Our Ref.: 1232-18

RECORDATION FORM COVER SHEET

05-03-1999

Commissioner of Patents and Trademarks Box Assignment, Washington, D.C. 20231

Total number of pages including original cover sheet, attachments, and document:

Arthur R. Crawford Name of Person Signing Reg. No. 25,327

Box Assignment, Washington, D.C. 20231	101027803
To the Honorable Commissioner of Patents and Trademarks	s: Please record the attached original documents or copy thereof. 2
1. Name of conveying party(ies):	2. Name and address of receiving party(ies):
Susumu Nakagaw Hideki Jona	Name: BANYU PHARMACEUTICAL CO., LTD. Internal Address: Street Address: 2-3, Nihombashi Honcho
Norikazu Otake Shigemitsu Okada	Name: BANYU PHARMACEUTICAL CO., LTD.
Hideo Kiyonaga Masayuki Ogawa	Internal Address:
Koji Yamada Hideaki Imamura	Street Address: 2-3, Nihombashi Honcho
	2-chome, Chuo-ku
Additional name/s of conveying party/ies attached?	
3. Nature of conveyance:	City: Tokyo
	State/Country: Japan
☐ Security Assignment ☐ Change of Name	Zip: 103-8416
Other	
B	
Execution Date: April 12, 1999	Additional name/s & address/es attached? ☐ Yes ☒ No
4. Application number(s) or patent number(s):	
If this document is being filed together with a new application, the	execution date of the application is: April 12, 1999
A. Patent Application No(s).	l n
(1)	B. 07/294091
(1)	
7/1989 ASELLININ 00000006 09294091	(2) (3)
40.00 P Additional numl	bers attached \(\sum \) Yes \(\subseteq \) No
5. Name and address of party to whom correspondence	6. Total number of applications & patents involved:
concerning document should be mailed:	o. Total number of applications & patents involved.
	7. Total fee (37 CFR 3.41) \$ 40.00
Name: Arthur R. Crawford	Enclosed
	Authorized to be charged to deposit account #14-1140
Internal Address:	Transfized to be charged to deposit account #14-1140
	8. The Commissioner is hereby authorized to charge any
Street Address: Nixon & Vanderhye P.C.	<u>deficiency</u> in the fee(s) filed, or asserted to be filed, or which
1100 North Glebe Road	should have been filed herewith (or with any paper thereafter
8 th Floor	filed in this application by this firm) to our Account No.
City: Arlington State: VA Zip: 22201	14-1140.
	_
DO NO	T USE THIS SPACE
9. Statements and signature.	
To the best of my knowledge and belief, the foregoing in	formation is true and correct and any attached copy is a true copy
of the original document.	011 07
36	1 V 14. V/
Arthur R. Crawford	April 19, 1999
Name of Person Signing Reg. No. 25 327	Signature Date
KEG NO 23 327	•

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Commissioner of Patents and Trademarks

Our Ref.: 1232-18

RECORDATION FORM COVER SHEET

PATENTS ONLY

Box Assignment, Washington, D.C. 20231		
1. Name of conveying party(ies):		
Ryosuke Ushijima		
2. Name:		ļ
Street Address:		
City:		
State:		
Zip:		
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4. Application number(s) or patent number(s):		
A. Didana Anna Handlan Na (a)	D. Detent No(e)	
A. Patent Application No(s).	B. Patent No(s).	
(4)	(4)	
(5)	(5)	
(6)	(6)	
(7)	(7)	
(8)	(8)	
(9)	(9)	

