UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934 (Amendment No. 2)*

PHARMATHENE, INC.

(Name of Issuer)

Common Stock, par value \$0.0001 per share (Title of Class of Securities)

42224H104

(CUSIP Number)

LUKE EVNIN

MPM ASSET MANAGEMENT THE JOHN HANCOCK TOWER 200 CLARENDON STREET, 54TH FLOOR BOSTON, MASSACHUSETTS 02116 TELEPHONE: (617) 425-9200

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

November 3, 2010

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. o

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see* the *Notes*).

42224H104

1.	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)							
	MPM B	MPM BioVentures III, L.P.						
	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)							
2.	(a) o (b) ☑ ((a) o (b) ☑ (1) 						
3.	SEC US	E ONL	Y					
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4.	SOURC	E OF F	UNDS (SEE INSTRUCTIONS)					
_	WC							
5.	CHECK	IF DIS	CLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)					
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6.	Delawar	e						
		-	SOLE VOTING POWER					
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	394,667							
12.	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)							
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13.	PERCE	NT OF	CLASS REPRESENTED BY AMOUNT IN ROW (11)					
т О .	1.0%(3)							
14	TYPE C	F REP	ORTING PERSON (SEE INSTRUCTIONS)					
14.	PN							
			by MPM BioVentures III, L.P. ("BV III"), MPM BioVentures III-QP, L.P. ("BV III QP "), MPM BioVentures III GmbH & Co. KG") MPM BioVentures III Parallel Fund L. P. ("BV III PE") MPM BioVentures III GP L. P. ("BV III GP") MPM BioVentures					
ROTOILIOU	mac KI = I	- к (/ Л	$M_{\rm L}$) we we have a comparison of the state of the					

Beteiligungs KG ("BV III KG"), MPM BioVentures III Parallel Fund, L.P. ("BV III PF"), MPM BioVentures III GP, L.P. ("BV III GP"), MPM BioVentures III GPD KG ("BV III KG"), MPM BioVentures III Parallel Fund, L.P. ("BV III PF"), MPM BioVentures III GP, L.P. ("BV III GP"), MPM BioVentures III LLC ("BV III LLC") and MPM Asset Management Investors 2004 BVIII LLC ("AM LLC") (collectively, the "MPM Entities") and Luke Evnin, Ansbert Gadicke, Nicholas Galakatos, Dennis Henner, Nicholas Simon III, Michael Steinmetz and Kurt Wheeler (collectively, the "Listed Persons" and together with the MPM Entities, the "Reporting Persons"). The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.

(2) Consists of 354,005 shares of common stock of the Issuer and 40,662 shares of Common Stock issuable upon exercise of warrants, which are exercisable within 60 days of the date of this filing.

1	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)						
1.	MPM BioVentures III-QP, L.P.						
	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)						
2.	(a) o						
	(b) ☑ ((1)					
2	SEC USE ONLY						
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	SOURC	E OF F	UNDS (SEE INSTRUCTIONS)				
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5.	CHECK	IF DIS	SCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)				
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6.	Delawar	10					
	Delawal	c	SOLE VOTING POWER				
		7.					
NUME	BER OF		5,869,246 (2)				
	RES	0	SHARED VOTING POWER				
	CIALLY ED BY	8.	0				
	CH		SOLE DISPOSITIVE POWER				
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	SON		5,869,246 (2)				
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	5,869,246 (2)						
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10	PERCE	NT OF	CLASS REPRESENTED BY AMOUNT IN ROW (11)				
13.	13.9%(3	0					
		,	ORTING PERSON (SEE INSTRUCTIONS)				
14.							
	PN						
(1) This	Schedule	is filed	by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.				

(2) Consists of 5,264,543 shares of common stock of the Issuer and 604,703 shares of Common Stock issuable upon exercise of warrants, which are exercisable within 60 days of the date of this filing.

1.	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)						
1.	MPM BioVentures III GmbH & Co. Beteiligungs KG						
	CHECK	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)					
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	(b) ☑ (SEC US		Y				
3.	510 65		-				
4.	SOURC	E OF F	UNDS (SEE INSTRUCTIONS)				
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5.	CHECK	IF DIS	SCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)				
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6.	CITIZE	NSHIP	OR PLACE OF ORGANIZATION				
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	7. SOLE VOTING POWER						
	BER OF		496,007 (2)				
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	SON	0.	496,007 (2)				
WI	TH:	10.	SHARED DISPOSITIVE POWER				
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11.	AGGRE	GATE	AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON				
11.	496,007 (2)						
12.	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)						
12,	0						
13.	PERCE	NT OF	CLASS REPRESENTED BY AMOUNT IN ROW (11)				
10.	1.2%(3)						
14.	ТҮРЕ С	OF REP	ORTING PERSON (SEE INSTRUCTIONS)				
	PN						
(1) This	Schedule	is filed	by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.				

