09-10-2001



EET Y

U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

> **Attorney Docket** No.: 10147-65US

101836692

To the Assistant Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): Christopher C. Fraser Millennium Pharmaceuticals, Inc. Thomas M. Barnes 75 Sidney Street John D. Sharp Cambridge, MA 02139 Susan J. Kirst Paul S. Myers Kevin R. Leiby A Massachusetts Corporation Douglas A. Holtzman Sean A. McCarthy Nicholas Wrighton Charles R. Mackay Andrew D.J. Goodearl 3. Nature of conveyance: [X] Assignment] Merger Security Agreement 1 Change of Name Other: Execution Date: Christopher C. Fraser, Paul S. Myers -6/18/01; Thomas M. Barnes, Douglas A. Holtzman, Andrew D.J. Goodearl - 6/19/01; John D. Sharp, Kevin R. Leiby, Nicholas Wrighton - 6/20/01; Susan J. Kirst - 7/10/01; Sean A. McCarthy - 7/2/01; Charles R. Mackay - 6/25/01 4. Application number(s) or patent number(s): 09/766,511 If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s): B. Patent No.(s): Additional numbers attached? [Yes [X] No Name and address of party to whom correspondence 6. Total number of applications and patents involved: [1] document should be mailed: 7. Total fee (37 C.F.R. 3.41) Cal. 1 \times \$40.00 = \$40.00 GARY D. COLBY, Ph.D., J.D. AKIN, GUMP, STRAUSS, HAUER & FELD, L.L.P. [X] Check enclosed One Commerce Square - 2005 Market Street - Suite 2200 Authorized to be charged to deposit account Philadelphia, PA 19103 Telephone: (215) 965-1200 Deposit account number: 50-1017 Direct Dial: (215) 965-1285 Facsimile: (215) 965-1210 (Billing No.: 210147.0065) E-Mail: gcolby@akingump.com

DO NOT USE THIS SPACE

10/2001 LINUELLER 00000060 09766511 FC:581

9. Statement and signature To the best of my knowledge and belief,	the foregoing information is tru	e and correct and any attached co	py is a true copy of the original document.
	1011		
Gary D. Colby, Ph.D., J.D.	July Willes		30 August 2001
Name of Person Signing	Signature	Rey. No. 40 161	Date
	•	Total number of pages includin	g cover sheet, attachments and document: [15]

OMB No. 0651-0011 (exp. 4/94)

JOINT

ASSIGNMENT

WHEREAS, John D. Sharp, Susan J. Kirst, Paul S. Myers, Andrew D.J. Goodearl, Douglas A. Holtzman, and Mehran Khodadoust, all citizens of the United States of America; with respective post office addresses of 245 Park Avenue, Arlington, MA 02476; 12 Dana Street, Brookline, MA 02445; 14 Cornelius Way, Cambridge, MA 02141; 13 Indian Ridge Road, Natick, MA 01760; 821 Centre Street, No. 6, Jamaica Plain, MA 02130; and 106 Sewell Avenue, Apartment 6, Brookline, MA 02445; Sean A. McCarthy, and Nicholas Wrighton, both citizens of the United Kingdom, with respective post office addresses of 3625 Dupont Street, San Diego, CA 92106, and 18 Lloyd Street, Winchester, MA 01890; Christopher C. Fraser, a citizen of Canada, with a post office address of 52 Grassland Street, Lexington, MA 02421, and Thomas S. Barnes, a citizen of Australia, with a post office addresses of 12 Mason Terrace, Brookline, MA 02446, hereinafter generally referred to as "ASSIGNORS," have invented a certain new and useful

Novel Genes Encoding Proteins Having Prognostic, Diagnostic, Preventive, Therapeutic, And Other Uses

for which we have executed a United States patent application, Application No. 09/766,511, filed January 19, 2001, and

ASSIGNORS authorize ASSIGNEE or ASSIGNEE's representative to insert the Application Number and Filing date of this application if they are unknown at the time of execution of this Assignment.

