FORM PTO-1595 (Modified) (Rev. 6-93)		R 09-04	1-2001		RTMENT OF COMMERCE
OMB No. 0651-0011 (exp.4/94) Copyright 1994-97 LegalStar P08/REV02	C.14.				atent and Trademark Office
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	Commissioner of Pa	<u>tent.</u> 1018;	32839	iched original docume	
1. Name of convey P-E Agent LLC	ing party(ies):		2. Name and addr	ess of receiving party(i	es):
			Name: Pharm-	Eco Laboratories, Inc.	
			Internal Address	S:	
Additional names(s)	of conveying party(ies)	☐ Yes 🏿 No			
3. Nature of convey	yance:				
☐ Assignment		Merger	Street Address:	25 Patton Road	
Security Agre ■ Security Agree ■ ■ Security Agree ■ Security Agree ■ Security Agree ■ ■ Security Agree ■ ■ Security Agree ■ Security Agree ■ ■	ement \Box	Change of Name			
☐ Other			City: Devens	State:	MA ZIP: 01432
Execution Date:	Иау 18, 2001		Additional name(s) 8	& address(es) attached?	☐ Yes 🏻 No
4. Application numb	oer(s) or registration r	numbers(s):			
If this document	is being filed together	with a new application,	the execution date	of the application is:	
A. Patent Applica	ation No.(s)		B. Patent	No.(s)	
08/765,283	09/370,819	60/136,009	5,562,808	5,599,994	5,750,713
09/041,212	09/237,334	60/155,443 60/169,463	5,630,914 5,643,408	5,618,966 6,631,405	6,051,726 6,063,921
09/342,855 09/309,329	09/226,469 09/510,805	00/109,403	5,475,138	6,020,495	6,054,598
ŕ		Additional numbers attacl	ned? 🛛 Yes 🗆	No	
5. Name and addre	ess of party to whom on the mailed iment should be mailed	correspondence ed:	6. Total number of	applications and pater	nts involved: 24
Name: Docketii	ng Specialist (33/48)		7. Total fee (37 CF	FR 3.41):\$	960.00
	Ropes & Gray		☐ Enclosed - credited or	Any excess or insufficion debited to deposit accord	ency should be ount
			☐ Authorized	to be charged to depos	sit account
			PREVIOUSI	LY PAID ON MAY 29	, 2001
Street Address:	One International Pl	ace	8. Deposit accour	nt number:	
			18-1945		
Oit Poston	Stat	e: MA ZIP: 02110	10 1745		
City: Boston	Otal		USE THIS SPACE		
9. Statement and	signature.	lief, the foregoing inform	nation is true and co	rrect and any attached	copy is a true copy
To the best of r	ny knowieage ana be locument.	iler, the ibregoing intolit	Manda	20.0	
Edward J. Kell			MELLY	49/4	1 2001
	of Doroon Signing		Signature	ad document:	Date
	Total number	of pages including cover s	sneet, attacriments, at	ia accument.	

Attachment to Recordation Form Cover Sheet:

Patent No. (s): 6,063,963

FORM PTO-1595 (Modified) (Rev. 6-5'3) OMB No. 0651-C011 (exp 4/94) Copyright 1994-97 LegalStar P08/REV02 RI

ocket No.:

