

Pacira Pharmaceuticals, Inc.  
Form SC 13D  
February 18, 2011

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**SCHEDULE 13D**

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

Pacira Pharmaceuticals, Inc.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

695127 10 0

(CUSIP Number)

Luke B. Evnin

MPM Asset Management

The John Hancock Tower

200 Clarendon Street, 54<sup>th</sup> Floor

Boston, MA 02116

Telephone: (617) 425-9200

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

February 8, 2011

(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.

**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 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).

CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

MPM BioVentures IV Q-P, L.P.

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

WC

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

Delaware

SOLE VOTING POWER

7

NUMBER OF 2,725,472(2)

SHARED VOTING POWER

SHARES BENEFICIALLY OWNED BY 8

0

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 2,725,472(2)

WITH SHARED DISPOSITIVE POWER

10

0

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

2,725,472(2)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

15.8%(3)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

PN

(1) MPM BioVentures IV-QP, L.P. ( BV IV QP ), MPM BioVentures IV GmbH & Co. Beteiligungs KG ( BV IV KG ), MPM Asset Management Investors BV4 LLC ( AM LLC ), MPM BioVentures IV GP LLC ( BV IV GP ), MPM BioVentures IV LLC ( BV IV LLC ) (collectively, the MPM Entities ) and Ansbert Gadicke, Luke Evnin, Steven St. Peter, William Greene, James Paul Scopa, Ashley Dombkowski, Vaughn Kailian and John Vander Vort (collectively, the Listed Persons and together with the MPM Entities, the Filing Persons ). The Listed Persons are members of BV IV LLC and AM LLC. The MPM Entities and the Listed Persons expressly disclaim status as a group for purposes of this Schedule 13D.

(2) Includes 74,072 shares of Common Stock underlying warrants which are exercisable within 60 days of the date of this filing.

(3) This percentage is calculated based upon 17,232,876 shares of the Issuer s Common Stock outstanding as of February 2, 2011, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, as set forth in the Issuer s final prospectus dated February 2, 2011, filed with the Securities and Exchange Commission on February 3, 2011.

CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1 MPM BioVentures IV GmbH & Co. Beteiligungs KG

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2 (a)   
(b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4 WC

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6 Germany

SOLE VOTING POWER

7

NUMBER OF 104,999(2)

SHARED VOTING POWER

SHARES BENEFICIALLY OWNED BY 8 0

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 104,999(2)

WITH SHARED DISPOSITIVE POWER

**10**

0

**11** AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

104,999(2)

**12** CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

o

**13** PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.6%(3)

**14** TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

PN

- (1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a group for purposes of this Schedule 13D.
- (2) Includes 2,852 shares of Common Stock underlying warrants which are exercisable within 60 days of the date of this filing.
- (3) This percentage is calculated based upon 17,232,876 shares of the Issuer's Common Stock outstanding as of February 2, 2011, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, as set forth in the Issuer's final prospectus dated February 2, 2011, filed with the Securities and Exchange Commission on February 3, 2011.

CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

MPM Asset Management Investors BV4 LLC

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

WC

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

Delaware

SOLE VOTING POWER

7

NUMBER OF 77,500(2)

SHARED VOTING POWER

SHARES BENEFICIALLY OWNED BY 8

0

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 77,500(2)

WITH SHARED DISPOSITIVE POWER

10

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

77,500(2)

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

o

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.5%(3)

14 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

OO

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a group for purposes of this Schedule 13D.

(2) Includes 2,106 shares of Common Stock underlying warrants which are exercisable within 60 days of the date of this filing.

(3) This percentage is calculated based upon 17,232,876 shares of the Issuer's Common Stock outstanding as of February 2, 2011, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, as set forth in the Issuer's final prospectus dated February 2, 2011, filed with the Securities and Exchange Commission on February 3, 2011.

CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

MPM BioVentures IV GP LLC

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

WC

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

Delaware

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY OWNED BY 8

2,830,471(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9



PERSON 0  
  
WITH SHARED DISPOSITIVE POWER  
10  
2,830,471(2)

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
2,830,471(2)

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)  
o

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  
16.4%(3)

14 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)  
OO

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(2) Includes 2,651,400 shares of Common Stock held by BV IV QP and 102,147 shares of Common Stock held by BV IV KG. Also includes (i) 74,072 shares of Common Stock underlying warrants held by BV IV QP, which are exercisable within 60 days of the date of this filing and (ii) 2,852 shares of Common Stock underlying warrants held by BV IV KG, which are exercisable within 60 days of the date of this filing. BV IV GP and BV IV LLC are the direct and indirect general partners of BV IV QP and BV IV KG.

(3) This percentage is calculated based upon 17,232,876 shares of the Issuer's Common Stock outstanding as of February 2, 2011, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, as set forth in the Issuer's final prospectus dated February 2, 2011, filed with the Securities and Exchange Commission on February 3, 2011.

CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

MPM BioVentures IV LLC

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

WC

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

Delaware

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY OWNED BY 8

2,907,971(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 0

WITH SHARED DISPOSITIVE POWER

10

2,907,971(2)

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

2,907,971(2)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

16.8%(3)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

OO

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(2) Includes 2,651,400 shares of Common Stock held by BV IV QP, 102,147 shares of Common Stock held by BV IV KG and 75,394 shares of Common Stock held by AM LLC. Also includes (i) 74,072 shares of Common Stock underlying warrants held by BV IV QP, which are exercisable within 60 days of the date of this filing, (ii) 2,852 shares of Common Stock underlying warrants held by BV IV KG, which are exercisable within 60 days of the date of this filing and (iii) 2,106 shares of Common Stock underlying warrants held by AM LLC, which are exercisable within 60 days of the date of this filing. BV IV GP and BV IV LLC are the direct and indirect general partners of BV IV QP and BV IV KG and BV IV LLC is the manager of AM LLC.

(3) This percentage is calculated based upon 17,232,876 shares of the Issuer's Common Stock outstanding as of February 2, 2011, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, as set forth in the Issuer's final prospectus dated February 2, 2011, filed with the Securities and Exchange Commission on February 3, 2011.

CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

Ansbert Gadicke

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

OO

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

United States

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY 8

OWNED BY 2,907,971(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 0

WITH SHARED DISPOSITIVE POWER

10

2,907,971(2)

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

2,907,971(2)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

16.8%(3)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

IN

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CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

Luke Evin

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

OO

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

United States

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY 8

OWNED BY 2,907,971(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 0

WITH SHARED DISPOSITIVE POWER

10

2,907,971(2)

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

2,907,971(2)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

16.8%(3)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

IN

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CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

Steven St. Peter

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

OO

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

United States

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY OWNED BY 8

2,907,971(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9



PERSON 0

WITH SHARED DISPOSITIVE POWER

10

2,907,971(2)

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

2,907,971(2)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

16.8%(3)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

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CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

William Greene

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

OO

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

United States

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY OWNED BY 8

2,907,971(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 0

WITH SHARED DISPOSITIVE POWER

10

2,907,971(2)

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

2,907,971(2)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

16.8%(3)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

IN

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CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

James Paul Scopa

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

OO

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

United States

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY OWNED BY 8

2,907,971(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 0

WITH SHARED DISPOSITIVE POWER

10

2,907,971(2)

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

2,907,971(2)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

16.8%(3)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

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CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

Ashley Dombkowski

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

OO

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

United States

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY 8

OWNED BY 2,907,971(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 0

WITH SHARED DISPOSITIVE POWER

10

2,907,971(2)

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

2,907,971(2)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

16.8%(3)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

IN

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CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

Vaughn M. Kailian

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

OO

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

United States

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY 8

OWNED BY 2,907,971(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9



PERSON 0

WITH SHARED DISPOSITIVE POWER

10

2,907,971(2)

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,907,971(2)

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

o

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

16.8%(3)

