of the	United States ("Application") entitled
SUBST	TUTED HETEROCYCLIC COMPOUNDS	AND METHODS OF USE	
which is found in:			
(a)	the US Patent Application executed on ev	en date herewith;	
☐ (b)	the US Patent Application executed on of U.S. Provisional Application No.	f	[which claims the benefit led]
⊠ (c)	US Application Serial No.: 10/875,896		June 23, 2004
whic	h claims benefit to US Prov. Appln. No. 60	/482,375 filed on	June 24, 2003
☐ (d)	US Patent No.:		

Whereas AMGEN INC., a Delaware corporation having its principal place of business at One Amgen Center Drive, Thousand Oaks, California 91320-1799, wishes to acquire the entire interest in all inventions disclosed in such Application;

Now, therefore, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over unto AMGEN INC., its successors and assigns (collectively "AMGEN") our entire right, title and interest in, to and under the Application, and any provisional application(s) from which Application is derived, and all priority rights to which the Application may be entitled, including all priority rights for other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries which may be granted for such inventions, or any of them, including divisional, continuation, and/or continuation-in-part applications based on the above identified Application, all such inventions and all rights in such Application and Letters Patent to be held and enjoyed by AMGEN for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

Further, we hereby sell, assign, transfer, and set over unto AMGEN our entire right, title and interest in or to the right to refer to, to access, and to control microorganism(s) or other biological material(s) related to the Application and which are deposited by us or at our direction or deposited on our behalf by Amgen, its affiliates, employees or employees of its affiliates. The transfer of such right, title and interest includes, without limitation, our unreserved and irrevocable consent and authorization to AMGEN to refer to the deposited microorganisms(s) or other biological materials(s) in the Application and the right to make available to the public the deposited material in accordance with the laws, treaties, statutes, rules, regulations and the like of the United States, all other countries, and any patent granting authority or organization.

1

We authorize and request the Commissioner of Patents and Trademarks of the United States to issue any such Letters Patent which may be granted on the Application to AMGEN as assignee of the entire right, title and interest therein and thereto.

For ourselves and for our legal representatives, we covenant and agree with AMGEN that we have not granted to any others any license to make, use or sell any of such inventions, that our right, title and interest in such inventions has not been encumbered, that we have good right and title to sell and assign the same, and that we will not execute any instrument in conflict herewith.

For ourselves and for our heirs, successors and legal representatives, we further covenant and agree with AMGEN that upon request we and they will: (i) execute continuing, divisional, or reissue applications, amended specifications, or rightful declarations or oaths; (ii) communicate to AMGEN any facts known to us or them relating to such inventions or the history thereof; (iii) execute preliminary statements and testify in any interference proceedings or litigation; (iv) execute and deliver any application papers, assignments, or other instruments; and (v) do all other acts which, in the opinion of counsel for AMGEN, may be necessary or desirable to secure the grant of Letters Patent to AMGEN or its nominees, in the United States and in all other countries where AMGEN may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by counsel for AMGEN and to vest and confirm in AMGEN or its nominees the full and complete legal and equitable title to all such Letters Patent, without further consideration than that now paid but at the expense of AMGEN.

in witness whereof I have execut	ed this assignment on the	day of	20
Joseph J. Nunes			
(Name of Inventor)		(Signature of	Inventor)
	UNITED STATES OF AMERI	CA	
State of Massachusetts County of Middlesex			
			20
Before me, a Notary Public for Mi Joseph J. Nunes			
personally known to me - OR -	proved to me on the basis of name is subscribed to the w he/she executed the same his/her signature on the inst of which the person acted, ex	ithin instrument and a in his/her authorized trument the person, o	cknowledged to me that capacity, and that by the entity upon behalf
	WITNESS my hand and offici	al seal.	
		Notary Public	
		My commission ex	xpires
	Ju	ly 24	20 09

In Witness Whereof I have execut	ed this assignment on the	day of	20
Xiaotian Zhu			
(Name of Inventor)		(Signature of Ir	eventor)
	UNITED STATES OF AMER	ICA	
State of Massachusetts County of Middlesex ss:			
			20
Xiaotian Zhu			
personally known to me - OR -	proved to me on the basis of name is subscribed to the w he/she executed the same his/her signature on the inst of which the person acted, ex	ithin instrument and ack in his/her authorized o trument the person, or t	nowledged to me that apacity, and that by
	WITNESS my hand and offic	ial seal.	
		Notary Public	
		My commission exp	ires
	Jı	ıly 24	20 09

NOTABY	(Signature of Inventor)
	CERTIFICATION
ounty of Oxfare ss:	
	12 hugur 20 og
Defens on a Nation Date for Midweller in	who faculty on Onland IIV
Before me, a Notary Public for	-Re County of Oxyland . UK, personally appeared
name is sub- he/she exec his/her signa	scribed to the within instrument and acknowledged to me that by
personally known to me - OR - proved to me name is substitute he/she exect his/her signate of which the	scribed to the within instrument and acknowledged to me tha cuted the same in his/her authorized capacity, and that by ature on the instrument the person, or the entity upon behal
personally known to me - OR - proved to me name is substitute he/she exect his/her signate of which the	scribed to the within instrument and acknowledged to me tha cuted the same in his/her authorized capacity, and that by ature on the instrument the person, or the entity upon behal person acted, executed the instrument.
personally known to me - OR - proved to me name is substitute he/she exect his/her signate of which the	