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

Tab settings + + + Table CEMARY	イφΣ39 I ∵ Please record the attached original documents or copy there
Name of conveying party(ies): P-E Agent LLC	Name and address of receiving party(ies):
	Name: Pharm-Eco Laboratories, Inc.
	Internal Address:
Additional names(s) of conveying party(ies) ☐ Yes ☒ No	
3. Nature of conveyance:	
☐ Assignment ☐ Merger	Street Address: 25 Patton Road
_	
☐ Security Agreement ☐ Change of Name	City Doyons
☑ Other Limited Liability Company	City: Devens State: MA ZIP: 0143
Execution Date: May 18, 2001	Additional name(s) & address(es) attached? Yes No
4. Application number(s) or registration numbers(s):	
If this document is being filed together with a new application	n, the execution date of the application is:
A. Patent Application No.(s)	B. Patent No.(s)
08/765,283 09/370,819 60/136,009	5,562,808 5,599,994 5,750,713
09/041,212 09/237,334 60/155,443	5,630,914 5,618,966 6,051,726
09/342,855	5,643,408 6,631,405 6,063,921 5,475,138 6,020,495 6,054,598
Additional numbers atta	
5. Name and address of party to whom correspondence	
concerning document should be mailed:	6. Total number of applications and patents involved: 2
Name: Docketing Specialist (33/48)	7. Total fee (37 CFR 3.41):\$ 960.00
Internal Address: Ropes & Gray	☐ Enclosed - Any excess or insufficiency should be
<u> </u>	credited or debited to deposit account
	Authorized to be charged to deposit account
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	8. Deposit account number:
	18-1945
City: Boston State: MA ZIP: 02110	THE THE SPACE
DO NO	T USE THIS SPACE
9. Statement and signature.	
To the best of my knowledge and belief, the oregoing inform	mation is true and correct and any attached copy is a true cop
of the original document.	Kun 7001
Edward J. Kelly	1100 1001

Attachment to Recordation Form Cover Sheet:

Patent No. (s): 6,063,963

RELEASE OF ASSIGNMENT AND GRANT OF SECURITY INTEREST IN CERTAIN INTELLECTUAL PROPERTY

This Release of Assignment and Grant of Security Interest in Certain Intellectual Property (the "Agreement") is made and entered into this 20th day of 400 ft., 2001 by and between CALIX LLC (f/k/a Calix Corporation), a Delaware limited liability company, PHARM-ECO LABORATORIES, INC., a California corporation, PHARM-ECO I, INC., a Delaware corporation, PHARM-ECO II, INC., a Delaware corporation, XILAC CORPORATION, a Massachusetts corporation, and PARADIGM DEVELOPMENT, LLC, a Massachusetts limited liability company (collectively, the "Grantors"), each with principal offices at 25 Patton Road, Devens, Massachusetts 01432, and P-E AGENT, LLC, as collateral agent (the "Agent"), with principal offices at 411 West Putnam Avenue, Suite 225, Greenwich Connecticut 06830, as collateral agent.

WITNESSETH:

WHEREAS, the Grantors and Agent have entered into (i) an Amended and Restated Security Agreement dated October 18, 2000 (the "Security Agreement"), and (ii) an Assignment of Security Interest in United States Trademarks and Patents dated October 18, 2000 (the "Assignment");

WHEREAS, the Agent holds a first priority security interest in specific intellectual property owned by the Grantors as listed in the Assignment and Schedules A and B annexed thereto (collectively, the "Intellectual Property") (copies of the Assignment and Schedules A and B are annexed hereto); and

WHEREAS, the Agent has obtained satisfactory performance and payment of all the Secured Obligations of the Grantors as defined in the Security Agreement; and

WHEREAS, the Grantors have requested that the Agent release its first priority security interest in the Intellectual Property, and the Agent has agreed to do so;

NOW THEREFORE, in consideration of the foregoing and for good and valuable consideration, the full receipt and sufficiency of which are hereby acknowledged, the parties to this Agreement agree as follows:

- 1. The Agent hereby releases in its entirety its first priority security interest in all of the Grantors' right, title, and interest in, to, and under the Intellectual Property, and the Agent hereby agrees to take any actions and to execute any further documents necessary or reasonably requested by the Grantors to effectuate or evidence such release.
- 2. The parties hereto authorize and request the Commissioner of Patents and Trademarks of the United States, and any equivalent official of any foreign country, to record this Agreement against the Intellectual Property.
- 3. This Agreement may not be modified, nor may any provision hereof be waived, orally or in any manner other than by an agreement in writing signed by the parties hereto or their respective successors and assigns.
- 4. All rights hereunder shall accrue to, and all obligations hereunder shall be binding upon, the heirs, representatives, successors, assigns and transferees of the parties hereto.
- 5. This Agreement may be executed in any number of separate counterparts, each of which, when so executed, shall be deemed an original, and all of said counterparts taken together shall be deemed to constitute but one and the same instrument.