(2) Consists of 444,904 shares of common stock of the Issuer and 51,103 shares of Common Stock issuable upon exercise of warrants, which are exercisable within 60 days of the date of this filing.

1.	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)						
1.	MPM BioVentures III Parallel Fund, L.P.						
CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)			APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)				
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	(a) o (b) ☑ (1)					
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	SOURC	E OF F	UNDS (SEE INSTRUCTIONS)				
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_	CHECK	IF DIS	SCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)				
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6.	Delawar	'e					
			SOLE VOTING POWER				
NUME	BER OF	7.	177,271 (2)				
	ARES		SHARED VOTING POWER				
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	RTING .SON	9.	177,271 (2)				
	TH:		SHARED DISPOSITIVE POWER				
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	177,271 (2) CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)						
12.	0						
		NT OF	CLASS REPRESENTED BY AMOUNT IN ROW (11)				
13.	0.4%(3)						
		F REP	ORTING PERSON (SEE INSTRUCTIONS)				
14.	PN						
(1) This		is filed	by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.				

(2) Consists of 159,007 shares of common stock of the Issuer and 18,264 shares of Common Stock issuable upon exercise of warrants, which are exercisable within 60 days of the date of this filing.

1.			PORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)					
	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)							
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	(a) o (b) ☑ ((a) o (b) \square (1)						
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	CITIZE	NSHIP	OR PLACE OF ORGANIZATION					
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	Delaware							
		7.	SOLE VOTING POWER					
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	ED BY		0					
	CH	0	SOLE DISPOSITIVE POWER					
	RTING SON	9.	139,531 (2)					
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10	PERCE	NT OF	CLASS REPRESENTED BY AMOUNT IN ROW (11)					
13.	0.3%(3)							
			ORTING PERSON (SEE INSTRUCTIONS)					
14.								
	00							
(1) This	Schedule	is filed	by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.					

(2) Consists of 125,155 shares of common stock of the Issuer and 14,376 shares of Common Stock issuable upon exercise of warrants, which are exercisable within 60 days of the date of this filing.

1.	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)						
1.	MPM BioVentures III GP, L.P.						
	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)						
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	(b) ☑ (1)						
3.	SEC USE ONLY						
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	ARES	•	SHARED VOTING POWER				
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	TH:		SHARED DISPOSITIVE POWER				
		10.	6,937,191 (2)				
	AGGRE	GATE	AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON				
11.	6,937,191 (2)						
	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)						
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4.0	PERCE	NT OF	CLASS REPRESENTED BY AMOUNT IN ROW (11)				
13.	16.4%(3)					
	-	-	ORTING PERSON (SEE INSTRUCTIONS)				
14.	PN						
(1) This		is filed	by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.				

1.	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)							
± •	MPM BioVentures III LLC							
	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)							
2.	(a) o							
	(b) ☑ ((b) 🗹 (1)						
3.	SEC US	E ONL	Y					
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4.	SOURC	E OF F	UNDS (SEE INSTRUCTIONS)					
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C	CITIZEI	NSHIP	OR PLACE OF ORGANIZATION					
6.	Delawar	e						
	SOLE VOTING POWER							
NUME	BER OF	7.	0					
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	СН		SOLE DISPOSITIVE POWER					
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	TH:		SHARED DISPOSITIVE POWER					
		10.						
	AGGRE	GATE	6,937,191 (2) AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON					
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	00		by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.					
(I) This	Schedule	is tiled	by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A					

1.	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)							
1.	Luke Evnin							
	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)							
2.	(a) o							
	(b) ☑ (
3.	SEC USE ONLY							
	SOURC	E OF F	UNDS (SEE INSTRUCTIONS)					
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F	CHECK	IF DIS	CLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)					
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6	CITIZEI	NSHIP	OR PLACE OF ORGANIZATION					
6.	United S	states						
		7.	SOLE VOTING POWER					
NUME	BER OF	7.	0					
	ARES ICIALLY	0	SHARED VOTING POWER					
	ED BY	8.	7,076,722 (2)					
	CH	0	SOLE DISPOSITIVE POWER					
	RTING SON	9.	0					
WI	TH:	10	SHARED DISPOSITIVE POWER					
		10.	7,076,722 (2)					
11	AGGRE	GATE	AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON					
11.	7,076,722 (2)							
10	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)							
12.	0							
10	PERCE	NT OF	CLASS REPRESENTED BY AMOUNT IN ROW (11)					
13.	16.7%(3)						
14	TYPE O	F REP	ORTING PERSON (SEE INSTRUCTIONS)					
14.	IN							
(1) This	Schedule	is filed	by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.					