WHEREAS, Millennium Pharmaceuticals, Inc., a Delaware corporation having a place of business at 75 Sidney Street, Cambridge, MA 02139, hereinafter generally referred to as "ASSIGNEE", is desirous of acquiring said invention and said patent application.

NOW, THEREFORE, in consideration of the sum of One Dollar and other good and valuable executed consideration, the full receipt and sufficiency of all of which are hereby acknowledged and intending to be legally bound hereby, we, the undersigned ASSIGNORS, hereby agree to sell, assign, transfer and convey and by these presents do sell, assign, transfer and convey unto the above-named ASSIGNEE, the whole and entire right, title and interest

in and to said invention as described in the above patent application, for the territory of the United States and its possessions and territories and all foreign countries:

104569 v1

in and to all United States and foreign patents which may be granted on any and all of said patent applications, including extensions, reissues and reexamination certificates thereof;

said invention, application(s) and patent(s) to be held and enjoyed by the above-named ASSIGNEE, for ASSIGNEE's own use and benefit, and for ASSIGNEE's legal representatives and assigns to the full end of the term or terms for which said patent(s) may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNORS had this assignment and sale not been made; and for the aforesaid consideration ASSIGNORS hereby covenant, agree and undertake to execute, whenever requested by the above-named ASSIGNEE, all patent applications, assignments, lawful oaths and any other papers which ASSIGNEE may deem necessary or desirable for securing to ASSIGNEE or for maintaining for ASSIGNEE all the patent(s) hereby assigned or agreed to be assigned; all without further compensation to the undersigned ASSIGNORS.

101516	Sean A. McCarthy	(SEAL)
	Christopher C. Fraser	(SEAL)
	John D. Sharp	(SEAL)
	Thomas S. Barnes	(SEAL)
	Susan J. Kirst	(SEAL)
	Paul S. Myers	(SEAL)

		(SEAL)
	Nicholas Wrighton	
		(SEAL)
	Andrew D.J. Goodearl	
		(SEAL)
	Douglas A. Holtzman	
		(SEAL)
	Mehran Khodadoust	
(a, b)		
Talling	405 Campus Avo#3	SaiDiego CA
Witness	Address	J 951160
yason adary	43.7 Maryland St s Address	on Diego, Co-
Witness	Address	92103

in and to all United States and foreign patents which may be granted on any and all of said patent applications, including extensions, reissues and reexamination certificates thereof:

said invention, application(s) and patent(s) to be held and enjoyed by the above-named ASSIGNEE, for ASSIGNEE's own use and benefit, and for ASSIGNEE's legal representatives and assigns to the full end of the term or terms for which said patent(s) may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNORS had this assignment and sale not been made; and for the aforesaid consideration ASSIGNORS hereby covenant, agree and undertake to execute, whenever requested by the above-named ASSIGNEE, all patent applications, assignments, lawful oaths and any other papers which ASSIGNEE may deem necessary or desirable for securing to ASSIGNEE or for maintaining for ASSIGNEE all the patent(s) hereby assigned or agreed to be assigned; all without further compensation to the undersigned ASSIGNORS.

		(SEAL)
Jan 12, 2001	Sean A. McCarthy Christopher C. Fraser	(SEAL)
	John D. Sharp	(SEAL)
	Thomas S. Barnes	(SEAL)
	Susan J. Kirst	(SEAL)
	Paul S. Myers	(SEAL)

STATE OF Market Charlet ?:	
STATE OF Marketti : ss. COUNTY OF Middle to y :	
	
Before me, a notary public in and for the State of, 2001, personally appearabeing to me personally known, and who having first presence and have been by me first duly sworn, did free deed and act, signed, sealed and delivered by his intending to be legally bound thereby and intending	red harshopher (1 1-24 50), who executed the foregoing instrument in my acknowledge the foregoing instrument as his m for the purpose therein stated and that said instrument be recorded.
	Notary Public To Carrivery
	Notary Public CORRIVERY
My Commission	Expires: 9/, 1228
STATE OF :	
COUNTY OF : ss.	
COUNTY OF	
Before me, a notary public in and for the State of, 2001, personally appearabeing to me personally known, and who having first presence and have been by me first duly sworn, did free deed and act, signed, sealed and delivered by his intending to be legally bound thereby and intending	red, who executed the foregoing instrument in my acknowledge the foregoing instrument as his m for the purpose therein stated and
	Notary Public
My Commission	n Expires:

104569 v1

in and to all United States and foreign patents which may be granted on any and all of said patent applications, including extensions, reissues and reexamination certificates thereof;

said invention, application(s) and patent(s) to be held and enjoyed by the above-named ASSIGNEE, for ASSIGNEE's own use and benefit, and for ASSIGNEE's legal representatives and assigns to the full end of the term or terms for which said patent(s) may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNORS had this assignment and sale not been made; and for the aforesaid consideration ASSIGNORS hereby covenant, agree and undertake to execute, whenever requested by the above-named ASSIGNEE, all patent applications, assignments, lawful oaths and any other papers which ASSIGNEE may deem necessary or desirable for securing to ASSIGNEE or for maintaining for ASSIGNEE all the patent(s) hereby assigned or agreed to be assigned; all without further compensation to the undersigned ASSIGNORS.

	Sean A. McCarthy	(SEAL)
	Christopher C. Fraser	(SEAL)
6-14-01	John D. Sharp	(SEAL)
	Thomas S. Barnes	(SEAL)
	Susan J. Kirst	(SEAL)
	Paul S. Myers	(SEAL)

STATE OF Massackers to	:
COUNTY OF Middling	: ss. :
of	I for the State and County aforesaid, on this day nally appeared have have have have have having first executed the foregoing instrument in my sworn, did acknowledge the foregoing instrument as his ivered by him for the purpose therein stated and dintending that said instrument be recorded. Notary Public Time we have day to the purpose therein stated and dintending that said instrument be recorded. Notary Public Time we have have have have a property of the purpose therein stated and dintending that said instrument be recorded.
STATE OF	:
COUNTY OF	:
of, 2001, perso being to me personally known, and who presence and have been by me first duly free deed and act, signed, sealed and deli-	I for the State and County aforesaid, on thisday mally appeared, who having first executed the foregoing instrument in my sworn, did acknowledge the foregoing instrument as his ivered by him for the purpose therein stated and d intending that said instrument be recorded.
	Notary Public

Notary Public

My Commission Expires:

in and to all United States and foreign patents which may be granted on any and all of said patent applications, including extensions, reissues and reexamination certificates thereof;

said invention, application(s) and patent(s) to be held and enjoyed by the above-named ASSIGNEE, for ASSIGNEE's own use and benefit, and for ASSIGNEE's legal representatives and assigns to the full end of the term or terms for which said patent(s) may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNORS had this assignment and sale not been made; and for the aforesaid consideration ASSIGNORS hereby covenant, agree and undertake to execute, whenever requested by the above-named ASSIGNEE, all patent applications, assignments, lawful oaths and any other papers which ASSIGNEE may deem necessary or desirable for securing to ASSIGNEE or for maintaining for ASSIGNEE all the patent(s) hereby assigned or agreed to be assigned; all without further compensation to the undersigned ASSIGNORS.

		(SEAL)
	Sean A. McCarthy	
		(SEAL)
	Christopher C. Fraser	
		(SEAL)
	John D. Sharp	
x June 13 2001	Thomas M. Banes	(SEAL)
	Thomas S. Barnes	
		(SEAL)
	Susan J. Kirst	
		(SEAL)
	Paul S. Myers	

STATE OF Maisackiesiet,
STATE OF Marketiery: ss.
Before me, a notary public in and for the State and County aforesaid, on this 15 day of
STATE OF :
: ss. : ss. :
Before me, a notary public in and for the State and County aforesaid, on thisday of, 2001, personally appeared, who being to me personally known, and who having first executed the foregoing instrument in my presence and have been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.
Notary Public
My Commission Expires:

104569 vI

in and to all United States and foreign patents which may be granted on any and all of said patent applications, including extensions, reissues and reexamination certificates thereof;

said invention, application(s) and patent(s) to be held and enjoyed by the above-named ASSIGNEE, for ASSIGNEE's own use and benefit, and for ASSIGNEE's legal representatives and assigns to the full end of the term or terms for which said patent(s) may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNORS had this assignment and sale not been made; and for the aforesaid consideration ASSIGNORS hereby covenant, agree and undertake to execute, whenever requested by the above-named ASSIGNEE, all patent applications, assignments, lawful oaths and any other papers which ASSIGNEE may deem necessary or desirable for securing to ASSIGNEE or for maintaining for ASSIGNEE all the patent(s) hereby assigned or agreed to be assigned; all without further compensation to the undersigned ASSIGNORS.

	Sean A. McCarthy	(SEAL)
	Christopher C. Fraser	(SEAL)
	John D. Sharp	(SEAL)
	Thomas S. Barnes	(SEAL)
10 July 2001	Susan J. Kirst	(SEAL)
	Paul S. Myers	(SEAL)

STATE OF Mass	_ : ·
STATE OF <u>Mass</u> COUNTY OF <u>Norfolk</u>	: SS. :
of	the State and County aforesaid, on this <u>loay</u> y appeared <u>Susan</u> . <u>Circs+</u> , who ing first executed the foregoing instrument in my orn, did acknowledge the foregoing instrument as his ed by him for the purpose therein stated and tending that said instrument be recorded.
	Notary Public
My Com	LORINA G. ALLIN NOTARY PUBLIC NY COMMISSION EXPIRES APRIL 11, 2008 Allustories all 14
STATE OF	:
COUNTY OF	: ss. _:
of, 2001, personall being to me personally known, and who have presence and have been by me first duly swo	ing first executed the foregoing instrument in my orn, did acknowledge the foregoing instrument as his ed by him for the purpose therein stated and
	Notary Public

104569 v1

in and to all United States and foreign patents which may be granted on any and all of said patent applications, including extensions, reissues and reexamination certificates thereof;

said invention, application(s) and patent(s) to be held and enjoyed by the above-named ASSIGNEE, for ASSIGNEE's own use and benefit, and for ASSIGNEE's legal representatives and assigns to the full end of the term or terms for which said patent(s) may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNORS had this assignment and sale not been made; and for the aforesaid consideration ASSIGNORS hereby covenant, agree and undertake to execute, whenever requested by the above-named ASSIGNEE, all patent applications, assignments, lawful oaths and any other papers which ASSIGNEE may deem necessary or desirable for securing to ASSIGNEE or for maintaining for ASSIGNEE all the patent(s) hereby assigned or agreed to be assigned; all without further compensation to the undersigned ASSIGNORS.

		(SEAL)
	Sean A. McCarthy	
		(SEAL)
	Christopher C. Fraser	
		(SEAL)
	John D. Sharp	
		(SEAL)
	Thomas S. Barnes	·
		(SEAL)
	Susan J. Kirst	
6/4/11	e Part Marca	(SEAL)
1	Paul S. Myers	<u> </u>

104569 vl

STATE OF MASSAChuse HS	:
STATE OF MASSACHUSE HS COUNTY OF NOC FOIL	: ss.
COUNTY OF Noe Folk	:
being to me personally known, and who presence and have been by me first duly free deed and act, signed, sealed and de	and for the State and County aforesaid, on this 14 day onally appeared Paul Myees, who having first executed the foregoing instrument in my y sworn, did acknowledge the foregoing instrument as his livered by him for the purpose therein stated and and intending that said instrument be recorded.
	Notary Public Line M. Berger Commission Expires: March 31, 3006
Му	Commission Expires: March 31, 2006
STATE OF	:
COUNTY OF	: SS. :
Before me, a notary public in an of, 2001, personally known, and who presence and have been by me first duly free deed and act, signed, sealed and de	onally appeared, who having first executed the foregoing instrument in my sworn, did acknowledge the foregoing instrument as his livered by him for the purpose therein stated and and intending that said instrument be recorded.
	Notary Public