- 2 **-**

IN WITNESS WHEREOF, the undersigned have entered into this Agreement as of the date first above written, intending to be legally bound.

CALIX LLC (f/k/a Calix Corporation)

Name: D

Name: David J. Wade

Title: Secretary

By:_

Name: Richard L. Gabriel

Title: President

PHARM-ECO LABORATORIES, INC.

By:_

Name: David J. Wade

Title: President

By:

Name: Richard L. Gabriel

Title: Senior Executive Vice President

PHARM-ECO I, INC.

By:_

Name: David J. Wade

Title: President

By:

Name: Richard L. Gabriel

Title: Director

PHARM-ECO II, INC.

By: Name: David J. Wade Title: President By: Name: Richard L. Gabriel Title: Director XILAC CORPORATION Name: David J. Title: Clerk By:Name: Richard L. Gabriel Title: President PARADIGM DEVELOPMENT, LLC Ďν:

Name: David J.

Title: Member

 $\mathbf{B}\mathbf{y}:_{-}$ Name: Richard L. Gabriel

Title: Member

P-E AGENT, LLC

By: Contrarian Capital Advisors, L.L.C., its Manager

Name: Janice M. Stanton

Tyle: Member

By: Touchstone Capital, LLC, its Manager

By: Marroll. Vills

Name: David A. Ericson Title: Managing Member

By: Värde Partners, Inc., its Manager

By:_____

Name: George G. Hicks Title: Vice President

P-E AGENT, LLC

By: Contrarian Capital Advisors, L.L.C., its Manager

By:_____

Name: Janice M. Stanton

Title: Member

By: Touchstone Capital, LLC,

its Manager

By:_____

Name: David A. Ericson
Title: Managing Member

By: Värde Partners, Inc.,

Name: George G. Hicks

Title: Vice President

ASSIGNMENT OF SECURITY INTEREST IN UNITED STATES TRADEMARKS AND PATENTS

FOR GOOD AND VALUABLE CONSIDERATION, receipt and sufficiency of which are hereby acknowledged, Calix Corporation, a Delaware corporation, Pharm-Eco Laboratories, Inc., a California corporation, Pharm-Eco I, Inc., a Delaware corporation, Pharm-Fco II, Inc., a Delaware corporation, Xilac Corporation, a Massachusetts corporation. and Paradigm Development, LLC, a Massachusetts limited liability company (each individually, a "Grantor" and together, the "Grantors"), each with principal offices at 25 Patton Road, Devens. Massachusetts 01432, hereby grant and assign to P-E Agent, LLC, as collateral agent, with principal offices at 411 West Putnam Avenue, Suite 225, Greenwich Connecticut 06830 (the "Grantee"), a first priority security interest in (i) all of the Grantors' right, title and interest in and to the United States trademarks, trademark registrations, including any renewals, and trademark applications (the "Trademarks") set forth on Schedule A attached hereto, (ii) all of the Grantors' rights, title and interest in and to the United States patents, including all reissues and extensions thereof, and patent applications, including all divisions, continuations and substitutes thereof (the "Patents") set forth on Schedule B attached, in each case together with (iii) all proceeds and products of the Trademarks and Patents, (iv) the goodwill of the businesses with which the Trademarks are associated and (v) all causes of action arising prior to or after the date hereof for infringement of any of the Trademarks and Patents or unfair competition regarding the same.