1.	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)							
1.	Ansbert	Ansbert Gadicke						
	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)							
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		(b) ☑ (1) SEC USE ONLY						
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6.	CITIZEI	NSHIP	OR PLACE OF ORGANIZATION					
0.	United S	tates						
		7.	SOLE VOTING POWER					
	BER OF		1,104 (2)					
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	ED BY		7,076,722 (3)					
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10	PERCEN	NT OF	CLASS REPRESENTED BY AMOUNT IN ROW (11)					
13.	16.7%(4)						
14	TYPE O	F REP	ORTING PERSON (SEE INSTRUCTIONS)					
14.	IN							
(1) This	Schedule i	is filed	by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.					

(2) Represents shares of common stock of the Issuer underlying an option to purchase shares of common stock that has vested or will vest within 60 days of this report.

(2) Consists of 354,005 shares of Common Stock and 40,662 shares of Common Stock issuable upon exercise of warrants held by BV III; 5,264,543 shares of Common Stock and 604,703 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 444,904 shares of Common Stock and 51,103 shares of Common Stock issuable upon exercise of warrants held by BV III KG; 159,007 shares of Common Stock and 18,264 shares of Common Stock issuable upon exercise of warrants held by BV III KG; 159,007 shares of Common Stock and 18,264 shares of Common Stock issuable upon exercise of warrants held by BV III PF; and 125,155 shares of Common Stock and 14,376 shares of Common Stock issuable upon exercise of warrants held by AM LLC. The warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III, BV III QP, BV III KG and BV III PF. The Reporting Person is a Series A member of BV III LLC and a manager of AM LLC.

(4) This percentage is calculated based upon 41,553,661 shares of the Issuer's common stock outstanding, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, which is the sum of: (i) 40,908,661 shares of the Issuer's common stock outstanding on November 9, 2010,

as set forth in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 15, 2010 and (ii) 645,000 shares of common stock issued pursuant to the exercise by the underwriters of their over-allotment option in connection with the Offering.

1.	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)						
1.	Nicholas Galakatos						
	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)						
2.	(a) o						
	(b) ☑ (V.				
3.	SEC USE ONLY						
1	SOURC	E OF F	UNDS (SEE INSTRUCTIONS)				
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F	CHECK	IF DIS	CLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)				
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6	CITIZE	NSHIP	OR PLACE OF ORGANIZATION				
6.	United S	states					
		7	SOLE VOTING POWER				
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		10.	7,076,722 (2)				
	AGGRE	GATE	AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON				
11.	7,076,722 (2)						
<u> </u>	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)						
12.	0						
10		NT OF	CLASS REPRESENTED BY AMOUNT IN ROW (11)				
13.	16.7%(3)					
			ORTING PERSON (SEE INSTRUCTIONS)				
14.	IN						
(1) This		is filed	by the Reporting Persons. The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13D/A.				

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NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)						
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1.	NAME OF REPORTING PERSONS I.R.S. Identification No(s). of above person(s) (entities only)							
1.	Michael Steinmetz							
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-	Kurt Wheeler							
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This Amendment No. 2 to Schedule 13D (this "Amendment No. 2") amends and supplements the Schedule 13D originally filed with the United States Securities and Exchange Commission (the "SEC") on August 14, 2007, as amended by Amendment No. 1 to Schedule 13D originally filed with the SEC on August 4, 2009 (as amended, the "Original Schedule 13D"). The persons filing this statement are MPM BioVentures III, L.P. ("BV III"), MPM BioVentures III GmbH & Co. Beteiligungs KG ("BV III KG"), MPM BioVentures III Parallel Fund, L.P. ("BV III PF"), MPM Asset Management Investors 2004 BVIII LLC ("AM LLC"), MPM BioVentures III GP, L.P. ("BV III GP"), MPM BioVentures III LLC ("BV III LLC") (collectively, the "MPM Entities") and Luke Evnin, Ansbert Gadicke, Nicholas Galakatos, Michael Steinmetz, Kurt Wheeler, Nicholas Simon III and Dennis Henner (collectively, the "Listed Persons" and together with the MPM Entities, the "Filing Persons"). The Original Schedule 13D, as amended by this Amendment No. 2 (the "Schedule 13D"), relates to the common stock, par value \$0.0001 per share (the "Common Stock"), of Pharmathene, Inc. (the "Issuer"). Capitalized terms used herein but not defined shall have the meanings ascribed to them in the Original Schedule 13D. This Amendment No. 2 amends the Original Schedule 13D as specifically set forth herein. Except as set forth below, all previous Items in the Original Schedule 13D remain unchanged.

Item 3. Source and Amount of Funds or Other Consideration.

Item 3 of the Original Schedule 13D is hereby supplemented by adding the following:

On November 3, 2010, the Issuer completed an underwritten public offering of 4,300,000 shares of its common stock at a public offering price of \$3.50 per share resulting in gross proceeds to the Issuer of approximately \$15,000,000, before deducting underwriting discounts and offering fees and expenses (the "Offering"). The MPM Entities participated in the Offering and acquired an aggregate of 430,000 shares of common stock of the Issuer (the "Shares"), for a total purchase price of \$1,505,000. BV III purchased 23,981 shares, BV III QP purchased 356,630 shares, BV III KG purchased 30,139 shares, BV III PF purchased 10,772 shares and AM LLC purchased 8,478 shares.