14 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IN

- (1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a group for purposes of this Schedule 13D.
- (2) Includes 2,651,400 shares of Common Stock held by BV IV QP, 102,147 shares of Common Stock held by BV IV KG and 75,394 shares of Common Stock held by AM LLC. Also includes (i) 74,072 shares of Common Stock underlying warrants held by BV IV QP, which are exercisable within 60 days of the date of this filing, (ii) 2,852 shares of Common Stock underlying warrants held by BV IV KG, which are exercisable within 60 days of the date of this filing and (iii) 2,106 shares of Common Stock underlying warrants held by AM LLC, which are exercisable within 60 days of the date of this filing. BV IV GP and BV IV LLC are the direct and indirect general partners of BV IV QP and BV IV KG and BV IV LLC is the manager of AM LLC. The Reporting Person is a member of BV IV LLC.
- (3) This percentage is calculated based upon 17,232,876 shares of the Issuer's Common Stock outstanding as of February 2, 2011, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, as set forth in the Issuer's final prospectus dated February 2, 2011, filed with the Securities and Exchange Commission on February 3, 2011.

CUSIP No. 695127 10 0

NAMES OF REPORTING PERSONS

1

John Vander Vort

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2

- (a)
- (b)  (1)

SEC USE ONLY

3

SOURCE OF FUNDS (SEE INSTRUCTIONS)

4

OO

CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

5

CITIZENSHIP OR PLACE OF ORGANIZATION

6

United States

SOLE VOTING POWER

7

NUMBER OF 0

SHARED VOTING POWER

SHARES BENEFICIALLY 8

OWNED BY 2,907,971(2)

SOLE DISPOSITIVE POWER

EACH REPORTING 9

PERSON 0

WITH SHARED DISPOSITIVE POWER

10

2,907,971(2)

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

2,907,971(2)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

16.8%(3)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

IN

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a group for purposes of this Schedule 13D.

(2) Includes 2,651,400 shares of Common Stock held by BV IV QP, 102,147 shares of Common Stock held by BV IV KG and 75,394 shares of Common Stock held by AM LLC. Also includes (i) 74,072 shares of Common Stock underlying warrants held by BV IV QP, which are exercisable within 60 days of the date of this filing, (ii) 2,852 shares of Common Stock underlying warrants held by BV IV KG, which are exercisable within 60 days of the date of this filing and (iii) 2,106 shares of Common Stock underlying warrants held by AM LLC, which are exercisable within 60 days of the date of this filing. BV IV GP and BV IV LLC are the direct and indirect general partners of BV IV QP and BV IV KG and BV IV LLC is the manager of AM LLC. The Reporting Person is a member of BV IV LLC.

(3) This percentage is calculated based upon 17,232,876 shares of the Issuer's Common Stock outstanding as of February 2, 2011, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, as set forth in the Issuer's final prospectus dated February 2, 2011, filed with the Securities and Exchange Commission on February 3, 2011.

**Item 1. Security and Issuer.**

This Schedule 13D (this Schedule 13D ) relates to the common stock, par value \$0.001 per share (the Common Stock ), of Pacira Pharmaceuticals, Inc. (the Issuer ). The Issuer s principal executive office is located at 5 Sylvan Way, Suite, 125, Parsippany, NJ 07054.

**Item 2. Identity and Background**

(a) The entities and persons filing this statement are MPM BioVentures IV-QP, L.P. ( BV IV QP ), MPM BioVentures IV GmbH & Co. Beteiligungs KG ( BV IV KG ), MPM Asset Management Investors BV4 LLC ( AM LLC ), MPM BioVentures IV GP LLC ( BV IV GP ), MPM BioVentures IV LLC ( BV IV LLC ) (collectively, the MPM Entities ) and Ansbert Gadicke, Luke Evnin, Steven St. Peter, William Greene, James Paul Scopa, Ashley Dombkowski, Vaughn Kailian and John Vander Vort (collectively, the Listed Persons and together with the MPM Entities, the Filing Persons ).

(b) The address of the principal place of business for each of the MPM Entities and Ansbert Gadicke, Luke Evnin, Steven St. Peter, Vaughn Kailian and John Vander Vort is The John Hancock Tower, 200 Clarendon Street, 54<sup>th</sup> Floor, Boston, MA 02116 and the address of the principal place of business for William Greene, James Paul Scopa and Ashley Dombkowski is 601 Gateway Blvd., Suite 350, S. San Francisco, CA 94080.

(c) The principal business of each of the Filing Persons is the venture capital investment business.