This Assignment is made to secure the satisfactory performance and payment of all the Secured Obligations of the Grantors, as such term is defined in the Amended and Restated Security Agreement among the Grantors, the other grantors from time to time party thereto and the Grantee, dated as of October 18, 2000 (as so amended and restated and as the same may be further amended, supplemented, amended and restated or otherwise modified from time to time, the "Security Agreement"). Upon the satisfactory performance and payment in full of all the Secured Obligations, including without limitation the indefeasible and irrevocable payment in full of all amounts, including principal, interest, fees and all obligations of the Grantors to the Grantce, or otherwise owing by the Grantors pursuant to the Amended and Restated Loan Agreement, dated as of October 18, 2000, by and among the Grantors, Paradigm Development LLC, the Lenders party thereto, the Grantee, as agent for the Lenders, and Mr. David J. Wade and Mr. Richard L. Gabriel, as guarantors (as so amended and restated and as the same may be higher amended, supplemented, amended and restated or otherwise modified from time to time, Loan Agreement"), the Grantee shall, upon such satisfaction, execute, acknowledge, and deliver to the Grantors an instrument in writing releasing the security interest in the Trademarks Patents acquired under this Assignment.

THE REPORT OF THE PROPERTY OF

This Assignment has been granted in conjunction with the security interest intend to the Grantee under the Security Agreement. The rights and remedies of the Grantee in respect to the security interest granted herein are without prejudice to, and are in addition to sect forth in the Security Agreement, all terms and provisions of which are incorporated in by reference. In the event that any provisions of this Assignment are deemed to conflict in the Security Agreement, the provisions of the Security Agreement shall govern.

The parties hereto authorize and request the Commissioner of Patents and Trademarks of the United States and/or any equivalent State Official to record this Assignment against the Trademarks and Patents.

IN WITNESS WHEREOF, the undersigned have executed this Assignment of Security Interest in United States Trademarks and Patents as of the 18th day of October, 2000.

CALIX CORPORATION, as a Grantor

By: Name David J. Wade

Title: Secretary

By: Name: Richard L. Gabriel

Title: President

PHARM-ECO LABORATORIES, INC., as a Grantor

Name. Davids. Wade

Title: President

By: Name: Richard L. Gabriel

Title: Senior Executive Vice President

PHARM-ECO I, INC.,

as a Grantor

Name: David J. Wade

Title: President

Name: Richard L. Gabriel

Title: Director

PHARM-ECO II, INC., as a Grantor

Name: David J. Wade Title: President

By:_ Name: Richard L. Gabriel

Title: Director

XILAC CORPORATION, as a Grantor

Name: David J. Wade Title: Clerk

By:_ Name: Richard L. Gabriel

Title: President

PARADIGM DEVELOPMENT, LLC, as a Grantor

Name: David J. Wade Title: Member

Name: Richard L. Gabriel

Title: Member

P-E AGENT, LLC, as Grantee

Ву: Contrarian Capital Advisors, L.L.C.,

its Manager

By:_

Title: Member

Touchstone Capital, LLC, By:

its Manager

By:_

Name: David A. Ericson Title: Managing Member

By: Värde Partners, Inc.,

its Manager

By:__ Name: George G. Hicks

Title: Vice President

P-E AGENT, LLC, as Grantee

Contrarian Capital Advisors, L.L.C., By:

its Manager

By:_

Name: Janice M. Stanton

Title: Member

Touchstone Capital, LLC, By:

its Manager

By:____

Name: David A. Ericson Title: Managing Member

Närde Partners, Inc., By: ils Manager

Name: George GVHicks

Title: Vice President

SCHEDULE A

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United States Trademark Registrations and Pending Applications Owned¹