	Susumu NAKAGAWA whose full post office address is 32 - 1, Aza Gomae,			
	OoazaYokoochi, Kouta - cho, Nukata - gun, Aichi 444 - 0114 JAPAN			
(Inventors)	(3) and			
,,	(4)			
	In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to			
(Assignee)	(5) BANYU PHARMACEUTICAL CO., LTD.			
(Address) (6) of 2-3, Nihombashi, Honcho 2 - chome, Chuo - ku, Tokyo 103 - 8416 JAF				
	(hereinafter designated as the Assignee) the entire right, title and interest for the United States, its territories, dependencies and possessions, and for the country of			
(Other Countries)	(7) in the invention, and all applications for patent and any Letters Patent which may be granted therefor, known as			
(Title)	(8) <u>CARBAPENEM DERIVATIVES</u> (Case No)			
for which the undersigned has (have) executed on even date herewith an application for patent in the Unite of America or, if not on even date, then has executed				
	(9) on or has already filed in			
	(10) U.S. appln. Serial Number, filed on			
	(11) The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.			
interference win connection vinecessary in coagreements.	ndersigned agree(s) to execute all papers and documents necessary in connection with the application or any hich may be declared and any continuing or divisional applications thereof and also to execute separate assignments with such applications as the Assignee may deem necessary or expedient and further to perform any act which may be connection with claims or provisions of the International Convention for Protection of Industrial Property or similar indersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States assignee			
	ndersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the			
Assignee of the assigned, and to 4) The un	resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as the entire interest, and hereby convenants that he has (they have) full right to convey the entire interest herein hat he has (they have) not executed and will not execute, any agreement in conflict herewith. Indersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on this assignment any			
further identification of	ication which may be necessary to desirable in order to comply with the rules of the United States Patent Office for			
	whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).			
Date 12/04	11999 Signature of Inventor (1) Susumu NAKAGAWA Jusumu Makagawa			
Date	Signature of Inventor (2)			
Date	Signature of Inventor (3)			
Date	Signature of Inventor (4)			

	Norikazu OTAKE, Hideo KIYONAGA and Koji YAMADA whose full post office				
	address is equally c/o BANYU PHARMACEUTICAL CO., LTD. Tsukuba				
(Inventors)	(3) Research Institute, 3, Okubo, Tsukuba – shi, Ibaraki 300 – 2611 JAPAN and				
	(4)				
	In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to				
(Assignee)	(5) BANYU PHARMACEUTICAL CO., LTD.				
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	(10) U.S. appln. Serial Number, filed on				
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1) The undersigned agree(s) to execute all papers and documents necessary in connection with the application or any interference which may be declared and any continuing or divisional applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient and further to perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements. 2) The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee. 3) The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby convenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed and will not execute, any agreement in conflict herewith. 4) The undersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on this assignment any further identification which may be necessary to desirable in order to comply with the rules of the United States Patent Office for recordation of this document.					
In witness	whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).				
Date 12/04					
	4/1999 Signature of Inventor (2) Hideo KIYONAGA Hideo Kiyonaga				
Date 12/04	1/1999 Signature of Inventor (3) Koji YAMADA Koji Yamada				
Date	Signature of Inventor (4)				

	Hideki JONA and Hideaki IMAMURA whose full post office address is equally				
	c/o BANYU PHARMACEUTICAL CO., LTD. Tsukuba Research Institute, 3, Okubo,				
(Inventors)	(3) Tsukuba – shi, Ibaraki 300 – 2611 JAPAN and				
	(4)				
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In witness	whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).				
Date	04/1999 Signature of Inventor (1) Hideki JONA Hideki Jona				
	04/1999 Signature of Inventor (2) Hideaki IMAMURA Hideaki / mamura				
	Signature of Inventor (3)				
Date	Signature of Inventor (4)				

	Shigemitsu OKADA and Ryosuke USHIJIMA whose full post office address is equally				
	(2) c/o BANYU PHARMACEUTICAL CO., LTD. Okazaki Site, 9-1 Kamimutuna 3-chome, Okazaki - shi, Aichi 444 - 0858 JAPAN				
(Inventors)	3 - chome, Okazaki - shi, Aichi 444 - 0858 JAPAN and				
(Inventors)	(4)				
	In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to				
(Assignee)	(5) BANYU PHARMACEUTICAL CO., LTD.				
(Address)	(6) of $\frac{2-3}{2}$, Nihombashi Honcho $2-$ chome, Chuo $-$ ku, Tokyo $103-8416$ JAPAN				
	(hereinafter designated as the Assignee) the entire right, title and interest for the United States, its territories, dependencies and possessions, and for the country of				
(Other Countries)	(7) in the invention, and all applications for patent and any Letters Patent which may be granted therefor, known as				
(Title)	(8) CARBAPENEM DERIVATIVES (Case No)				
	for which the undersigned has (have) executed on even date herewith an application for patent in the United States of America or, if not on even date, then has executed				
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2) The un	dersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States				
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further identifi	cation which may be necessary to desirable in order to comply with the rules of the United States Patent Office for				
recordation of t					
	whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).				
Date	4/1999 Signature of Inventor (1) Shigemitsu OKADA Shiyemitsu Okada				
Date	Signature of Inventor (2) Ryosuke USHIJIMA				
Date	Signature of Inventor (3)				
Date	Signature of Inventor (4)				