PATENT REEL: 015911 FRAME: 0047

In Witness Whereof I have execu-	ted this assignment on the	day of	20
Chiara Ghiron			
(Name of Inventor)		(Signature of Inventor)	
	NOTARY CERTIFICAT	TION	
State of County of ss:			
·			20
Before me, a Notary Public for], personally appeared	
Chiara Ghiron		The Prince is a support of the state of the	
personally known to me - OR -	name is subscribed to the he/she executed the sa his/her signature on the	s of satisfactory evidence to be the per e within instrument and acknowledge me in his/her authorized capacity, instrument the person, or the entity I, executed the instrument.	d to me that and that by
	WITNESS my hand and o	official seal.	
		Notary Public	
		My commission expires	
			20

In Witness Whereof I have execut	ed this assignment on the	day of	20
David Johnston (Name of Inventor)		(Signature of Inv	entor)
(Name of inventor)		(Signature of line	entor)
	NOTARY CERTIFICATION		
State of Sounty of			
			20
Before me, a Notary Public for		, person	ally appeared
David Johnston	4-1-2-1-1		
personally known to me - OR -	proved to me on the basis of name is subscribed to the wi he/she executed the same his/her signature on the instr of which the person acted, ex	thin instrument and acknown in his/her authorized can rument the person, or the	owledged to me that pacity, and that by
	WITNESS my hand and official	al seal.	
		Notary Public	
		My commission expire	es
			20

In Witness Whereof I have execut	ted this assignment on the	day of	20
Eoin Christopher Power			
(Name of Inventor)		(Signature of Invento	or)
	NOTARY CERTIFICATION	4	
State of Sounty of State of St			
			20
Before me, a Notary Public for		; personally appeared	l
Eoin Christopher Power			
personally known to me - OR -	name is subscribed to the w he/she executed the same	satisfactory evidence to be the ithin instrument and acknowle in his/her authorized capacitument the person, or the entected the instrument.	dged to me that ty, and that by
	WITNESS my hand and office	ial seal.	
		Notary Public	
		My commission expires	
			20

ASSIGNMENT

Wherea	s, we, <u>Joseph J. Nunes, 70 Elm Street, A</u>	Indover, MA 01810	
<u></u>	Xiaotian Zhu, 137 Temple Street,	Newton MA 02465	
	Patricia Amouzegh, 4 Merton Clos	se, Didcot, Oxfordshire, (OX11 8UJ U.K.
	Chiara Ghiron, 149 Cumnor Road	, Wootton, Oxford OX1 5	JS U.K.
	David N. Johnston, 111 Milton Pa	k, Abingdon, Oxfordshir	e, OX14 4SD U.K.
	Eoin Christopher Power, 135 Jack	man Close, Abingdon, C	oxfordshire OX14 3GB U.K.
have made an inve	ntion which is the subject of an application	or Letters Patent of the	United States ("Application") entitle
SUBSTI	TUTED HETEROCYCLIC COMPOUNDS A	ND METHODS OF USE	
which is found in:			
☐ (a)	the US Patent Application executed on eve	en date herewith;	
☐ (b)	the US Patent Application executed on of U.S. Provisional Application No.	f	[which claims the benefit led]
⊠ (c) whicl	US Application Serial No.: 10/875,896 n claims benefit to US Prov. Appln. No. 60/		June 23, 2004 June 24, 2003
☐ (d)	US Patent No.:		

Whereas AMGEN INC., a Delaware corporation having its principal place of business at One Amgen Center Drive, Thousand Oaks, California 91320-1799, wishes to acquire the entire interest in all inventions disclosed in such Application;

Now, therefore, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over unto AMGEN INC., its successors and assigns (collectively "AMGEN") our entire right, title and interest in, to and under the Application, and any provisional application(s) from which Application is derived, and all priority rights to which the Application may be entitled, including all priority rights for other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries which may be granted for such inventions, or any of them, including divisional, continuation, and/or continuation-in-part applications based on the above identified Application, all such inventions and all rights in such Application and Letters Patent to be held and enjoyed by AMGEN for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

Further, we hereby sell, assign, transfer, and set over unto AMGEN our entire right, title and interest in or to the right to refer to, to access, and to control microorganism(s) or other biological material(s) related to the Application and which are deposited by us or at our direction or deposited on our behalf by Amgen, its affiliates, employees or employees of its affiliates. The transfer of such right, title and interest includes, without limitation, our unreserved and irrevocable consent and authorization to AMGEN to refer to the deposited microorganisms(s) or other biological materials(s) in the Application and the right to make available to the public the deposited material in accordance with the laws, treaties, statutes, rules, regulations and the like of the United States, all other countries, and any patent granting authority or organization.

1

We authorize and request the Commissioner of Patents and Trademarks of the United States to issue any such Letters Patent which may be granted on the Application to AMGEN as assignee of the entire right, title and interest therein and thereto.

For ourselves and for our legal representatives, we covenant and agree with AMGEN that we have not granted to any others any license to make, use or sell any of such inventions, that our right, title and interest in such inventions has not been encumbered, that we have good right and title to sell and assign the same, and that we will not execute any instrument in conflict herewith.

