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U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

Name of conveying party(ies):	
Boulos Zacharie, Christopher Penney, Lyne Gagnon  Additional name(s) of conveying party(ies) attached?  [] Yes	Name and address of receiving party(ies)     Name: Shire Biochem Inc.
3. Nature of conveyance:  Assignment [] Merger [] Security Agreement [] Change of Name	Address: 275 Armand Frappier Boulevard, Laval, Quebec H7V 4A7 CANADA
[] Other:	City: State: Zip:
Execution Date: November 20, 2002	Additional name(s) and address(es) attached? Country: Canada
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  B. Patent No.(s)
A. Patent Application No.(s)	6,110,923
Additional numbers attached?	[] Yes
5. Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1
Name: Andrea Dorigo	7. Total fee (37 CFR 3.41): \$ 40.00
BAKER BOTTS L.L.P.	[ ] Enclosed
30 Rockefeller Plaza - 44 Fl.	[ ] Authorized to be charged to deposit account
New York, NY 10112	8. Deposit account number: 02-4377 (Charge any additional fees to this account) (Attach duplicate copy of this page if paying by deposit account)
DO NOT USE THIS SPACE	
9. Statement and signature	
To the best of my knowledge and belief, the foregoing instrume original document.  Andrea Dorigo 47,532	entation is true and correct and any attached copy is a true copy of 1
Name of Person Signing	Signature Date
Page 1 of 1	,
fotal number of pages including cover sheet, attachments and docum	nent: 7

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## <u>ASSIGNMENT</u>

WHEREAS, I, BOULOS ZACHARIE, a citizen of CANADA, residing at 3202 Honoré de Balzac, Laval, Quebec H7P 5Y3, Canada; have made an invention for which we have made application for Letters Patent of the United States entitled "METHOD FOR TREATING CANCER USING NOVEL SUBSTITUTED PURINYL DERIVATIVES WITH IMMUNOMODULATING ACTIVITY," filed June 7, 1995 as Serial No. 08/487,329, and which issued as U.S. Patent No. 6,110,923 on August 29, 2000; and

WHEREAS, SHIRE BIOCHEM INC., a corporation organized and existing under the laws of Quebec, Canada, and having an office for the transaction of business at 275 Armand Frappier Boulevard, Laval, Quebec H7V 4A7, CANADA, is desirous of acquiring the entire right, title and interest in and to said invention and any improvements thereon, and in and to the said application for Letters Patent therefor, and any Letters Patent which may be obtained therefor;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that I, the said BOULOS ZACHARIE, for and in consideration of the sum of One Dollar (\$1.00), lawful money of the United States, to us in hand paid by said SHIRE BIOCHEM INC., and other valuable considerations unto us moving from said SHIRE BIOCHEM INC., at or before the ensealing and delivery of these presents, the receipt of which is hereby acknowledged, have sold, assigned, transferred and conveyed and by these presents do sell, assign, transfer and convey, unto said SHIRE BIOCHEM INC., its successors and assigns, the entire right, title and interest in and to the said invention for which we have made application for Letters Patent of the United States entitled "METHOD FOR TREATING CANCER USING NOVEL SUBSTITUTED PURINYL DERIVATIVES WITH IMMUNOMODULATING ACTIVITY", filed June 7, 1995 as Serial No. 08/487,329, and which issued as U.S. Patent No. 6,110,923 on August 29, 2000, and any and all improvements thereon, and in and to said application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, TO HAVE AND TO HOLD THE SAME to the full end of the term or terms for which any and all said Letters Patent may be granted;

AND I, the said BOULOS ZACHARIE, do hereby authorize and request the Commissioner of Patents and Trademarks to issue the said Letters Patent of the United States to said SHIRE BIOCHEM INC., as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said SHIRE BIOCHEM INC., its successors and assigns;

AND I, the said BOULOS ZACHARIE, for the considerations aforesaid, do hereby covenant and agree to and with said SHIRE BIOCHEM INC., its successors and

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PATENT REEL: 013645 FRAME: 0307 assigns, that we have the full power to make this assignment, and that the rights assigned are not encumbered by any grant, license or right heretofore given, and that we, our executors or administrators, shall and will do all lawful acts and things and make, execute and deliver without further compensation, any and all other instruments in writing, further applications, papers, affidavits, powers of attorney, assignments, and other documents which, in the opinion of counsel for said SHIRE BIOCHEM INC., its successors and assigns, may be required or necessary more effectively to secure to and vest in said SHIRE BIOCHEM INC., its successors and assigns, the entire right, title and interest in and to said invention and improvements, applications, Letters Patent, rights, titles, benefits, privileges, and advantages hereby sold, assigned, transferred and conveyed, and that we will sign any applications for reissue which may be desired by the owner of the patent or patent which may be issued for the said invention or improvements.