In addition, the MPM Entities agreed, pursuant to an early conversion agreement (the "Early Conversion Agreement"), to convert their 10% senior convertible notes (the "Notes"). In exchange for the MPM Entities' election to convert the notes prior to their July 2011 maturity, in addition to receiving shares of the Issuer's common stock as a result of the conversion, they received cash payments corresponding to the interest foregone, i.e. the interest such holders would have received between the conversion date and the maturity date had they held the note through maturity. The MPM Entities received an aggregate of 2,428,171 shares of Common Stock in connection with the conversion of the Notes, for a total conversion price of \$6,171,601.10. BV III received 135,419 shares, BV III QP received 2,013,859 shares, BV III KG received 170,191 shares, BV III PF received 60,826 shares and AM LLC received 47,876 shares.

The funds used by the MPM Entities to acquire the securities described herein were obtained from capital contributions by their partners and from direct capital commitments by the MPM Entities.

Item 4. Purpose of Transaction.

Item 4 of the Original Schedule 13D is hereby supplemented by adding the following:

The Issuer completed the Offering on November 3, 2010. The MPM Entities participated in the Offering and acquired the Shares for a total purchase price of \$1,505,000. The MPM Entities participated in the Offering for investment purposes and in order to provide funding to the Issuer.

The MPM Entities acquired the securities of the Issuer for investment purposes, except as otherwise stated herein. Subject to the foregoing, as of the date of the filing of this Amendment No. 2, none of the

MPM Entities has a present plan or proposal that relates to or would result in any of the actions specified in clauses (a) through (j) of Item 4 of Schedule 13D. The MPM Entities intend to review from time to time their investment in the Issuer and depending on such review may consider various alternative courses of action. In addition, depending on prevailing conditions from time to time, including, without limitation, price and availability of shares, future evaluations by the MPM Entities of the business and prospects of the Issuer, regulatory requirements, other investment opportunities available to the MPM Entities and general stock market and economic conditions, the MPM Entities may determine to increase their investment or sell all or part of their investment in the Issuer through open-market purchases, privately negotiated transactions, a tender or exchange offer or otherwise.

Item 5. Interest in Securities of the Issuer.

Item 5. Interest in Securities of the Issuer is hereby amended and restated in its entirety as follows:

The following information with respect to the ownership of the Issuer's securities by the persons filing this Statement is provided as of the date of this filing:

MPM Entity	Shares Held Directly	Warrants Held Directly	Options Held Directly	Sole Voting Power	Shared Voting Power	Sole Dispositive Power	Shared Dispositive Power	Beneficial Ownership	Percentage of Class (1)
BV III	354,005	40,662	0	394,667	0	394,667	0	394,667	1.0%
BV III QP	5,264,543	604,703	0	5,869,246	0	5,869,246	0	5,869,246	13.9%
BV III KG	444,904	51,103	0	496,007	0	496,007	0	496,007	1.2%
BV III PF	159,007	18,264	0	177,271	0	177,271	0	177,271	0.4%
AM LLC	125,155	14,376	0	139,531	0	139,531	0	139,531	0.3%
BV III GP(2)	0	0	0	0	6,937,191	0	6,937,191	6,937,191	16.4%
BV III LLC(2)	0	0	0	0	6,937,191	0	6,937,191	6,937,191	16.4%
Luke Evnin(3)	0	0	0	0	7,076,722	0	7,076,722	7,076,722	16.7%
Ansbert Gadicke(3) (4)	0	0	1,104	1,104	7,076,722	1,104	7,076,722	7,077,826	16.7%
Nicholas Galakatos(3)	0	0	0	0	7,076,722	0	7,076,722	7,076,722	16.7%
Michael Steinmetz(3)	0	0	0	0	7,076,722	0	7,076,722	7,076,722	16.7%
Kurt Wheeler(3)	0	0	0	0	7,076,722	0	7,076,722	7,076,722	16.7%
Nicholas Simon									
III(3)	0	0	0	0	7,076,722	0	7,076,722	7,076,722	16.7%
Dennis Henner(3)	0	0	0	0	7,076,722	0	7,076,722	7,076,722	16.7%

(1) This percentage is calculated based upon 41,553,661 shares of the Issuer's common stock outstanding, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, which is the sum of: (i) 40,908,661 shares of the Issuer's common stock outstanding on November 9, 2010, as set forth in the Issuer's Quarterly Report on Form 10-Q filed with the

Securities and Exchange Commission on November 15, 2010 and (ii) 645,000 shares of common stock issued pursuant to the exercise by the underwriters of their over-allotment option in connection with the Offering.