For ourselves and for our heirs, successors and legal representatives, we further covenant and agree with AMGEN that upon request we and they will: (i) execute continuing, divisional, or reissue applications, amended specifications, or rightful declarations or oaths; (ii) communicate to AMGEN any facts known to us or them relating to such inventions or the history thereof; (iii) execute preliminary statements and testify in any interference proceedings or litigation; (iv) execute and deliver any application papers, assignments, or other instruments; and (v) do all other acts which, in the opinion of counsel for AMGEN, may be necessary or desirable to secure the grant of Letters Patent to AMGEN or its nominees, in the United States and in all other countries where AMGEN may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by counsel for AMGEN and to vest and confirm in AMGEN or its nominees the full and complete legal and equitable title to all such Letters Patent, without further consideration than that now paid but at the expense of AMGEN.

In Witness Whereof I have execute	ed this assignment on theday of	20
Joseph J. Nunes		
(Name of Inventor)	(Signa	ture of Inventor)
	UNITED STATES OF AMERICA	
State of Massachusetts County of Middlesex State of Massachusetts State of Massachusetts		
		20
·	ddlesex County, State of Massachusetts, pers	onally appeared
Joseph J. Nunes personally known to me - OR -	proved to me on the basis of satisfactory ev name is subscribed to the within instrument he/she executed the same in his/her authis/her signature on the instrument the per of which the person acted, executed the instrument	and acknowledged to me that horized capacity, and that by son, or the entity upon behalf
	WITNESS my hand and official seal.	
	Notar	y Public
	My commis	ssion expires
	July 24	20 09

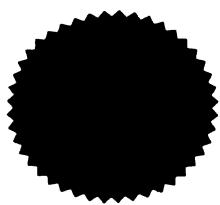
In Witness Whereof I have executed this	s assignment on theday of	20
Xiaotian Zhu		· · · · · · · · · · · · · · · · · · ·
(Name of Inventor)	(Signature of	Inventor)
UNIT	ED STATES OF AMERICA	
State of Massachusetts County of Middlesex ss:		
	-	20
Before me, a Notary Public for Middles	ex County, State of Massachusetts, personally	appeared
Xiaotian Zhu		· · · · · · · · · · · · · · · · · · ·
nam he/s his/i	red to me on the basis of satisfactory evidence to be is subscribed to the within instrument and active executed the same in his/her authorized the signature on the instrument the person, or hich the person acted, executed the instrument.	knowledged to me that capacity, and that by the entity upon behalf
WIT	NESS my hand and official seal.	
	Notary Public	;
	My commission ex	rpires
	July 24	20 09

In Witness Whereof I have	e executed this assignment o	on theday of	20
Patricia Amouze	, and		
(Name of Invent		(Signature of I	nventor)
	NOTARY CERT	IFICATION	
State of Sounty of			
			20
Before me, a Notary Pub	lic for	, pe	rsonally appeared
Patricia Amouzegh			
personally known to me - OR	name is subscribe he/she executed his/her signature o	ne basis of satisfactory evidence to to the within instrument and active same in his/her authorized on the instrument the person, or nacted, executed the instrument.	knowledged to me that capacity, and that by
	WITNESS my han	d and official seal.	
		Notary Public	
		My commission ex	pires
			20

In Witness Whereof I have execute	ed this assignment on the	day of	20
Chiara Ghiron		(Signature of Inventor)	
(Name of Inventor)		(Signature of inventor)	
	NOTARY CERTIFICAT	ION	
State of Sounty of Ss:			
			20
Before me, a Notary Public for], personally appeared	
Chiara Ghiron			
personally known to me - OR -	name is subscribed to the he/she executed the san his/her signature on the	s of satisfactory evidence to be the e within instrument and acknowled me in his/her authorized capacity instrument the person, or the entity, executed the instrument.	ged to me that , and that by
	WITNESS my hand and o	official seal.	
		Notary Public	
		My commission expires	
			20

In Witness Whereof I have exec	cuted this assignment on the	12th day of	Thoust	20 <u>02</u>
		CAL.	3 0 -	
David Johnston		/Cianati	ure of Inventor)	
(Name of Inventor)		(Signati	are of inventor)	
	NOTARY CERTIFICAT	ION		
te of United Kingdan ss:				
unty of $\theta \times \{ 4 \}$ ss.				
		12 h	upur	20 Out
	-		,	
m Common Alabam Dublic for		A		
	. Milanday by to Car	who a by and . Ul	C nareonally an	naarad
Before me, a Notary Public for	Minglow he tre Car	us of organion	🗴 personally ap	peared
	Mingelor he tree Car	uly y orgal. U	💃 personally ap	peared
David Johnston	Minghon he tree Car	uly y orgal. U	Spersonally ap	peared
	proved to me on the basiname is subscribed to the he/she executed the satisfier signature on the	s of satisfactory evid e within instrument a me in his/her autho instrument the pers	lence to be the pand acknowledgorized capacity, on, or the entity	person whose led to me that and that by
David Johnston	proved to me on the basiname is subscribed to the he/she executed the sa	s of satisfactory evid e within instrument a me in his/her autho instrument the pers	lence to be the pand acknowledgorized capacity, on, or the entity	person whose led to me that and that by
David Johnston	proved to me on the basiname is subscribed to the he/she executed the satisfier signature on the	s of satisfactory evid e within instrument a me in his/her autho instrument the person I, executed the instru	lence to be the pand acknowledgorized capacity, on, or the entity	person whose led to me that and that by
David Johnston	proved to me on the basiname is subscribed to the he/she executed the sahis/her signature on the of which the person acted	s of satisfactory evide within instrument ame in his/her authorinstrument the person, executed the instrument.	dence to be the pand acknowledgorized capacity, on, or the entity ument.	person whose led to me that and that by
David Johnston	proved to me on the basiname is subscribed to the he/she executed the sahis/her signature on the of which the person acted	s of satisfactory evide within instrument ame in his/her authorinstrument the person, executed the instrument.	dence to be the pand acknowledgorized capacity, on, or the entity ument.	person whose led to me that and that by
David Johnston	proved to me on the basiname is subscribed to the he/she executed the sahis/her signature on the of which the person acted	s of satisfactory evid e within instrument a me in his/her autho instrument the person I, executed the instru	dence to be the pand acknowledgorized capacity, on, or the entity ument.	person whose led to me that and that by
David Johnston	proved to me on the basiname is subscribed to the he/she executed the sahis/her signature on the of which the person acted	s of satisfactory evide within instrument ame in his/her authorinstrument the person, executed the instrument.	lence to be the pand acknowledge orized capacity, on, or the entity ument.	person whose led to me that and that by
David Johnston	proved to me on the bas name is subscribed to the he/she executed the sa his/her signature on the of which the person acted WITNESS my hand and	s of satisfactory evide within instrument ame in his/her authorinstrument the person, executed the instrument official seal.	dence to be the pand acknowledge orized capacity, on, or the entity ument. Public Sion expires	person whose led to me that and that by