		(l) <u>M</u>	asayuki OGAV	/A whose	full post office	address is c/o BANYU PHARMACE	EUTICA:
			O., LTD. Menu	na Site, 8	10, Ooaza Nishijo	o, Menuma – machi, Osato – gun,	
(Inve	entors)		tama 360 – 02	14 JAPAN			and
,							and
		In co	onsideration of th	e sum of on	e dollar (\$1.00) and	other good and valuable considerations paid to eby does assign, transfer and set over to	o each of
(Assi	gnee)	(5) BA	NYU PHARMA	CEUTICA	L CO., LTD.		
(Add	ress)	(6) of _	2 – 3, Nihombas	shi Honch	o 2 – chome, Chu	o – ku, Tokyo 103 – 8416 JAPAN	
			ter designated as icies and possession			title and interest for the United States, its te	rritories,
(Othe	er itries)	(7)granted ti	herefor, known as	n the invent	tion, and all application	ons for patent and any Letters Patent which ma	ıy be
(Title	e)	(8)	CARBPENEM I	ERIVATI	VES	(Case No)
			the undersigned or, if not on even			herewith an application for patent in the Unit	ed States
		(9) on .				or has alread	y filed in
		(10) U.	S. appln. Serial Nu	ımber	, filed	on	 ,
			e undersigned ack was made.	nowledges a	nn obligation of assign	nment of this invention to said assignee at the	time the
interfin cor necess agrees 2 paten	erence whenection was any in contents. The unit to the As	nich may be rith such a nection was dersigned ssignee.	e declared and an pplications as the with claims or pro agree(s) to perfor	y continuing Assignee ma visions of the m all affirm	g or divisional applica ay deem necessary or one ne International Conv native acts which may	necessary in connection with the application ations thereof and also to execute separate assist expedient and further to perform any act which rention for Protection of Industrial Property of the necessary to obtain a grant of a valid United	gnments h may be or similar ed States
Unite Assign assign 4 furthe	d States renee of the ned, and the	esulting from the entire in the has dersigned that the has dersigned that the entire that the	om said application nterest, and hereb (they have) not ex hereby grant(s) th ch may be necessa	n or any div y convenan ecuted and v ne firm of N	vision or divisions or of ts that he has (they will not execute, any a IIXON & VANDER	ner of Patents to issue any and all Letters Pate continuing applications thereof to the said Ass have) full right to convey the entire interest greement in conflict herewith. LHYE P.C. the power to insert on this assignmy with the rules of the United States Patent C	ignee, as st herein ment any
1:	n witness	whereof, e	executed by the un	dersigned or	the date(s) opposite	the undersigned signature(s).	
Date :	12/04	/1999	Signature of In	ventor (1)_	Masayuki OGAWA	Masayuki Ozawa	
			•				

Date ______ Signature of Inventor (4)______

	Shigemitsu OKADA and Ryosuke USHIJIMA whose full post office address is equally
	c/o BANYU PHARMACEUTICAL CO., LTD. Okazaki Site, 9 – 1 Kamimutuna
(Inventors)	(3) 3 - chome, Okazaki - shi, Aichi 444 - 0858 JAPAN and
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United States Assignee of t	resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as he entire interest, and hereby convenants that he has (they have) full right to convey the entire interest herein that he has (they have) not executed and will not execute, any agreement in conflict herewith.
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In witnes	s whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).
Date	Signature of Inventor (1) Shigemitsu OKADA
Date 12/0	Signature of Inventor (1) 4/1999 Signature of Inventor (2) Ryosuke USHIJIMA Ryosuke Ushijima Signature of Inventor (3)
Date	Signature of Inventor (3)
	Signature of Inventor (4)

PATENT REEL: 9916 FRAME: 0487

RECORDED: 04/19/1999