(d) During the last five years, none of the Filing Persons has been convicted in any criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) During the last five years, none of the Filing Persons has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree, or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Each of the Listed Persons is a United States citizen and each of the MPM Entities is a Delaware limited partnership or limited liability company, except BV IV KG, which was organized in Germany.

In accordance with the provisions of General Instruction C to Schedule 13D, information concerning the managers and each other person controlling the general partners of the MPM Entities required by Item 2 of Schedule 13D is listed on Schedule 1 hereto and is incorporated by reference herein.

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

On February 2, 2011, the Registration Statement on Form S-1 filed with the Securities and Exchange Commission by the Issuer (File No. 333-170245) in connection with its initial public offering of 6,000,000 shares of Common Stock was declared effective. The closing of the offering took place on February 8, 2011, and at such closing the MPM Entities purchased an aggregate of 267,857 shares of Common Stock at the initial public offering price of \$7.00 per share. The source of funds for such purchase was the working capital of the MPM Entities and capital contributions made to the MPM Entities by its partners.

**Item 4. Purpose of Transaction**

The MPM Entities purchased the shares of Common Stock of the Issuer in the initial public offering for investment purposes.

Luke B. Evnin is a member of the Board of Directors of the Issuer and is also a member of BV IV LLC.

Subject to applicable legal requirements, one or more of the Filing Persons may purchase additional securities of the Issuer from time to time in open market or private transactions, depending on their evaluation of the Issuer's business, prospects and financial condition, the market for the Issuer's securities, other developments concerning the Issuer, the reaction of the Issuer to the Filing Persons' ownership of the Issuer's securities, other opportunities available to the Filing Persons, and general economic, money market and stock market conditions. In addition, depending upon the factors referred to above, the Filing Persons may dispose of all or a portion of their securities of the Issuer at any time. Each of the Filing Persons reserves the right to increase or decrease its holdings on such terms and at such times as each may decide.

Other than as described above in this Item 4, none of the Filing Persons have any plan or proposal relating to or that would result in: (a) the acquisition by any person of additional securities of the Issuer or the disposition of securities of the Issuer; (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries; (c) a sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries; (d) any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or terms of directors or to fill any existing vacancies on the board; (e) any material change in the present capitalization or dividend policy of the Issuer; (f) any other material change in the Issuer's business or corporate structure; (g) any changes in the Issuer's charter, by-laws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person; (h) causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association; (i) a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Exchange Act; or (j) any action similar to those enumerated above.

**Item 5. Interest in Securities of the Issuer**

(a) (b) The following information with respect to the ownership of the Common Stock of the Issuer by the Filing Persons is provided as of February 8, 2011:

Reporting Person	Shares Held	Shares Issuable Upon Exercise of Warrants to Purchase Common Stock		Sole Voting Power	Shared Voting Power	Sole Dispositive Power	Shared Dispositive Power	Beneficial Ownership	Percentage of Class (1)
		Directly Held	Indirectly Held						
BV IV QP	2,651,400	74,072		2,725,472	0	2,725,472	0	2,725,472	15.8%
BV IV KG	102,147	2,852		104,999	0	104,999	0	104,999	0.6%
AM LLC	75,394	2,106		77,500	0	77,500	0	77,500	0.5%
BV IV GP(2)	0	0	0	2,830,471	0	2,830,471	2,830,471	2,830,471	16.4%
BV IV LLC(3)	0	0	0	2,907,971	0	2,907,971	2,907,971	2,907,971	16.8%
Ansbert Gadicke(4)	0	0	0	2,907,971	0	2,907,971	2,907,971	2,907,971	16.8%
Luke Evnin(4)	0	0	0	2,907,971	0	2,907,971	2,907,971	2,907,971	16.8%
Steven St. Peter(4)	0	0	0	2,907,971	0	2,907,971	2,907,971	2,907,971	16.8%
William Greene(4)	0	0	0	2,907,971	0	2,907,971	2,907,971	2,907,971	16.8%
James Paul Scopa(4)	0	0	0	2,907,971	0	2,907,971	2,907,971	2,907,971	16.8%
Ashley Dombkowski(4)	0	0	0	2,907,971	0	2,907,971	2,907,971	2,907,971	16.8%
Vaughn Kailian(4)	0	0	0	2,907,971	0	2,907,971	2,907,971	2,907,971	16.8%
John Vander Vort(4)	0	0	0	2,907,971	0	2,907,971	2,907,971	2,907,971	16.8%