NIGEL P. S. SHAW NOTARY PUBLIC Walton House, 15 Ock Street Abingdon, Oxfordshire England OX14 5AN



PATENT REEL: 015911 FRAME: 0056

In Witness Whereof I have execu	ited this assignment on the	day of	20
Eoin Christopher Power		(2)	
(Name of Inventor)		(Signature of Inver	ntor)
	NOTARY CERTIFICATION		
State of County of ss:			
			20
Before me, a Notary Public for _		; personally appear	ed
Eoin Christopher Power			
personally known to me - OR -	proved to me on the basis of name is subscribed to the wi he/she executed the same his/her signature on the instr of which the person acted, ex	thin instrument and acknow in his/her authorized capa rument the person, or the	rledged to me that acity, and that by
	WITNESS my hand and offici	al seal.	
		Notary Public	
		My commission expires	;
			20

ASSIGNMENT

Wherea	s, we, <u>Joseph J. Nunes,</u>	70 Elm Street, Andover, MA 01	810	
	Xiaotian Zhu, 137	Temple Street, Newton MA 024	465	
	Patricia Amouzegl	n, 4 Merton Close, Didcot, Oxfo	ordshire, (OX11 8UJ U.K.
	Chiara Ghiron, 14	O Cumnor Road, Wootton, Oxfo	ord OX1 5	iJS U.K.
	David N. Johnston	, 111 Milton Park, Abingdon, O	xfordshire	e, OX14 4SD U.K.
	Eoin Christopher F	Power, 135 Jackman Close, Ab	ingdon, C	Oxfordshire OX14 3GB U.K.
have made an inve	ntion which is the subject of	an application for Letters Pate	nt of the l	United States ("Application") entitled
SUBSTI	TUTED HETEROCYCLIC C	OMPOUNDS AND METHODS	OF USE	
which is found in:				
☐ (a)	the US Patent Application	executed on even date herewith	h;	
☐ (b)	the US Patent Application of U.S. Provisional Applica		fi	[which claims the benefit
⊠ (c)	US Application Serial No.:		-	June 23, 2004
which	n claims benefit to US Prov. US Patent No.:	Appin. No. 60/482,375	tiled on	June 24, 2003

Whereas AMGEN INC., a Delaware corporation having its principal place of business at One Amgen Center Drive, Thousand Oaks, California 91320-1799, wishes to acquire the entire interest in all inventions disclosed in such Application;

Now, therefore, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over unto AMGEN INC., its successors and assigns (collectively "AMGEN") our entire right, title and interest in, to and under the Application, and any provisional application(s) from which Application is derived, and all priority rights to which the Application may be entitled, including all priority rights for other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries which may be granted for such inventions, or any of them, including divisional, continuation, and/or continuation-in-part applications based on the above identified Application, all such inventions and all rights in such Application and Letters Patent to be held and enjoyed by AMGEN for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

Further, we hereby sell, assign, transfer, and set over unto AMGEN our entire right, title and interest in or to the right to refer to, to access, and to control microorganism(s) or other biological material(s) related to the Application and which are deposited by us or at our direction or deposited on our behalf by Amgen, its affiliates, employees or employees of its affiliates. The transfer of such right, title and interest includes, without limitation, our unreserved and irrevocable consent and authorization to AMGEN to refer to the deposited microorganisms(s) or other biological materials(s) in the Application and the right to make available to the public the deposited material in accordance with the laws, treaties, statutes, rules, regulations and the like of the United States, all other countries, and any patent granting authority or organization.

PATENT REEL: 015911 FRAME: 0058

We authorize and request the Commissioner of Patents and Trademarks of the United States to issue any such Letters Patent which may be granted on the Application to AMGEN as assignee of the entire right, title and interest therein and thereto.

For ourselves and for our legal representatives, we covenant and agree with AMGEN that we have not granted to any others any license to make, use or sell any of such inventions, that our right, title and interest in such inventions has not been encumbered, that we have good right and title to sell and assign the same, and that we will not execute any instrument in conflict herewith.