- (2) BV III GP and BV III LLC are the direct and indirect general partners of BV III, BV III QP, BV III KG and BV III PF. The securities are held as follows: 354,005 shares of Common Stock and 40,662 shares of Common Stock issuable upon exercise of warrants held by BV III; 5,264,543 shares of Common Stock and 604,703 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 444,904 shares of Common Stock and 51,103 shares of Common Stock issuable upon exercise of warrants held by BV III KG; and 159,007 shares of Common Stock and 18,264 shares of Common Stock issuable upon exercise of warrants held by BV III KG; and 159,007 shares of Common Stock and 18,264 shares of Common Stock issuable upon exercise of warrants held by BV III PF.
- (3) The Reporting Person is a member of BV III LLC and AM LLC. The securities are held as follows: 354,005 shares of Common Stock and 40,662 shares of Common Stock issuable upon exercise of warrants held by BV III; 5,264,543 shares of Common Stock and 604,703 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 444,904 shares of Common Stock and 51,103 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 444,904 shares of Common Stock and 51,103 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 444,904 shares of Common Stock and 51,103 shares of Common Stock issuable upon exercise of warrants held by BV III PF; and 125,155 shares of Common Stock and 14,376 shares of Common Stock issuable upon exercise of warrants held by AM LLC.
- (4) Includes 1,104 shares issuable upon the exercise of options that are exercisable within 60 days of the filing date.

The information provided and incorporated by reference in Item 3 is hereby incorporated by reference.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

Item 6 of the Original Schedule 13D is hereby supplemented by adding the following:

On December 8, 2010, the MPM Entities entered into a pre-arranged stock trading plan (the "Trading Plan") to sell shares of the Issuer's Common Stock. The Trading Plan is designed to comply with Rule 10b5-1 under the Securities Exchange Act of 1934. The Trading Plan entered into by the Reporting Person provides for the sale, over a period of approximately 24 months, with such sales potentially beginning as early as December 2010, of an aggregate of up to 6,347,614 shares of the Issuer's Common Stock, subject to various floor prices.

The description contained in this Amendment No. 3 of the Trading Plan is qualified in its entirety by reference to the full text of the Trading Plan, a copy of which is filed herewith as Exhibit 9 and incorporated by reference in this Amendment No. 3.

Item 7. Material to be Filed as Exhibits.

Item 7 of the Original Schedule 13D is hereby supplemented by adding the following in appropriate numerical order:

Exhibit No.	Description
1.	Agreement regarding joint filing of Schedule 13D.
6.	Prospectus Supplement filed pursuant to Rule 424(b)(5) (incorporated by reference to the Rule 424(b)(5) filing by the Issuer on November 1, 2010).
7.	Underwriting Agreement dated as of October 28, 2010 by and among the Issuer and Roth Capital Partners, LLC (incorporated by reference to Exhibit 1.1 to the Issuer's Current Report on Form 8-K filed on November 1, 2010 (SEC File No. 001-32587)).
8.	Early Conversion Agreement (incorporated by reference to Exhibit 1.2 to the Issuer's Current Report on Form 8-K filed on November 1, 2010 (SEC File No. 001-32587)).
9.	Trading Plan.

SIGNATURES

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: December 23, 2010

MPM BIOVENTURES III, L.P.

- By: MPM BioVentures III GP, L.P., its General Partner
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member
- MPM BIOVENTURES III PARALLEL FUND, L.P.
- By: MPM BioVentures III GP, L.P., its General Partner
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Luke Evnin

Name: Luke Evnin Title: Series A Member

MPM ASSET MANAGEMENT INVESTORS 2004 BVIII LLC

- By: /s/ Luke Evnin Name: Luke Evnin Title: Manager
- MPM BIOVENTURES III LLC
- By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member

MPM BIOVENTURES III-QP, L.P.

- By: MPM BioVentures III GP, L.P., its General Partner
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member

MPM BIOVENTURES III GMBH & CO. BETEILIGUNGS KG

- By: MPM BioVentures III GP, L.P., in its capacity as the Managing Limited Partner
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member
- MPM BIOVENTURES III GP, L.P.
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member
- /s/ Luke Evnin

Luke Evnin

/s/ Ansbert Gadicke Ansbert Gadicke

/s/ Michael Steinmetz Michael Steinmetz

/s/ Nicholas Simon III

Nicholas Simon III

/s/ Nichoals Galakatos

Nicholas Galakatos

/s/ Kurt Wheeler Kurt Wheeler

/s/ Dennis Henner

Dennis Henner

SCHEDULE I

General Partners/Members:

Luke Evnin c/o MPM Asset Management The John Hancock Tower 200 Clarendon Street, 54th Floor Boston, Massachusetts 02116 Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2004 BVIII LLC Citizenship: USA Ansbert Gadicke c/o MPM Asset Management The John Hancock Tower 200 Clarendon Street, 54th Floor Boston, Massachusetts 02116 Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2004 BVIII LLC Citizenship: USA Nicholas Galakatos c/o MPM Asset Management The John Hancock Tower 200 Clarendon Street, 54th Floor Boston, Massachusetts 02116 Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2004 BVIII LLC Citizenship: USA Michael Steinmetz c/o MPM Asset Management The John Hancock Tower 200 Clarendon Street, 54th Floor Boston, Massachusetts 02116 Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2004 BVIII LLC Citizenship: USA

Kurt Wheeler c/o MPM Asset Management The John Hancock Tower 200 Clarendon Street, 54th Floor Boston, Massachusetts 02116 Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2004 BVIII LLC Citizenship: USA Nicholas Simon III c/o MPM Asset Management The John Hancock Tower 200 Clarendon Street, 54th Floor Boston, Massachusetts 02116 Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2004 BVIII LLC Citizenship: USA Dennis Henner c/o MPM Asset Management The John Hancock Tower 200 Clarendon Street, 54th Floor Boston, Massachusetts 02116 Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2004 BVIII LLC Citizenship: USA

Exhibit Index

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7.	Underwriting Agreement dated as of October 28, 2010 by and among the Issuer and Roth Capital Partners, LLC (incorporated by reference to Exhibit 1.1 to the Issuer's Current Report on Form 8-K filed on November 1, 2010 (SEC File No. 001-32587)).
8.	Early Conversion Agreement (incorporated by reference to Exhibit 1.2 to the Issuer's Current Report on Form 8-K filed on November 1, 2010 (SEC File No. 001-32587)).
9.	Trading Plan

JOINT FILING STATEMENT

I, the undersigned, hereby express my agreement that the attached Amendment No. 2 to Schedule 13D (and any amendments thereto) relating to the common stock of Pharmathene, Inc. is filed on behalf of each of the undersigned.

Dated: December 23, 2010

MPM BIOVENTURES III, L.P.

- By: MPM BioVentures III GP, L.P., its General Partner
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member
- MPM BIOVENTURES III PARALLEL FUND, L.P.
- By: MPM BioVentures III GP, L.P., its General Partner
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member

MPM ASSET MANAGEMENT INVESTORS 2004 BVIII LLC

By: /s/ Luke Evnin Name: Luke Evnin Title: Manager

MPM BIOVENTURES III LLC

By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member

MPM BIOVENTURES III-QP, L.P.

- By: MPM BioVentures III GP, L.P., its General Partner
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member
- MPM BIOVENTURES III GMBH & CO. BETEILIGUNGS KG
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- By: /s/ Luke Evnin Name: Luke Evnin Title: Series A Member
- MPM BIOVENTURES III GP, L.P.
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Luke Evnin Name: Luke Evnin

Title: Series A Member

/s/ Luke Evnin

Luke Evnin

/s/ Ansbert Gadicke/s/ Nichoals GalakatosAnsbert GadickeNicholas Galakatos/s/ Michael Steinmetz/s/ Kurt WheelerMichael SteinmetzKurt Wheeler/s/ Nicholas Simon III/s/ Dennis HennerNicholas Simon IIIDennis Henner

Attention. Intentional misstatements or omissions of fact constitute federal criminal violations (see 18 U.S.C. 1001).

STOCK TRADING PLAN

This Stock Trading Plan (the "**Plan**") is being adopted by MPM Bioventures III LP Fund(s) (the "Client"), as of the date below, to facilitate the sale of 6,347,614 shares of the common stock (the "**Shares**") of Pharmathene, Inc. ("**Issuer**") pursuant to the requirements of Rule 10b5-1 under the Securities Exchange Act of 1934, as amended ("Exchange Act").

In order to diversify its investment portfolio, Client desires to sell the Shares. To dispel any inference that the Client is trading in the Shares on the basis of, while using, when in possession of, or when aware of material nonpublic information; or that the trades in the Shares evidence Client's knowledge of material nonpublic information, or information at variance with Issuer's statements to investors; Client has determined to instruct Credit Suisse Securities (USA) LLC ("CSSU") to sell a pre-determined amount of Shares pursuant to the formula described in Exhibit A.

Representations, Warranties and Covenants Regarding Compliance with Rule 10b5-1:

1. As of the date of this Plan, the Client is not aware of any material nonpublic information regarding Issuer and is not subject to any legal, regulatory or contractual restriction or undertaking that would prevent CSSU from acting upon the instructions set forth in this Plan;

2. The Client is entering into this Plan in good faith and not as part of any scheme to evade the prohibitions of Rule 10b5-1 adopted under the Securities Exchange Act of 1934, as amended;

3. The Client has not entered into, and will not enter into, any corresponding or hedging transaction or position with respect to the Shares;

4. The Client acknowledges that CSSU may make a market in the Shares and will continue to engage in market-making activities while executing transactions on behalf of the Client pursuant to the Plan; and

5. The Client may not discuss with CSSU the timing of the trading in the Shares on its behalf (other than to confirm these instructions and describe them if necessary).