IN WITNESS WHEREOF, I, the said BOULOS ZACHARIE, have hereunto set our hands and seals on the dates below written.

STATE OF

: SS.:

COUNTY OF

COUNTRY OF CANADA

BE IT KNOWN, that on this 20th day of November, 2002, before me personally came BOULOS ZACHARIE, to me known and known to me to be the person mentioned in and who executed the foregoing assignment, and he acknowledged to me that he executed the same as his free act and deed for the use and purposes therein mentioned.

Notary Public Witness

Linuigo Accrite

## ASSIGNMENT

WHEREAS, I, CHRISTOPHER PENNEY, a citizen of CANADA, residing at 12787 Joron, Pierrefonds, Quebec, H8Z 3K7 Canada; have made an invention for which we have made application for Letters Patent of the United States entitled "METHOD FOR TREATING CANCER USING NOVEL SUBSTITUTED PURINYL DERIVATIVES WITH IMMUNOMODULATING ACTIVITY," filed June 7, 1995 as Serial No. 08/487,329, and which issued as U.S. Patent No. 6,110,923 on August 29, 2000; and

WHEREAS, SHIRE BIOCHEM INC., a corporation organized and existing under the laws of Quebec, Canada, and having an office for the transaction of business at 275 Armand Frappier Boulevard, Laval, Quebec H7V 4A7, CANADA, is desirous of acquiring the entire right, title and interest in and to said invention and any improvements thereon, and in and to the said application for Letters Patent therefor, and any Letters Patent which may be obtained therefor;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that I, the said CHRISTOPHER PENNEY, for and in consideration of the sum of One Dollar (\$1.00), lawful money of the United States, to us in hand paid by said SHIRE BIOCHEM INC., and other valuable considerations unto us moving from said SHIRE BIOCHEM INC., at or before the ensealing and delivery of these presents, the receipt of which is hereby acknowledged, have sold, assigned, transferred and conveyed and by these presents do sell, assign, transfer and convey, unto said SHIRE BIOCHEM INC., its successors and assigns, the entire right, title and interest in and to the said invention for which we have made application for Letters Patent of the United States entitled "METHOD FOR TREATING CANCER USING NOVEL SUBSTITUTED PURINYL DERIVATIVES WITH IMMUNOMODULATING ACTIVITY", filed June 7, 1995 as Serial No. 08/487,329, and which issued as U.S. Patent No. 6,110,923 on August 29, 2000, and any and all improvements thereon, and in and to said application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, TO HAVE AND TO HOLD THE SAME to the full end of the term or terms for which any and all said Letters Patent may be granted;

AND I, the said CHRISTOPHER PENNEY, do hereby authorize and request the Commissioner of Patents and Trademarks to issue the said Letters Patent of the United States to said SHIRE BIOCHEM INC., as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said SHIRE BIOCHEM INC., its successors and assigns;

AND I, the said CHRISTOPHER PENNEY, for the considerations aforesaid, do hereby covenant and agree to and with said SHIRE BIOCHEM INC., its successors and

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PATENT REEL: 013645 FRAME: 0309

assigns, that we have the full power to make this assignment, and that the rights assigned are not encumbered by any grant, license or right heretofore given, and that we, our executors or administrators, shall and will do all lawful acts and things and make, execute and deliver without further compensation, any and all other instruments in writing, further applications, papers, affidavits, powers of attorney, assignments, and other documents which, in the opinion of counsel for said SHIRE BIOCHEM INC., its successors and assigns, may be required or necessary more effectively to secure to and vest in said SHIRE BIOCHEM INC., its successors and assigns, the entire right, title and interest in and to said invention and improvements, applications, Letters Patent, rights, titles, benefits, privileges, and advantages hereby sold, assigned, transferred and conveyed, and that we will sign any applications for reissue which may be desired by the owner of the patent or patent which may be issued for the said invention or improvements.