For ourselves and for our heirs, successors and legal representatives, we further covenant and agree with AMGEN that upon request we and they will: (i) execute continuing, divisional, or reissue applications, amended specifications, or rightful declarations or oaths; (ii) communicate to AMGEN any facts known to us or them relating to such inventions or the history thereof; (iii) execute preliminary statements and testify in any interference proceedings or litigation; (iv) execute and deliver any application papers, assignments, or other instruments; and (v) do all other acts which, in the opinion of counsel for AMGEN, may be necessary or desirable to secure the grant of Letters Patent to AMGEN or its nominees, in the United States and in all other countries where AMGEN may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by counsel for AMGEN and to vest and confirm in AMGEN or its nominees the full and complete legal and equitable title to all such Letters Patent, without further consideration than that now paid but at the expense of AMGEN.

in Witness Whereof I have execute	ed this assignment on the	2 day of	Chargost 20 04
Joseph J. Nunes) sy	& J. hum
(Name of Inventor)		∦Sign	ature of Inventor)
	UNITED STATES OF AMERICA	4	/
State of Massachusetts County of Middlesex } ss:			
		J.	ugust 9 20 04
Before me, a Notary Public for Mic	ddlesex County, State of Massac	husetts, per	sonally appeared
Joseph J. Nunes			
personally known to me - OR -	name is subscribed to the with he/she executed the same in	nin instrumer in his/her au iment the pe	vidence to be the person whose nt and acknowledged to me that thorized capacity, and that by erson, or the entity upon behalf trument.
	WITNESS my hand and official	seal.	
	Danis K	ichard & Nota	Fruith-Bayl
		My comm	ission expires
	July	24	20 09

In Witness Whereof I have execut	ed this assignment on the	9th day of	Sept. 20 0 k
Xiaotian Zhu		201	- N
(Name of Inventor)		(Signature	e of Inventor)
	UNITED STATES OF AME	RICA	
State of Massachusetts County of Middlesex ss:			
		Septembe	<u> 2004</u>
Before me, a Notary Public for Mi	ddlesex County, State of Ma	ssachusetts, person	ally appeared
Xiaotian Zhu		·····	
personally known to me - OR -	name is subscribed to the he/she executed the sam	within instrument and ne in his/her authorianstrument the person	nce to be the person whose diacknowledged to me that zed capacity, and that by , or the entity upon behalf ent.
	WITNESS my hand and of	ficial seal.	
	Dani	Kichard Si Notary Pi	mith-Boyl
		My commissio	n expires
		July 24	20 09

In Witness Whereof I have execu	ted this assignment on the	day of	20
Patricia Amouzegh			
(Name of Inventor)		(Signature of In	ventor)
	NOTARY CERTIFICATION	I	
State of County of ss:			
			20
Before me, a Notary Public for _		, per	sonally appeared
Patricia Amouzegh			
personally known to me - OR -	proved to me on the basis of name is subscribed to the w he/she executed the same his/her signature on the ins of which the person acted, ex	rithin instrument and ack in his/her authorized of trument the person, or t	nowledged to me that capacity, and that by
	WITNESS my hand and office	ial seal.	
		Notary Public	
		My commission exp	pires
			20

In Witness Whereof I have execute	ed this assignment on the	eday of	20
Chiara Ghiron			
(Name of Inventor)	-	(Signature of Invento	or)
	NOTARY CERTIFICA	ATION	
State of Sciently of State of			
		14.04	20
Before me, a Notary Public for], personally appeared	
Chiara Ghiron			
personally known to me - OR -	name is subscribed to he/she executed the his/her signature on th	asis of satisfactory evidence to be the the within instrument and acknowle same in his/her authorized capace instrument the person, or the eried, executed the instrument.	edged to me that ity, and that by
	WITNESS my hand an	d official seal.	
		Notary Public	
		My commission expires	
			20

In Witness Whereof I have execute	ed this assignment on the	day of	20
David Johnston			
(Name of Inventor)		(Signature of Inver	ntor)
	NOTARY CERTIFICATION		
State of Sounty of Ss:			
			20
Before me, a Notary Public for		, personal	ly appeared
David Johnston	<u></u>		
personally known to me - OR -	proved to me on the basis of name is subscribed to the with he/she executed the same his/her signature on the instr of which the person acted, ex-	thin instrument and acknow in his/her authorized capa rument the person, or the	rledged to me that acity, and that by
	WITNESS my hand and official	al seal.	
		Notary Public	
		My commission expires	;
			20

In Witness Whereof I have execute	ed this assignment on the	day of	20
Eoin Christopher Power (Name of Inventor)		(Signature of Inver	ntor)
	NOTARY CERTIFICATION	N	
State of Sounty of Ss:			
			20
Before me, a Notary Public for		; personally appear	red
Eoin Christopher Power			
personally known to me - OR -	proved to me on the basis of name is subscribed to the value he/she executed the same his/her signature on the insoft which the person acted, expenses the same of which the person acted.	within instrument and acknow e in his/her authorized capa strument the person, or the	vledged to me that acity, and that by
	WITNESS my hand and office	cial seal.	
		Notary Public	
		My commission expires	S
			20