6. The Client agrees to inform CSSU as soon as possible of any of the following:

i) any subsequent restrictions imposed on client due to changes in the securities (or other) laws or of any contractual restrictions imposed on the Issuer that would prevent CSSU or client from complying with the Plan, and

ii) the occurrence of any event as set forth in the Plan that would cause the Plan to be suspended or terminated under Section 10 or Section 15 of the Plan, respectively.

Representations, Warranties and Covenants Regarding Compliance with Rule 144 and Rule 145

7. Client understands and agrees that if it is an affiliate or control person for purposes of Rule 144 under the Securities Act of 1933, as amended ("Securities Act"), or if the Shares subject to the Plan are restricted securities subject to limitations under Rule 144 or eligible for resale under Rule 145,

then all sales of Shares under the Plan will be made in accordance with the applicable provisions of Rule 144.

i) Client requests and authorizes CSSU to complete and file on its behalf any Forms 144 (pre-signed by it) necessary to effect sales under the Plan.

ii) If appropriate, Client understands and agrees that, upon its prompt execution and delivery to CSSU of Form 144, CSSU will either: (a) make one Form 144 filing at the beginning of each three-month period commencing with the date of the first sale made in connection with the Plan, (b) file a Form 144 for each sale made in connection with the Plan, or (c) file at its discretion in compliance with the rules of the Securities Act.

iii) Each Form 144 shall state the following: "This proposed sale is made pursuant to a plan intended to comply with Rule 10b5-1(c), previously entered into on [insert plan adoption date], at which time [the Client] was not aware of material nonpublic information."

iv) CSSU will conduct sales pursuant to Rule 144 or Rule 145 if appropriate, including applying Rule 144 volume limitations as if the sales under the Plan were the only sales subject to the volume limitations.

v) Client agrees not to take any action or to cause any other person or entity to take any action that would require it to aggregate sales of Shares subject to the Plan with any other sales of shares as may be required by Rule 144; and not to take any action that would cause the sales of Shares under the Plan not to comply with Rule 144 or Rule 145.

Stock Splits / Reincorporations/ Reorganizations

8. In the event of a stock split or reverse stock split, the quantity and price at which the Shares are to be sold will be adjusted proportionately.

9. In the event of a reincorporation or other corporate reorganization resulting in an internal Issuer share-for-share exchange of new shares for the Shares subject to the Plan, then the new shares will automatically replace the shares originally specified in the Plan.

Suspension

10. Sales of Shares pursuant to the Plan shall be suspended where:

i) trading of the Shares on the principal exchange or market on which the Shares trade is suspended for any reason;

ii) CSSU, in its sole discretion, determines that there is a legal, regulatory or contractual reason why it cannot effect a sale of Shares; or

iii) CSSU is notified in writing by the Client or the Issuer that a sale of Shares should not be effected due to legal, regulatory or contractual restrictions applicable to the Issuer or to the Client (including without limitation, Regulation M).

11. CSSU will resume sales in accordance with the Plan as promptly as practicable after (a) CSSU receives notice in writing from the Client or the Issuer, as the case may be, that it may resume sales in accordance with the formula described in <u>Exhibit A</u> in the case of the occurrence of an event described in Sections 10(iii) or (b) CSSU determines, in its sole discretion, that it may resume sales in accordance

with the formula described in Exhibit A in the case of the occurrence of an event described in Sections 10(i) or 10(ii).

12. Shares allocated under the Plan for sale during a period that has elapsed due to a suspension under Section 10 will be carried forward with the next amount of shares to be sold in accordance with the formula described in <u>Exhibit A</u>.

13. In the event the formula described in <u>Exhibit A</u> provides for an amount of Shares to be sold during a given period pursuant to a limit order, Shares that would otherwise be permitted to be sold during that period but are not sold due to a suspension under Section 10, shall, upon lapse of the suspension, nonetheless be carried forward to be sold with the next amount of Shares to be sold in accordance with the formula described in <u>Exhibit A</u>.

14. CSSU is released from all liability in connection with any suspension of sales made in accordance with Section 10.

Termination

15. The Plan shall terminate on the earliest to occur of the following:

- i) the termination date specified in Exhibit A; or
- ii) the completion of all sales in Exhibit A;
- iii) CSSU's reasonable determination that: (a) the Plan does not comply with Rule 10b5-1 or other applicable securities laws; (b) Client has not complied with the Plan, Rule 10b5-1 or other applicable securities laws; or (c) Client has made misstatements in its representations or warranties in Sections 1-6 above that are false or materially inaccurate;
- iv) receipt by CSSU of written notice from the Issuer or Client of: (a) the filing of a bankruptcy petition by the Issuer; (b) a merger, recapitalization, acquisition, tender or exchange offer, or other business combination or reorganization resulting in the exchange or conversion of the Shares of the Issuer into shares of a company other than the Issuer; or (c) the conversion of the Shares into rights to receive fixed amounts of cash or into debt securities and/or preferred stock (whether in whole or in part);
- v) receipt by CSSU of written notice of Client's liquidation, dissolution or winding up in a form legally satisfactory; or
- vi) receipt by CSSU of written notice of termination of the Plan from Client.