(1) This percentage is calculated based upon 17,232,876 shares of the Issuer's Common Stock outstanding as of February 2, 2011, as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Securities Exchange Act, as set forth in the Issuer's final prospectus dated February 2, 2011, filed with the Securities and Exchange Commission on February 3, 2011.

(2) Includes securities held by BV IV QP and BV IV KG. BV IV GP and BV IV LLC are the direct and indirect general partners of BV IV QP and BV IV KG.

(3) Includes securities held by BV IV QP, BV IV KG and AM LLC. BV IV GP and BV IV LLC are the direct and indirect general partners of BV IV QP and BV IV KG and BV IV LLC is the manager of AM LLC.

- (4) Includes securities held by BV IV QP, BV IV KG and AM LLC. The Reporting Person is a member of BV IV LLC.
- (c) The information provided in Item 3 is hereby incorporated by reference. In addition, on February 8, 2011, the MPM Entities acquired an aggregate of 1,487,680 shares of Common Stock of the Issuer upon the automatic conversion of preferred stock of the Issuer and 980,424 shares of Common Stock of the Issuer upon the automatic conversion of convertible promissory notes, in each case in connection with the closing of the Issuer's initial public offering.

Each Filing Person disclaims membership in a group. Each Filing Person also disclaims beneficial ownership of any shares of the Issuer, except for the shares set forth in the table above next to the respective Filing Person's name in subsection (b) of this Item 5.

(d) Inapplicable.

(e) Inapplicable.

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

The MPM Entities and other stockholders of the Issuer have entered into an Investors' Rights Agreement dated March 23, 2007 (the "Investor Rights Agreement") with the Issuer. Subject to the terms of the Investor Rights Agreement, holders of shares having registration rights ("Registrable Securities") can demand that the Issuer file a registration statement or request that their shares be covered by a registration statement that the Issuer is otherwise filing.

**Demand Registration Rights**

If the Issuer shall receive a written request from the Holders (as defined in the Investor Rights Agreement) of at least 30% of the Registrable Securities then outstanding (the "Initiating Holder") that the Issuer file a Form S-1 registration statement under the Securities Act of 1933 (the "Securities Act") with respect to at least 20% of the Registrable Securities then outstanding (or a lesser percent if the anticipated aggregate offering price, net of Selling Expenses, would exceed \$10,000,000), then the Company shall (i) within ten (10) days after the date such request is given, give notice thereof (the "Demand Notice") to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within sixty (60) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders.

If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least twenty percent (20%) of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least \$1,000,000, then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders.

The Issuer shall not be obligated to effect, or to take any action to effect, any demand registration after the Issuer has effected three Form S-1 demand registrations.

The Issuer shall not be obligated to effect, or to take any action to effect, any Form S-3 demand registration if the Company has effected two Form S-3 demand registrations within the twelve months period immediately preceding the date of such request.



**Piggyback Registration Rights**

If the Issuer proposes to register any of its stock in connection with the public offering of such securities by the Issuer or on behalf of selling stockholders, the Issuer shall, at such time, promptly give each Holder written notice of such registration. Upon the written request of each Holder, the Issuer shall, subject to the certain limitations, use its reasonable best efforts to cause to be registered all of the Registrable Securities that each such Holder has requested to be registered.

**Expenses of Registration**

Subject to certain limitations, the Issuer will pay all registration expenses, other than underwriting discounts and commissions, related to any registration effected pursuant to the Investor Rights Agreement.

**Indemnification**

The Investor Rights Agreement contains customary cross-indemnification provisions, pursuant to which the Issuer is obligated to indemnify the selling stockholders in the event of material misstatements or omissions in the registration statement attributable to the Issuer, and the selling stockholders are obligated to indemnify the Issuer for material misstatements or omissions attributable to them.