		7		
T 1. 1. 1. Dog /Car #	Mark	Class	Status	
rademark Keg. Joel. #	Trians	1, 40, 42	Registered July 22, 1997	
1 11S2 082.026	PHAKM-ECO	, , ,		
1. (152,522,527)	MCSTIRRARIES		Registered June 2, 1998	
2. US2,102,372		36	Registered July 1, 1997	
13 115 2.076,251	AKOK			00/1/01
770 027126 01.	THAM CHEMISTRY	4.7	Pending	111ed 3/1/29
4. US /3/050,000	A LOTAIN CALLES	77	Dending	filed 1/2000
028008/30	PHARMASUILE	74	1 Citaing	200217
5. 03/3/09/9/9	PLIADM-ECOMMERCE	35	Pending	filed 4/25/00
6. US 76/054186		CV 3	1)	610d A175100
*10177007	SYNAX	3,42	renaing	111Cu 4/22/00
7. US /0/034190		CV 2	Danding	filed 4/25:00
***************************************	CVLIX	2, 47	l cildilig	חווכם דו בטוט
8. US /6/034185		C 4.3	Danding	610d 4725/00
*0717077 011	CALIX PHARMACEUTICALS	3,42	rending	111ca 4/22/00
9. 03 /0/0341/9	POINT A DIRECTOR A PREPERIOR	7.7	Danding	F11ed 4/25/00
40 110 76/03/178	SMALL MOLECULES MANING A DIFFERENCE	7.	1 Culture	
10. 03 /0/0341/0				

¹ The * indicates the trademark registrations and pending applications that are filed in the name of Calix Corporation. The other listed trademark registrations and pending applications are filed in the name of Pharm-Eco Laboratories, Inc.

HEEL:

LATE * Indicates the trademark registrations and pending application and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and pending applications are filed in the name of Pharm-Eco Labora and Pharm-Eco L

SCHEDULE B

United States Patent Registrations and Patent Applications 1

S)	d filed 9/21/93	d filed 6/7/95	d filed 5/16/95	d filed 7/7/94		d filed <i>6/7/95</i>	d filed 5/16/95	d filed 6/7/95	
Inventors	Yesh P. Sachdeva, Richard L. Issued Gabriel 10/8/96	Yesh P. Sachdeva, Richard L. Issued Gabriel 5/20/97	Yesh P. Sachdeva, Richard L. Issued Gabriel 7/1/97	Biman Pal, Siya Ram, Bing Issued Cai, Yesh P. Sachdeva, Jaechul Shim, Salah A. Zahr, Emile Al-Farhan, Richard L.	\dashv	Biman Pal, Siya Ram, Yesh P. Issued Sachdeva, Jaechul Shim, Salah A. Zahr, Emile Al-Farhan, Richard L. Gabriel	Biman Pal, Siya Ram, Bing Issued Cai, Yesh P. Sachdeva, Jacchul Shim, Salah A. Zahr, Emile A[-Farhan, Richard L. Gabriel	Biman Pal, Siya Ram, Bing Issued Cai, Yesh P. Sachdeva, 5/20/97	
Title	Method And Apparatus For Decontaminating A Liquid Surfactant Of Dioxane	Method And Apparatus For Decontaminating A Liquid	Apparatus For Decontaminating A Liquid Surfactant Of Dioxane	Method Preparing Amino Acid-Derived Diaminopropanols		Amino Acid -Derived Diaminopropanols	Method Forming Protease Inhibitor Synthetic Intermediates	Method of Forming Amino Acid-Derived Diaminopropanols	Pharm-Eco Laboratories, Inc. owns the patents listed on this Schedule.
Patent/Serial Number	1. U.S 5,562,808	2. U.S. 5,630,914	3. U.S. 5,643,408	4. U.S. 5,475,138		5. U.S. 5,599,994	6. U.S. 5,618,966	7. U.S. 6,631,405	1 Pharm-Eco Laboratories, Ir

