

FORM 5

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL

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Check this box if no longer subject  
to Section 16. Form 4 or Form 5  
obligations may continue. See  
Instruction 1(b).

ANNUAL STATEMENT OF CHANGES IN BENEFICIAL  
OWNERSHIP

Form 3 Holdings Reported.

Form 4 Transactions Reported.

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934  
or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person*	2. Issuer Name and Ticker or Trading Symbol	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)
<u>Chen Lan Bo</u>	<u>SYNTA PHARMACEUTICALS CORP [</u> <u>SNTA ]</u>	<input checked="" type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner
(Last) (First) (Middle)	3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year)	Officer (give title below) Other (specify below)
<u>184 EAST EMERSON ROAD</u>	<u>12/31/2008</u>	
(Street)	4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line)
<u>LEXINGTON MA 02420</u>		<input checked="" type="checkbox"/> Form filed by One Reporting Person
(City) (State) (Zip)		Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned at end of Issuer's Fiscal Year (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
				Amount	(A) or (D)	Price			
Common Stock	09/11/2008		G	17,500	D	\$0	600,035 <sup>(1)</sup>	D	
Common Stock	09/11/2008		G	2,500	A	\$0	12,710	I	By Alexander Chen Wu 2002 Irrevocable Trust <sup>(2)</sup>
Common Stock	09/11/2008		G	2,500	A	\$0	8,560	I	By Allison Chen Wu 2004 Irrevocable Trust <sup>(2)</sup>
Common Stock							1,684,016 <sup>(3)</sup>	I	By Wisteria Trust <sup>(2)</sup>
Common Stock							243,481	I	By Ann Chen Trust <sup>(2)</sup>
Common Stock							243,481	I	By Jane Chen Trust <sup>(2)</sup>
Common Stock							12,946	I	By Chen Grandchildren's Trust <sup>(2)</sup>
Common Stock							142,223	I	By LAJ Holdings LLC <sup>(2)</sup>
Common Stock							160,000	I	By Lan Bo Chen 2008 GRAT
Common Stock							320,000	I	By Lin-Huey Chen 2008 GRAT

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned  
(e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
					(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				

**Explanation of Responses:**

1. Excludes 160,000 shares previously owned directly by the Reporting Person which were contributed to the Lan Bo Chen 2008 GRAT on September 11, 2008.
2. The Reporting Person disclaims beneficial ownership of these securities except to the extent of his pecuniary interest therein, if any, and the inclusion of these shares in this report shall not be deemed an admission of the beneficial ownership of all of the reported shares for purposes of Section 16 or for any other purpose.
3. Excludes 320,000 shares previously owned directly by the Wisteria Trust and reported as indirectly owned by the Reporting Person which were contributed to the Lin-Huey Chen 2008 GRAT on September 11, 2008.

/s/ Ann Margaret Eames,  
Attorney-in-Fact

02/13/2009

\*\* Signature of Reporting Person      Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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