**Termination**

No Holder shall be entitled to exercise any registration rights after the earlier of:

the closing of a Deemed Liquidation Event (as such term is defined in the Company's Certificate of Incorporation);

when all of such Holder's Registrable Securities could be sold without restriction under SEC Rule 144 during any 90-day period and such Holder owns less than 1% of the then outstanding capital stock of the Company; and

February 8, 2016.

**Lock-up Letter Agreement**

The MPM Entities and Mr. Evnin, along with all of the Issuer's officers, directors, and holders of substantially all of the Issuer's common stock, have agreed with the underwriters for the Issuer's initial public offering, subject to certain exceptions, not to offer, sell, contract to sell, pledge or otherwise dispose of or hedge any of its common stock or securities convertible into or exchangeable for shares of common stock for a 180-day period beginning on February 2, 2011 and ending on August 1, 2011 except with the prior written consent of Barclays Capital Inc. and Piper Jaffray & Co.

The 180-day restricted period under the agreements with the underwriters described above will be automatically extended if: (1) during the last 17 days of the 180-day restricted period the Issuer issues an earnings release or material news or a material event relating to the Issuer occurs; or (2) prior to the expiration of the 180-day restricted period, the Issuer announces that it will release earnings results or becomes aware that material news or a material event relating to the Issuer will occur during the 16-day period beginning on the last day of the 180-day restricted period, in which case the restrictions described in the preceding paragraph will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

The foregoing description of the terms of the Investor Rights Agreement and the Lock-up Agreement is intended as a summary only and is qualified in its entirety by reference to the Investor Rights Agreement and Form of Letter Lock-up Agreement, which are filed as exhibits to this Schedule 13D and incorporated by reference herein.

Other than as described in this Schedule 13D, to the best of the Filing Persons' knowledge, there are no other contracts, arrangements, understandings or relationships (legal or otherwise) among the persons named in Item 2 and between such persons and any person with respect to any securities of the Issuer.

**Item 7. Material to Be Filed as Exhibits**

- A. Investor Rights Agreement by and among the Issuer and each of the persons and entities listed on Schedule A thereto, dated as of March 23, 2007 (incorporated by reference to Exhibit 10.3 to the Issuer's Registration Statement on Form S-1 (SEC File No. 333-170245), filed with the SEC on November 1, 2010).
- B. Form of Lock-up Letter Agreement
- C. Agreement regarding filing of joint Schedule 13D.

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.

Date: February 17, 2011

**MPM BioVentures IV GP LLC**

By: MPM BioVentures IV LLC,  
its Managing Member

By: /s/ Vaughn M. Kailian  
Name: Vaughn M. Kailian  
Title: Member

**MPM BioVentures IV LLC**

By: /s/ Vaughn M. Kailian  
Name: Vaughn M. Kailian  
Title: Member

**MPM BioVentures IV-QP, L.P.**

By: MPM BioVentures IV GP LLC, its General  
Partner

By: MPM BioVentures IV LLC, its Managing  
Member

By: /s/ Vaughn M. Kailian  
Name: Vaughn M. Kailian  
Title: Member

**MPM BioVentures IV GmbH & Co. Beteiligungs  
KG**

By: MPM BioVentures IV GP LLC, in its capacity  
as  
the Managing Limited Partner

By: MPM BioVentures IV LLC, its Managing  
Member

By: /s/ Vaughn M. Kailian  
Name: Vaughn M. Kailian  
Title: Member

**MPM Asset Management Investors BV4 LLC**

By: MPM BioVentures IV LLC  
Its: Manager

By: /s/ Vaughn M. Kailian  
Name: Vaughn M. Kailian  
Title: Member

By: /s/ Ansbert Gadicke  
Name: Ansbert Gadicke

By: /s/ Luke Evinin  
Name: Luke Evinin

By: /s/ Steven St. Peter  
Name: Steven St. Peter

By: /s/ William Greene  
Name: William Greene

By: /s/ James Paul Scopa  
Name: James Paul Scopa

By: /s/ Ashley Dombkowski  
Name: Ashley Dombkowski

By: /s/ Vaughn M. Kailian  
Name: Vaughn M. Kailian

By: /s/ John Vander Vort  
Name: John Vander Vort

**Schedule I**  
**General Partners/Members**

Ansbert Gadicke

c/o MPM Asset Management  
The John Hancock Tower  
200 Clarendon Street, 54<sup>th</sup> Floor  
Boston, MA 02116

Principal Occupation: Member of the managing member of the general partner of MPM BioVentures IV-QP, L.P., member of the managing member of the managing limited partner of MPM BioVentures IV GmbH & Co. Beteiligungs KG and member of the manager of MPM Asset Management Investors BV4 LLC.