ASSIGNMENT

Whereas	s, we,Joseph J. Nunes, 70 Elm Street, Andover,	, MA 01810	
	Xiaotian Zhu, 137 Temple Street, Newton	MA 02465	
	Patricia Amouzegh, 4 Merton Close, Didco		
	Chiara Ghiron, Strada Comunale di Saltea IT	ano 1, 53014 Loc. Isola d'Arbia - Asciano (Siena)	
	David N. Johnston, 111 Milton Park, Abing	gdon, Oxfordshire, OX14 4SD U.K.	
	Eoin Christopher Power, 135 Jackman Clo	ose, Abingdon, Oxfordshire OX14 3GB U.K.	
have made an inve	ntion which is the subject of an application for Lette	ers Patent of the United States ("Application") entit	iled
SUBSTI	TUTED HETEROCYCLIC COMPOUNDS AND MET	THODS OF USE	
which is found in:			
☐ (a)	the US Patent Application executed on even date h	herewith;	
☐ (b)	the US Patent Application executed on of U.S. Provisional Application No.	[which claims the benefit]	
	US Application Serial No.: 10/875,896		
	n claims benefit to US Prov. Appln. No. 60/482,375	filed on <u>June 24, 2003</u>	
∐ (d)	US Patent No.:		

Whereas AMGEN INC., a Delaware corporation having its principal place of business at One Amgen Center Drive, Thousand Oaks, California 91320-1799, wishes to acquire the entire interest in all inventions disclosed in such Application;

Now, therefore, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over unto AMGEN INC., its successors and assigns (collectively "AMGEN") our entire right, title and interest in, to and under the Application, and any provisional application(s) from which Application is derived, and all priority rights to which the Application may be entitled, including all priority rights for other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries which may be granted for such inventions, or any of them, including divisional, continuation, and/or continuation-in-part applications based on the above identified Application, all such inventions and all rights in such Application and Letters Patent to be held and enjoyed by AMGEN for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

Further, we hereby sell, assign, transfer, and set over unto AMGEN our entire right, title and interest in or to the right to refer to, to access, and to control microorganism(s) or other biological material(s) related to the Application and which are deposited by us or at our direction or deposited on our behalf by Amgen, its affiliates, employees or employees of its affiliates. The transfer of such right, title and interest includes, without limitation, our unreserved and irrevocable consent and authorization to AMGEN to refer to the deposited microorganisms(s) or other biological materials(s) in the Application and the right to make available to the public the deposited material in accordance with the laws, treaties,

1

statutes, rules, regulations and the like of the United States, all other countries, and any patent granting authority or organization.

We authorize and request the Commissioner of Patents and Trademarks of the United States to issue any such Letters Patent which may be granted on the Application to AMGEN as assignee of the entire right, title and interest therein and thereto.

For ourselves and for our legal representatives, we covenant and agree with AMGEN that we have not granted to any others any license to make, use or sell any of such inventions, that our right, title and interest in such inventions has not been encumbered, that we have good right and title to sell and assign the same, and that we will not execute any instrument in conflict herewith.

For ourselves and for our heirs, successors and legal representatives, we further covenant and agree with AMGEN that upon request we and they will: (i) execute continuing, divisional, or reissue applications, amended specifications, or rightful declarations or oaths; (ii) communicate to AMGEN any facts known to us or them relating to such inventions or the history thereof; (iii) execute preliminary statements and testify in any interference proceedings or litigation; (iv) execute and deliver any application papers, assignments, or other instruments; and (v) do all other acts which, in the opinion of counsel for AMGEN, may be necessary or desirable to secure the grant of Letters Patent to AMGEN or its nominees, in the United States and in all other countries where AMGEN may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by counsel for AMGEN and to vest and confirm in AMGEN or its nominees the full and complete legal and equitable title to all such Letters Patent, without further consideration than that now paid but at the expense of AMGEN.

In Witness Whereof I have execut	ted this assignment on the	day of	20
Joseph J. Nunes			
(Name of Inventor)		(Signature of	Inventor)
	UNITED STATES OF AMERI	ICA	
State of Massachusetts County of Middlesex } ss:			
			20
Joseph J. Nunes personally known to me - OR -	proved to me on the basis of name is subscribed to the whe/she executed the same his/her signature on the instance of which the person acted, executed the basis of which the person acted.	vithin instrument and a in his/her authorized strument the person, o	cknowledged to me that capacity, and that by the entity upon behalf
	WITNESS my hand and offic	ial seal.	
	Brown of the control	Notary Publi	
		My commission e	xpires
	Jı	uly 24	20 09

PATENT REEL: 015911 FRAME: 0066

In Witness Whereof I have execute	ed this assignment on the	day of	20
Xiaotian Zhu			
(Name of Inventor)		(Signature of In	ventor)
State of Massachusetts	UNITED STATES OF AMERI	CA	
County of Middlesex			20
Before me, a Notary Public for Mic	ddlesex County, State of Mass	sachusetts, personally ap	ppeared
personally known to me - OR -	proved to me on the basis of name is subscribed to the w he/she executed the same his/her signature on the inst of which the person acted, ex	ithin instrument and ack in his/her authorized o trument the person, or t	nowledged to me that apacity, and that by
	WITNESS my hand and offic	ial seal.	
		Motory Dublic	
		Notary Public My commission exp	ires
	Jı	uly 24	20 09

In Witness Whereof I have execut	ed this assignment on the	day of	20
Patricia Amouzegh (Name of Inventor)		(Signature of Inv	entor)
	NOTARY CERTIFICATION	1	
State of Scounty of State of S			
			20
Before me, a Notary Public for		, perso	onally appeared
Patricia Amouzegh			
personally known to me - OR -	proved to me on the basis of name is subscribed to the w he/she executed the same his/her signature on the inst of which the person acted, ex	ithin instrument and acknin in his/her authorized catrument the person, or the	owledged to me that pacity, and that by
	WITNESS my hand and offic	ial seal.	
		Notary Public	
		My commission expir	es
			20

