

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934
(Amendment No. 4)*

SYNTA PHARMACEUTICALS CORP.

(Name of Issuer)

Common Stock, par value \$0.0001 per share

(Title of Class of Securities)

87162T 20 6

(CUSIP Number)

December 31, 2011

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- ☐ Rule 13d-1(b)
☐ Rule 13d-1(c)
☒ Rule 13d-1(d)

*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 the disclosures provided in a prior cover page.

The information required in 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).

1.	Names of Reporting Persons Lan Bo Chen	
2.	Check the Appropriate Box if a Member of a Group (See Instructions)	
	(a)	<input type="checkbox"/>
	(b)	<input type="checkbox"/>
3.	SEC Use Only	
4.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	5.	Sole Voting Power 0
	6.	Shared Voting Power 3,364,552
	7.	Sole Dispositive Power 0
	8.	Shared Dispositive Power 3,364,552
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 3,364,552	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
11.	Percent of Class Represented by Amount in Row (9) 6.8% (based on 49,539,808 shares outstanding on December 31, 2011).	
12.	Type of Reporting Person (See Instructions) IN	

1.	Names of Reporting Persons Lin-Huey Chen	
2.	Check the Appropriate Box if a Member of a Group (See Instructions)	
	(a)	<input type="checkbox"/>
	(b)	<input type="checkbox"/>
3.	SEC Use Only	
4.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	5.	Sole Voting Power 0
	6.	Shared Voting Power 3,364,552
	7.	Sole Dispositive Power 0
	8.	Shared Dispositive Power 3,364,552
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 3,364,552	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
11.	Percent of Class Represented by Amount in Row (9) 6.8% (based on 49,539,808 shares outstanding on December 31, 2011).	
12.	Type of Reporting Person (See Instructions) IN	

Item 1.

- (a) Name of Issuer
Synta Pharmaceuticals Corp.
-
- (b) Address of Issuer's Principal Executive Offices
45 Hartwell Avenue
Lexington, MA 02421
-

Item 2.

- (a) Name of Person Filing
(i) Lan Bo Chen

(ii) Lin-Huey Chen
-
- (b) Address of Principal Business Office or, if none, Residence
(i) 184 East Emerson Road
Lexington, MA 02420

(ii) 184 East Emerson Road
Lexington, MA 02420
-
- (c) Citizenship
(i) United States

(ii) United States
-
- (d) Title of Class of Securities
Common Stock, par value \$0.0001 per share
-
- (e) CUSIP Number
87162T 20 6
-

Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a) ☐ Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b) ☐ Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c) ☐ Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d) ☐ Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e) ☐ An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f) ☐ An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g) ☐ A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G);
- (h) ☐ A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) ☐ A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j) ☐ A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J);
- (k) ☐ Group, in accordance with § 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution:

Item 4. Ownership

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(i) Lan Bo Chen

(a) Amount beneficially owned:

3,364,552 shares. Consists of 666,262 shares of common stock owned of record by Dr. Lan Bo Chen; 142,223 shares of common stock owned of record by LAJ Holdings LLC, the manager of which is Dr. Chen's spouse, Lin-Huey Chen, and of which Dr. Chen disclaims beneficial ownership except to the extent of any pecuniary interest therein; 952,606 shares of common stock owned of record by the Wisteria Trust, the trustee of which is Dr. Chen's spouse, and of which Dr. Chen disclaims beneficial ownership except to the extent of any pecuniary interest therein; 249,831 shares of common stock owned of record by the Ann Chen Trust, a co-trustee of which is Dr. Chen's spouse, and of which Dr. Chen disclaims beneficial ownership except to the extent of any pecuniary interest therein; 249,831 shares of common stock owned of record by the Jane Chen Trust, a co-trustee of which is Dr. Chen's spouse, and of which Dr. Chen disclaims beneficial ownership except to the extent of any pecuniary interest therein; 12,946 shares of common stock owned of record by the Chen Grandchildren's Trust, a co-trustee of which is Dr. Chen's spouse, and of which Dr. Chen disclaims beneficial ownership except to the extent of any pecuniary interest therein; 31,860 shares of common stock owned of record by the Alexander Chen Wu 2002 Irrevocable Trust, a co-trustee of which is Dr. Chen's spouse, and of which Dr. Chen disclaims beneficial ownership except to the extent of any pecuniary interest therein; 27,710 shares of common stock owned of record by the Allison Chen Wu 2004 Irrevocable Trust, a co-trustee of which is Dr. Chen's spouse, and of which Dr. Chen disclaims beneficial ownership except to the extent of any pecuniary interest therein; 113,773 shares of common stock owned of record by the Lan Bo Chen 2009 GRAT, of which Dr. Chen is the trustee; 711,088 shares of common stock owned of record by the Lin-Huey Chen 2009 GRAT, of which Dr. Chen's spouse is the trustee; and 206,422 shares of common stock owned of record by the Lin-Huey Chen 2010 GRAT, of which Dr. Chen's spouse is the trustee.

(b) Percent of class:

6.8% (based on 49,539,808 shares outstanding on December 31, 2011).

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote

0

(ii) Shared power to vote or to direct the vote

3,364,552

(iii) Sole power to dispose or to direct the disposition of

0

(iv) Shared power to dispose or to direct the disposition of

3,364,552

(ii) Lin-Huey Chen

(a) Amount beneficially owned:

3,364,552 shares. Consists of 666,262 shares of common stock owned of record by Mrs. Chen's spouse, Dr. Lan Bo Chen; 142,223 shares of common stock owned of record by LAJ Holdings LLC, of which Mrs. Chen is the manager, and of which Mrs. Chen disclaims beneficial ownership except to the extent of any pecuniary interest therein; 952,606 shares of common stock owned of record by the Wisteria Trust, of which Mrs. Chen is the trustee; 249,831 shares of common stock owned of record by the Ann Chen Trust, of which Mrs. Chen is a co-trustee; 249,831 shares of common stock owned of record by the Jane Chen Trust, of which Mrs. Chen is a co-trustee; 12,946 shares of common stock owned of record by the Chen Grandchildren's Trust, of which Mrs. Chen is a co-trustee; 31,860 shares of common stock owned of record by the Alexander Chen Wu 2002 Irrevocable Trust, of which Mrs. Chen is a co-trustee; 27,710 shares of common stock owned of record by the Allison Chen Wu 2004 Irrevocable Trust, of which Mrs. Chen is a co-trustee; 113,773 shares of common stock owned of record by the Lan Bo Chen 2009 GRAT, of which Mrs. Chen's spouse is the trustee; 711,088 shares of common stock owned of record by the Lin-Huey Chen 2009 GRAT, of which Mrs. Chen is the trustee; and 206,422 shares of common stock owned of record by the Lin-Huey Chen 2010 GRAT, of which Mrs. Chen is the trustee.

(b) Percent of class:

6.8% (based on 49,539,808 shares outstanding on December 31, 2011).

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote

0

(ii) Shared power to vote or to direct the vote

3,364,552

(iii) Sole power to dispose or to direct the disposition of
0

(iv) Shared power to dispose or to direct the disposition of
3,364,552

Item 5. Ownership of Five Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following ☐.

Not Applicable

Item 6. Ownership of More than Five Percent on Behalf of Another Person

Not Applicable

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person

Not Applicable

Item 8. Identification and Classification of Members of the Group

Not Applicable

Item 9. Notice of Dissolution of Group

Not Applicable

Item 10. Certification

Not Applicable

Signature

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

Date: February 14, 2012

/s/ Lan Bo Chen

Lan Bo Chen

Date: February 14, 2012

/s/ Lin-Huey Chen

Lin-Huey Chen