Citizenship: USA

Luke Evin

c/o MPM Asset Management  
The John Hancock Tower  
200 Clarendon Street, 54<sup>th</sup> Floor  
Boston, MA 02116

Principal Occupation: Member of the managing member of the general partner of MPM BioVentures IV-QP, L.P., member of the managing member of the managing limited partner of MPM BioVentures IV GmbH & Co. Beteiligungs KG and member of the manager of MPM Asset Management Investors BV4 LLC.

Citizenship: USA

Steven St. Peter

c/o MPM Asset Management  
The John Hancock Tower  
200 Clarendon Street, 54<sup>th</sup> Floor  
Boston, MA 02116

Principal Occupation: Member of the managing member of the general partner of MPM BioVentures IV-QP, L.P., member of the managing member of the managing limited partner of MPM BioVentures IV GmbH & Co. Beteiligungs KG and member of the manager of MPM Asset Management Investors BV4 LLC.

Citizenship: USA

William Greene

c/o MPM Asset Management  
601 Gateway Blvd. Suite 350  
S. San Francisco, CA 94080

Principal Occupation: Member of the managing member of the general partner of MPM BioVentures IV-QP, L.P., member of the managing member of the managing limited partner of MPM BioVentures IV GmbH & Co. Beteiligungs KG and member of the manager of MPM Asset Management Investors BV4 LLC.

Citizenship: USA

James Paul Scopa

c/o MPM Asset Management

601 Gateway Blvd. Suite 350

S. San Francisco, CA 94080

Principal Occupation: Member of the managing member of the general partner of MPM BioVentures IV-QP, L.P., member of the managing member of the managing limited partner of MPM BioVentures IV GmbH & Co. Beteiligungs KG and member of the manager of MPM Asset Management Investors BV4 LLC.

Citizenship: USA

Ashley Dombkowski

c/o MPM Asset Management

601 Gateway Blvd. Suite 350

S. San Francisco, CA 94080

Principal Occupation: Member of the managing member of the general partner of MPM BioVentures IV-QP, L.P., member of the managing member of the managing limited partner of MPM BioVentures IV GmbH & Co. Beteiligungs KG and member of the manager of MPM Asset Management Investors BV4 LLC.

Citizenship: USA

Vaughn M. Kailian

c/o MPM Asset Management

The John Hancock Tower

200 Clarendon Street, 54<sup>th</sup> Floor

Boston, MA 02116

Principal Occupation: Member of the managing member of the general partner of MPM BioVentures IV-QP, L.P., member of the managing member of the managing limited partner of MPM BioVentures IV GmbH & Co. Beteiligungs KG and member of the manager of MPM Asset Management Investors BV4 LLC.

Citizenship: USA

John Vander Vort

c/o MPM Asset Management

The John Hancock Tower

200 Clarendon Street, 54<sup>th</sup> Floor

Boston, MA 02116

Principal Occupation: Member of the managing member of the general partner of MPM BioVentures IV-QP, L.P., member of the managing member of the managing limited partner of MPM BioVentures IV GmbH & Co. Beteiligungs KG and member of the manager of MPM Asset Management Investors BV4 LLC.

Citizenship: USA

**Exhibit Index**

- A. Investor Rights Agreement by and among the Issuer and each of the persons and entities listed on Schedule A thereto, dated as of March 23, 2007 (incorporated by reference to Exhibit 10.3 to the Issuer's Registration Statement on Form S-1 (SEC File No. 333-170245), filed with the SEC on November 1, 2010).
- B. Form of Lock-up Letter Agreement
- C. Agreement regarding filing of joint Schedule 13D.