In Witness Whereof I have execute	ed this assignment on theday of20
Chiara Ghiron (Name of Inventor)	(Signature of Inventor)
State of South Caroline County of Charleton ss:	NOTARY CERTIFICATION October 5 20 04
Before me, a Notary Public for <u>B</u>	erkeley County], personally appeared
personally known to me - OR -	proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. WITNESS my hand and official seal.
	Notary Public My commission expires March 8 2014 CRYSTIE M. STEWART NOTARY PUBLIC FOR SOUTH CAROLINA My Commission expires March 8, 2014

In Witness Whereof I have execute	ed this assignment on the	day of	20
David Jahnatan			
David Johnston (Name of Inventor)		(Signature of Inver	ntor)
	NOTARY CERTIFICATION	PN	
State of Sounty of State of St			
			20
Before me, a Notary Public for David Johnston		, persona	lly appeared
personally known to me - OR -	name is subscribed to the he/she executed the sam	of satisfactory evidence to be within instrument and acknow e in his/her authorized cap strument the person, or the executed the instrument.	vledged to me that acity, and that by
	WITNESS my hand and off	icial seal.	
		Notary Public	
		My commission expire	s
			20

In Witness Whereof I have execu	ted this assignment on the	day of	20
Fair Christopher Bower			
Eoin Christopher Power (Name of Inventor)		(Signature of Inventor)	
	NOTARY CERTIFICAT	ION	
State of Scounty of			
			20
Before me, a Notary Public for _		; personally appeared	
Eoin Christopher Power			
Loin Offisiopher Fower			
personally known to me - OR -	name is subscribed to the he/she executed the sai his/her signature on the	s of satisfactory evidence to be the pe e within instrument and acknowledged me in his/her authorized capacity, a instrument the person, or the entity to l, executed the instrument.	I to me that and that by
	WITNESS my hand and o	official seal.	
		Notary Public	
		My commission expires	
			20

ASSIGNMENT

Whereas	, we,Joseph J. Nunes, 70 Elm Street, Andover, M	IA 01810
	Xiaotian Zhu, 137 Temple Street, Newton M	A 02465
	Patricia Amouzegh, 4 Merton Close, Didcot,	Oxfordshire, OX11 8UJ U.K.
	Chiara Ghiron, 149 Cumnor Road, Wootton,	Oxford OX1 5JS U.K.
	David N. Johnston, 111 Milton Park, Abingd	on, Oxfordshire, OX14 4SD U.K.
	Eoin Christopher Power, 135 Jackman Clos	e, Abingdon, Oxfordshire OX14 3GB U.K.
have made an inve	ntion which is the subject of an application for Letters	Patent of the United States ("Application") entitled
SUBSTI	TUTED HETEROCYCLIC COMPOUNDS AND METH	ODS OF USE
which is found in:		
☐ (a)	the US Patent Application executed on even date he	erewith;
☐ (b)	the US Patent Application executed on of U.S. Provisional Application No.	[which claims the benefitfiled]
⊠ (c)	US Application Serial No.: 10/875,896	filed on _June 23, 2004
which	claims benefit to US Prov. Appln. No. 60/482,375	filed on June 24, 2003
☐ (d)	US Patent No.:	

Whereas AMGEN INC., a Delaware corporation having its principal place of business at One Amgen Center Drive, Thousand Oaks, California 91320-1799, wishes to acquire the entire interest in all inventions disclosed in such Application;

Now, therefore, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over unto AMGEN INC., its successors and assigns (collectively "AMGEN") our entire right, title and interest in, to and under the Application, and any provisional application(s) from which Application is derived, and all priority rights to which the Application may be entitled, including all priority rights for other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries which may be granted for such inventions, or any of them, including divisional, continuation, and/or continuation-in-part applications based on the above identified Application, all such inventions and all rights in such Application and Letters Patent to be held and enjoyed by AMGEN for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

Further, we hereby sell, assign, transfer, and set over unto AMGEN our entire right, title and interest in or to the right to refer to, to access, and to control microorganism(s) or other biological material(s) related to the Application and which are deposited by us or at our direction or deposited on our behalf by Amgen, its affiliates, employees or employees of its affiliates. The transfer of such right, title and interest includes, without limitation, our unreserved and irrevocable consent and authorization to AMGEN to refer to the deposited microorganisms(s) or other biological materials(s) in the Application and the right to make available to the public the deposited material in accordance with the laws, treaties, statutes, rules, regulations and the like of the United States, all other countries, and any patent granting authority or organization.

1

We authorize and request the Commissioner of Patents and Trademarks of the United States to issue any such Letters Patent which may be granted on the Application to AMGEN as assignee of the entire right, title and interest therein and thereto.

For ourselves and for our legal representatives, we covenant and agree with AMGEN that we have not granted to any others any license to make, use or sell any of such inventions, that our right, title and interest in such inventions has not been encumbered, that we have good right and title to sell and assign the same, and that we will not execute any instrument in conflict herewith.

For ourselves and for our heirs, successors and legal representatives, we further covenant and agree with AMGEN that upon request we and they will: (i) execute continuing, divisional, or reissue applications, amended specifications, or rightful declarations or oaths; (ii) communicate to AMGEN any facts known to us or them relating to such inventions or the history thereof; (iii) execute preliminary statements and testify in any interference proceedings or litigation; (iv) execute and deliver any application papers, assignments, or other instruments; and (v) do all other acts which, in the opinion of counsel for AMGEN, may be necessary or desirable to secure the grant of Letters Patent to AMGEN or its nominees, in the United States and in all other countries where AMGEN may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by counsel for AMGEN and to vest and confirm in AMGEN or its nominees the full and complete legal and equitable title to all such Letters Patent, without further consideration than that now paid but at the expense of AMGEN.

