

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

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

<b>1. Name and Address of Reporting Person *</b> Gollust Keith R  (Last) (First) (Middle) C/O SYNTA PHARMACEUTICALS CORP., 45 HARTWELL AVENUE  (Street) LEXINGTON MA 02421  (City) (State) (Zip)	<b>2. Issuer Name and Ticker or Trading Symbol</b> SYNTA PHARMACEUTICALS CORP [SNTA]	<b>5. Relationship of Reporting Person(s) to Issuer</b> (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner  Officer (give title below) Other (specify below)
	<b>3. Date of Earliest Transaction</b> (Month/Day/Year) 07/01/2012	
<b>4. If Amendment, Date of Original Filed</b> (Month/Day/Year)		

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 Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	07/01/2012		A		7,312 <sup>(1)</sup>	A	\$ 0 <sup>(1)</sup>	194,693	D	
Common Stock	07/01/2012		A		3,656 <sup>(2)</sup>	A	\$ 0 <sup>(2)</sup>	198,349	D	
Common Stock	07/01/2012		A		1,828 <sup>(3)</sup>	A	\$ 0 <sup>(3)</sup>	200,177	D	
Common Stock	07/01/2012		A		914 <sup>(4)</sup>	A	\$ 0 <sup>(4)</sup>	201,091	D	
Common Stock	07/01/2012		A		914 <sup>(5)</sup>	A	\$ 0 <sup>(5)</sup>	202,005	D	
Common Stock								1,827,967	I	By Wyandanch Partners, L.P. <sup>(6)</sup>

**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 Underlying Securities (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 of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Director Stock Option (Right to Buy)	\$ 5.47	07/01/2012		A		10,000		(7)	07/01/2022	Common Stock	10,000	\$ 0	10,000	D	
Director Stock Option (Right to Buy)	\$ 5.47	07/01/2012		A		4,500		(8)	07/01/2022	Common Stock	4,500	\$ 0	4,500	D	

**Explanation of Responses:**

1. Represents a restricted stock grant subject to the Issuer's lapsing forfeiture right, which lapses as to 25% of the shares on each of September 30, 2012, December 31, 2012, March 31, 2013 and June 30, 2013, provided the Reporting Person continues to serve as a director of the Issuer on such date.
2. Represents a restricted stock grant subject to the Issuer's lapsing forfeiture right, which lapses as to 25% of the shares on each of September 30, 2012, December 31, 2012, March 31, 2013 and June 30, 2013, provided the Reporting Person continues to serve as Chairman of the Board of Directors of the Issuer on such date.
3. Represents a restricted stock grant subject to the Issuer's lapsing forfeiture right, which lapses as to 25% of the shares on each of September 30, 2012, December 31, 2012, March 31, 2013 and June 30, 2013, provided the Reporting Person continues to serve as Chairman of the Nominating and Governance Committee of the Board of Directors of the Issuer on such date.
4. Represents a restricted stock grant subject to the Issuer's lapsing forfeiture right, which lapses as to 25% of the shares on each of September 30, 2012, December 31, 2012, March 31, 2013 and June 30, 2013, provided the Reporting Person continues to serve as a member of the Audit Committee of the Board of Directors of the Issuer on such date.
5. Represents a restricted stock grant subject to the Issuer's lapsing forfeiture right, which lapses as to 25% of the shares on each of September 30, 2012, December 31, 2012, March 31, 2013 and June 30, 2013, provided the Reporting Person continues to serve as a member of the Compensation Committee of the Board of Directors of the Issuer on such date.
6. 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.
7. The option vests as to 25% of the shares on each of September 30, 2012, December 31, 2012, March 31, 2013 and June 30, 2013, provided the Reporting Person continues to serve as a director of the Issuer on such date.
8. The option vests as to 25% of the shares on each of September 30, 2012, December 31, 2012, March 31, 2013 and June 30, 2013, provided the Reporting Person continues to serve as Chairman of the Board of Directors of the Issuer on such date.

/s/ Ann Margaret Eames,      07/03/2012  
Attorney-in-Fact

\*\* Signature of Reporting      Date  
Person

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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