IN WITNESS WHEREOF, I, the said CHRISTOPHER PENNEY, have hereunto set our hands and seals on the dates below written.

Christopher Tenney

CHRISTOPHER PENNEY

-STATE OF

COUNTY OF

COUNTRY OF CANADA

BE IT KNOWN, that on this 20th day of hor , 2002, before me personally came CHRISTOPHER PENNEY, to me known and known to me to be the person mentioned in and who executed the foregoing assignment, and he acknowledged to me that he executed the same as his free act and deed for the use and purposes therein mentioned.

Notary Public Witness Lawyer/Auccate

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## ASSIGNMENT

WHEREAS, I, LYNE GAGNON, a citizen of CANADA, residing at 1973 de la Victoire, Laval, Quebec, H7M 3E5 Canada; have made an invention for which we have made application for Letters Patent of the United States entitled "METHOD FOR TREATING CANCER USING NOVEL SUBSTITUTED PURINYL DERIVATIVES WITH IMMUNOMODULATING ACTIVITY," filed June 7, 1995 as Serial No. 08/487,329, and which issued as U.S. Patent No. 6,110,923 on August 29, 2000; and

WHEREAS, SHIRE BIOCHEM INC., a corporation organized and existing under the laws of Quebec, Canada, and having an office for the transaction of business at 275 Armand Frappier Boulevard, Laval, Quebec H7V 4A7, CANADA, is desirous of acquiring the entire right, title and interest in and to said invention and any improvements thereon, and in and to the said application for Letters Patent therefor, and any Letters Patent which may be obtained therefor;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that I, the said LYNE GAGNON, for and in consideration of the sum of One Dollar (\$1.00), lawful money of the United States, to us in hand paid by said SHIRE BIOCHEM INC., and other valuable considerations unto us moving from said SHIRE BIOCHEM INC., at or before the ensealing and delivery of these presents, the receipt of which is hereby acknowledged, have sold, assigned, transferred and conveyed and by these presents do sell, assign, transfer and convey, unto said SHIRE BIOCHEM INC., its successors and assigns, the entire right, title and interest in and to the said invention for which we have made application for Letters Patent of the United States entitled "METHOD FOR TREATING CANCER USING NOVEL SUBSTITUTED PURINYL DERIVATIVES WITH IMMUNOMODULATING ACTIVITY", filed June 7, 1995 as Serial No. 08/487,329, and which issued as U.S. Patent No. 6,110,923 on August 29, 2000, and any and all improvements thereon, and in and to said application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, TO HAVE AND TO HOLD THE SAME to the full end of the term or terms for which any and all said Letters Patent may be granted;

AND I, the said LYNE GAGNON, do hereby authorize and request the Commissioner of Patents and Trademarks to issue the said Letters Patent of the United States to said SHIRE BIOCHEM INC., as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said SHIRE BIOCHEM INC., its successors and assigns;

AND I, the said LYNE GAGNON, for the considerations aforesaid, do hereby covenant and agree to and with said SHIRE BIOCHEM INC., its successors and assigns, that

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we have the full power to make this assignment, and that the rights assigned are not encumbered by any grant, license or right heretofore given, and that we, our executors or administrators, shall and will do all lawful acts and things and make, execute and deliver without further compensation, any and all other instruments in writing, further applications, papers, affidavits, powers of attorney, assignments, and other documents which, in the opinion of counsel for said SHIRE BIOCHEM INC., its successors and assigns, may be required or necessary more effectively to secure to and vest in said SHIRE BIOCHEM INC., its successors and assigns, the entire right, title and interest in and to said invention and improvements, applications, Letters Patent, rights, titles, benefits, privileges, and advantages hereby sold, assigned, transferred and conveyed, and that we will sign any applications for reissue which may be desired by the owner of the patent or patent which may be issued for the said invention or improvements.

IN WITNESS WHEREOF, I, the said LYNE GAGNON, have hereunto set our hands and seals on the dates below written.

: ss.:

COUNTRY OF CANADA

BE IT KNOWN, that on this 21st day of Arcomber, 2002, before me personally came LYNE GAGNON, to me known and known to me to be the person mentioned in and who executed the foregoing assignment, and he acknowledged to me that he executed the same as his free act and deed for the use and purposes the rein/mentioned.

Notary Public Witness
Lawyer / Avocates, district of Montrean

Type Jagman
LYNE GAGNON

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**RECORDED: 01/13/2003**