In Witness Whereof I have execute	ed this assignment on the	aay or	20
Joseph J. Nunes			
(Name of Inventor)		(Signature of I	nventor)
	UNITED STATES OF AMERI	CA	
State of Massachusetts County of Middlesex } ss:			
			20
Joseph J. Nunes personally known to me - OR -	proved to me on the basis of name is subscribed to the whe/she executed the same his/her signature on the instead of which the person acted, example 1.	vithin instrument and a in his/her authorized trument the person, o	cknowledged to me that capacity, and that by
	WITNESS my hand and office	ial seal.	*
		Notary Public	3
		My commission e	xpires
	Jı	ıly 24	20 09

In Witness Whereof I have execute	ed this assignment on the	day of	20
Xiaotian Zhu			
(Name of Inventor)		(Signature of In	ventor)
	UNITED STATES OF AMERI	ICA	
State of Massachusetts County of Middlesex			
			20
Xiaotian Zhu			
personally known to me - OR -	proved to me on the basis on ame is subscribed to the whe/she executed the same his/her signature on the insof which the person acted, e	vithin instrument and ack in his/her authorized of strument the person, or t	nowledged to me that capacity, and that by
	WITNESS my hand and office	cial seal.	
		Notary Public	
		My commission exp	pires
	J	luly 24	20 <u>09</u>

Docket No.: A-832 20 In Witness Whereof I have executed this assignment on the day of Patricia Amouzegh (Name of Inventor) (Signature of Inventor) **NOTARY CERTIFICATION** State of SS: County of Before me, a Notary Public for ______, personally appeared _ Patricia Amouzegh personally known to me - OR - proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. WITNESS my hand and official seal.

4

Notary Public

My commission expires

20

In Witness Whereof I have execut	ed this assignment on the _	day of	20
Chiara Ghiron (Name of Inventor)		(Signature of Invento	r)
	NOTARY CERTIFICATION	ı	
State of County of ss:			
			20
Before me, a Notary Public for], personally appeared	1-0-2
Chiara Ghiron			
personally known to me - OR -	name is subscribed to the windershe executed the same	satisfactory evidence to be the ithin instrument and acknowle in his/her authorized capacity rument the person, or the enterecuted the instrument.	dged to me that ty, and that by
	WITNESS my hand and offici	al seal.	
		Notary Public	
		My commission expires	
			20

	In Witness Whereof I have execut	ted this assignment on the	day of	20
	David Johnston			
	(Name of Inventor)		(Signature o	f Inventor)
		NOTARY CERTIFICATION	N .	
State of County	88.			
				20
	Before me, a Notary Public for _		, pe	ersonally appeared
	David Johnston		·	Park to the second seco
☐ per	sonally known to me - OR -	proved to me on the basis of name is subscribed to the he/she executed the same his/her signature on the in- of which the person acted, of	within instrument and a e in his/her authorized strument the person, o	acknowledged to me that d capacity, and that by or the entity upon behalf
		WITNESS my hand and offi	cial seal.	
			Notary Publ	ic
			My commission e	expires
				20

· · · · · · · · · · · · · · · · · · ·	in Christopher Po (Name of Inventor				- CA	(Signature of Inventor)	······································
					1		
		NO	TARY	Y CERTIFICA	TION		
tate of)	Kingdo	m o	f England	1		
ounty of	SS:	City	of	London			
				_	11	OCTOBER	20 04
Eoin Chris	e, a Notary Public stopher Power vn to me - OR -	☑ prove	d to r	me on the ba	sis of satisfa	_; personally appeared _	person whose
Eoin Chris	stopher Power	prove name he/sh	d to r is su e exe	me on the ba ubscribed to ecuted the s nature on th	sis of satisfa he within ins ame in his/ e instrument		person whose ged to me that
Eoin Chris	stopher Power	prove name he/sh his/he of wh	d to r is su e exe er sign ich the	me on the ba ubscribed to ecuted the s nature on th	sis of satisfa he within ins ame in his/ e instrument ed, executed	ctory evidence to be the strument and acknowled her authorized capacity the person, or the entit the instrument.	person whose ged to me that
Eoin Chris	stopher Power	prove name he/sh his/he of wh	d to r is su e exe er sign ich the	me on the ba ubscribed to ecuted the s nature on the e person act	sis of satisfa he within ins ame in his/ e instrument ed, executed	ctory evidence to be the strument and acknowled her authorized capacity the person, or the entit the instrument.	person whose ged to me that
Eoin Chris	stopher Power	prove name he/sh his/he of wh	d to r is su e exe er sign ich the	me on the ba ubscribed to ecuted the s nature on the e person act	sis of satisfa he within ins ame in his/ e instrument ed, executed	ctory evidence to be the strument and acknowled her authorized capacity the person, or the entit the instrument.	person whose ged to me that
Eoin Chri	stopher Power	prove name he/sh his/he of wh	d to r is su e exe er sign ich the	me on the ba ubscribed to ecuted the s nature on the e person act	sis of satisfa he within ins ame in his/ e instrument ed, executed official seal.	ctory evidence to be the strument and acknowledge the authorized capacity the person, or the entite the instrument.	person whose ged to me that , and that by y upon behalf

wy Commission Expires with Life

RECORDED: 10/18/2004