

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 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <b>BARBARI SHARON SURREY</b>			2. Issuer Name and Ticker or Trading Symbol <b>CYTOKINETICS INC [ CYTK ]</b>			5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <b>EVP, Finance &amp; CFO</b>		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) <b>02/24/2010</b>					
280 EAST GRAND AVENUE			4. If Amendment, Date of Original Filed (Month/Day/Year)			6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person		
(Street) <b>SOUTH SAN FRANCISCO CA 94080</b>								
(City)	(State)	(Zip)						

**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								14,127	D	

**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)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date					
Incentive Stock Option (right to buy)	\$3.08	02/24/2010		A		38,581		03/24/2010 <sup>(1)</sup>	02/24/2020	Common Stock	\$0	38,581	D	
Non-Qualified Stock Option (right to buy)	\$3.08	02/24/2010		A		96,419		03/24/2010 <sup>(1)</sup>	02/24/2020	Common Stock	\$0	96,419	D	
Incentive Stock Option (right to buy)	\$1.85							03/26/2009 <sup>(2)</sup>	02/26/2019	Common Stock		43,752	D	
Incentive Stock Option (right to buy)	\$3.37							03/29/2008 <sup>(3)</sup>	02/28/2018	Common Stock		27,305	D	
Incentive Stock Option (right to buy)	\$6.59							04/11/2005 <sup>(4)</sup>	04/11/2015	Common Stock		1,031	D	
Incentive Stock Option (right to buy)	\$6.81							04/01/2007 <sup>(5)</sup>	03/14/2017	Common Stock		14,497	D	

**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)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Incentive Stock Option (right to buy)	\$7.15							03/01/2006 <sup>(6)</sup>	03/01/2016	Common Stock	16,785		16,785	D	
Incentive Stock Option (right to buy)	\$9.95							09/07/2005 <sup>(7)</sup>	09/15/2014	Common Stock	40,200		40,200	D	
Non-Qualified Stock Option (right to buy)	\$1.85							03/26/2009 <sup>(2)</sup>	02/26/2019	Common Stock	106,248		106,248	D	
Non-Qualified Stock Option (right to buy)	\$3.37							03/29/2008 <sup>(3)</sup>	02/28/2018	Common Stock	95,695		95,695	D	
Non-Qualified Stock Option (right to buy)	\$6.59							04/11/2005 <sup>(4)</sup>	04/11/2015	Common Stock	15,469		15,469	D	
Non-Qualified Stock Option (right to buy)	\$6.81							04/01/2007 <sup>(5)</sup>	03/14/2017	Common Stock	45,503		45,503	D	
Non-Qualified Stock Option (right to buy)	\$7.15							03/01/2006 <sup>(6)</sup>	03/01/2016	Common Stock	43,215		43,215	D	
Non-Qualified Stock Option (right to buy)	\$9.95							09/07/2005 <sup>(7)</sup>	09/15/2014	Common Stock	69,800		69,800	D	

**Explanation of Responses:**

- When the ISO and NQ dated 02/24/2010 are combined for a total grant of 135,000 shares, the option shall vest and become exercisable as to 2,812 shares on 03/24/2010 and the balance of 132,188 divided into equal monthly installments thereafter such that the option shall be 100% vested on 02/24/2014.
- When the ISO and NQ dated 02/26/2009 are combined for a total grant of 150,000 shares, the option shall vest and become exercisable as to 3,125 shares on 03/26/09 and the balance of 146,875 divided into equal monthly installments thereafter such that the option shall be 100% vested on 02/26/13.
- When the ISO and NQ dated 02/29/2008 are combined for a total grant of 125,000 shares, the option shall vest and become exercisable as to 2,604 shares on 03/29/08 and the balance of 122,396 divided into equal monthly installments thereafter such that the option shall be 100% vested on 02/29/12.
- When the ISO and NQ dated 04/11/05 are combined for a total grant of 16,500 shares, the option shall vest and become exercisable as to 16,500 shares divided into equal monthly installments such that the option shall be 100% vested on 03/01/2009.
- When the ISO and NQ dated 03/14/2007 are combined for a total grant of 60,000 shares, the option shall vest and become exercisable as to 1,250 shares on 04/01/07 and the balance of 58,750 divided into equal monthly installments thereafter such that the option shall be 100% vested on 03/01/11.
- When the ISO and NQ dated 03/01/2006 are combined for a total grant of 60,000 shares, the option shall vest and become exercisable as to 60,000 shares divided into equal monthly installments such that the option shall be 100% vested on 03/01/2010.
- When the ISO and NQ dated 09/15/04 are combined for a total grant of 110,000 shares, the option shall vest and become exercisable as to 27,500 shares on 09/07/05 and the balance of 82,500 divided into equal monthly installments thereafter such that the option shall be 100% vested on 09/07/08.

Sharon Barbari

02/26/2010

\*\* 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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