Execution, Average Pricing and Pro Rata Allocation of Sales

16. Client agrees and acknowledges that:

i) If its order to sell Shares pursuant to the Plan, whether market or limit, is handled by a CSSU trading desk, its order shall be handled as "not held". A "not held" or

"working order" permits a CSSU trader to use reasonable brokerage judgment, exercising price and time discretion, as to when to execute the order.

ii) CSSU may execute its order: (a) in a single transaction or multiple transactions during the course of the trading day, or (b) it may aggregate its order with other orders for other sellers of the Issuer's securities that may or may not have been accepted pursuant to a Rule 10b5-1 sales plan, execute them as block or in multiple smaller transactions, and allocate an average price to each seller.

Indemnification

17. Client agrees to indemnify and hold harmless CSSU and its directors, officers, employees and affiliates from and against all claims, losses, damages and liabilities, including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such claim, arising out of or attributable to CSSU's actions taken in compliance with the Plan, because of any breach by Client of the Plan, or any violation by Client of applicable federal or state laws or regulations. This indemnification shall survive the termination of the Plan.

18. Client has consulted with their own advisors as to the legal, tax, business, financial and related aspects of, and has not relied upon CSSU or any person affiliated with CSSU in connection with, Client's adoption and implementation of this Sales Plan.

Section 16 Reporting

If Client is subject to the reporting requirements of Section 16 of the Exchange Act of 1934, CSSU will provide information regarding open market transactions under the Plan to a designated third party in accordance with the instructions provided below.

19. Client authorizes CSSU to transmit information via facsimile and/or email regarding open market transactions under the Plan to:

Name:	Charles Bridge
Title:	CFO
Organization:	MPM Capital
Fax:	617-425-9314
Tel:	617-425-9236
e-mail:	<u>cbridge@mpmcapital.com</u>
Name:	Kim Merritt
Title:	Paralegal Specialist
Organization:	Cooley LLP
Fax:	415-693-2222
Tel:	415-693-2443
e-mail:	kmerritt@coolev.com

i) Client understands that reasonable efforts will be made to transmit transaction information for open market transactions under the Plan (purchase or sale) by close of business on the day of the purchase or sale, but no later than the close of business on the first trading day following the purchase or sale.

ii) Client acknowledges that CSSU (a) has no obligation to confirm receipt of any email or faxed information by the designated contact and (b) has no responsibility or liability for filing a Form 4 with the SEC or for compliance with Section 16 of the Exchange Act.

iii) If any of the above contact information changes, or Client wishes to terminate this authorization, Client will promptly notify CSSU in writing. Client further authorizes CSSU to transmit transaction information to a third party service provider who will make the information available to its designated representative(s) listed above.

Governing Law

20. This Plan shall be governed by and construed in accordance with the laws of the State of New York.

Client and Issuer authorize and direct Issuer's insider trading personnel to take all necessary steps to effect the instructions described in this Plan.

MPM BIOVENTURES III, L.P.

By: MPM BioVentures III GP, L.P., its General Partner By: MPM BioVentures III LLC, its General Partner

By: /s/ Ansbert Gadicke Name: Ansbert Gadicke Title: Series A Member

MPM BIOVENTURES III-QP, L.P.

- By: MPM BioVentures III GP, L.P., its General Partner By: MPM BioVentures III LLC, its General Partner
- By: /s/ Ansbert Gadicke Name: Ansbert Gadicke Title: Series A Member

MPM BIOVENTURES III GMBH & CO. BETEILIGUNGS KG

- By: MPM BioVentures III GP, L.P., in its capacity as the Managing Limited Partner
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Ansbert Gadicke Name: Ansbert Gadicke Title: Series A Member

MPM BIOVENTURES III PARALLEL FUND, L.P.

- By: MPM BioVentures III GP, L.P., its General Partner
- By: MPM BioVentures III LLC, its General Partner
- By: /s/ Ansbert Gadicke

Name: Ansbert Gadicke Title: Series A Member

MPM ASSET MANAGEMENT INVESTORS 2004 BVIII LLC

By: /s/ Ansbert Gadicke Name: Ansbert Gadicke

Title: Manager

11/19/2010 (Date)

Reviewed and authorized on 11/29, 2010

Acknowledged and Agreed this 8th day of Dec, 2010:

Credit Suisse Securities (USA) LLC

By: /s/ Jordan Karp

Name: Jordan Karp Title: SVP & GC Pharmathene, Inc. By: /s/ Stephen Dunne

Name: Stephen Dunne Title: Director