104569 vI

6/20/01	Nicholas Wrighton	(SEAL)
	Andrew D.J. Goodearl	(SEAL)
	Douglas A. Holtzman	(SEAL)
	Mehran Khodadoust	(SEAL)
Witness	Address	
Witness	Address	

STATE OF Marachusett.	:	
COUNTY OF Market	: ss.	
COUNTY OF 22s feet 2		
of		
	Notary Public Tr. 10 Boy	
My Comr	mission Expires: 3/34/24	
STATE OF	: SS. :	
of, 2001, personally being to me personally known, and who having	· ·	
Notary Public		
My Comm	nission Expires:	

104569 v1

		(SEAL)
- 2 JUNE 2001	Nicholas Wrighton rocken	(SEAL)
	Andrew D. J. Goodearl	(GEAL)
	Douglas A. Holtzman	(SEAL)
	Mehran Khodadoust	(SEAL)
Witness	Address	······································
Witness	Address	•

COUNTY OF Madling	:
'	: ss.
COUNTY OF Madeiney	:
personally being to me personally known, and who have been by me first duly swo free deed and act, signed, sealed and delivered intending to be legally bound thereby and intending the legally bound the legally belong the legally bound the legally bound the legally belong the	· · · · · · · · · · · · · · · · · · ·
	Notary Public
M. C	Similar Ci Killer
My Com	mission Expires:
STATE OF	:
COUNTY OF	<u>.</u> :
of, 2001, personall	the State and County aforesaid, on thisday appeared, who
being to me personally known, and who have	ing first executed the foregoing instrument in my orn, did acknowledge the foregoing instrument as his ed by him for the purpose therein stated and
	Notary Public

104569 v1

		(SEAL)
	Nicholas Wrighton	· · · · · · · · · · · · · · · · · · ·
		(SEAL)
	Andrew D.J. Goodearl	
6/13/01	Douglas A Holtzman	(SEAL)
	Mehran Khodadoust	(SEAL)
		
Witness	Address	
Witness	Address	

STATE OF Massa Lewet	:	
COUNTY OF MARKELEY	: SS. :	
of	and for the State and County aforesaid, on this is to day sonally appeared in the Itamian, who is having first executed the foregoing instrument in my sworn, did acknowledge the foregoing instrument as his elivered by him for the purpose therein stated and and intending that said instrument be recorded. Notary Public Comment	
Μv	Commission Expires: 3/1/2003	
STATE OF		
COUNTY OF	: SS.	
	·	
Before me, a notary public in and for the State and County aforesaid, on thisday of, 2001, personally appeared, who being to me personally known, and who having first executed the foregoing instrument in my presence and have been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.		
	Notary Public	

	(SEAL)
	Nicholas Wrighton
	Andrew D.J. Goodearl (SEAL)
	(SEAL) Douglas A. Holtzman
1 Jun, 19, 200	Mehran Khodadoust (SEAL)
Witness	Address
Witness	Address

STATE OF Maza Chusel :	:	
COUNTY OF Meddliney	SS.	
Before me, a notary public in and for the form of 2001, personally being to me personally known, and who having presence and have been by me first duly sworn free deed and act, signed, sealed and delivered antending to be legally bound thereby and interest.	appeared Mehann Khededeus + Ig first executed the foregoing instrument In, did acknowledge the foregoing instrum I by him for the purpose therein stated and Inding that said instrument be recorded.	, who in my nent as his d
	Notary Public	Conveau
My Comm	nission Expires: ////2006	
COUNTY OF:	SS.	
Before me, a notary public in and for the form of, 2001, personally being to me personally known, and who having bresence and have been by me first duly sworr free deed and act, signed, sealed and delivered antending to be legally bound thereby and interpretable to the sealed and interpretable to the sealed and the sealed and delivered and the sealed and t	n, did acknowledge the foregoing instrum I by him for the purpose therein stated and	, who in my nent as his
	Notary Public	
My Comm	nission Expires:	

104569 v1

RECORDED: 09/04/2001