1 Pharm-Eco Laboratories, Inc. owns the patents listed on this Schedule.

		Filed 12/8/97	Filed 8/18/97	filed 3/13/97	filed 11/20/97	filed 3/23/98	filed 7/5/95	filed 1/6/97	filed 3/12/98
Status		Issued 2/1/00	Issued 5/12/98	Issued 4/18/00	Issued 5/16/00	Issued 4/25/00	Issued 5/16/00	Pending	Allowed
Inventors	Jaechul Shim, Salah A. Zahr, Emile Al-Farhan, Richard L. Gabriel	Xiaoyong Sun, Yesh P. Sachdeva, Donna Kayc Wilson, Richard L. Gabriel, Siya Ram	Xiaoyong Sun, Yesh P. Sachdeva, Donna Kaye Wilson, Richard L. Gabriel, Siya Ram	Yesh P. Sachdeva, Siya Ram	Adel Moussa, Richard J. Lombardy, Reem M. Haider, Minghua Sun	Yesh P. Sachdeva, Siya Ram	Biman Pal, Siya Ram, Bing Cai, Yesh P. Sachdeva, Jaechul Shim, Salah A. Zahr, Emile Al-Farhan, Richard L. Gabriel	Biman Pal, Siya Ram, Bing Cai, Yesh P. Sachdeva, Jaechul Shim, Salah A. Zahr, Emile Al-Farhan, Richard L. Gabriel	Yesh P. Sachdeva, Ravi
Title	Useful As Chemical Intermediates For Protease-inhibitors	Stereoselective Method for Synthesizing Dolaphenine	Stereoselective Method for Synthesizing Dolaphenine	Synthesis of 2-Alkoxyestradiols	Synthesis of 11-Aryl-5,6-Dihydro-11H-Dibenz[B,E]azepincs	Improved Synthesis of 2-Alkoxyestradiols	Amino Acid-Derived Diaminoproponols	Amino Acid-Dcrived Diaminoproponols	Novel 2-Alkoxyestradiols and
Patent/Serial Number		8. U.S. 6,020,495	9. U.S. 5,750,713	10. U.S. 6,051,726	11. U.S. 6,063,921	12. U.S. 6,054,598	13. U.S. 6,063,963	14. U.S. 08/765,283	15. US 09/041,212

Datent/Serial Number	Title	Inventors	Status		
1 atomos di maria	Derivatives thereof	Varma, Siya Ram	2/24/00		
16. US 09/342,855	Amino Acid Derivatives and Methods of Making the Same	Richard Gabriel, Jurjus Jurayj	Pending	filed 6/29/99	,
17. US 09/309,329	Method for Making Substituted	Robert Stevenson, Milind P.	Pending	filed 1/13/00	
	Indoles	Sant, Reem M. Filder, Anmed Hilmy, Emile Al-Farhan			
18. U.S. 09/370,819	Synthesis of 11-Aryl-5,6-Dihydro-11H-Dibenz[B,E]azepines	Adel Moussa, Richard J. Lombardy, Reem M. Haider, Minghua Sun	Pending	filed 8/9/99	
19. US 09/237,334	Enzyme Activated Supports for Enantiomeric Separation	Richard L. Gabriel, David A. Swanson	Pending	filed 1/26/99	
20. US 09/226,469	Synthesis of 3-Aryl-1-Indanamines	Adel M Moussa, Reem M. Haider, Heather Taft, Jurjus Jurayj, Weiheng Wang, HaeSuk Suh	Pending	filed 1/7/99	
21. US 09/510,805	Simulated Moving Bed Separation of Nitroalcohol Isomers	Richard L. Gabriel, Adel M. Moussa, Sharon Fitzhenry, Changhua Liu, David Swanson, Brittany La, Salah A. Zahr	Pending	filed 2/23/00	
22. US 60/136,009	Preparation of (-) FTC by Simulated Moving Bcd	Salah Zahr, David A. Swanson, Adel Moussa, Luning Han	Pending	filed 5/26/99	
23. US 60/155,443	Improved Synthesis of 2,7-dicyanocarbazole	Anwar Jardine	Pending	filed 9/22/99	
24. US 60/169,463	Radiation Induced Crosslinking of Polysaccharide	Richard Gabriel, Ira Krull, David Swanson	Pending	filed 12/7/99	

RECORDED: 08/14/2001