FORM 4

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).

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

Name and Address of Reporting Person* Plum Pobort I									cker or Trad				5. Relationship of Reporting Person(s) to Issuer (Check all applicable)					
Blum Robert I						CYTOKINETICS INC [CYTK]								X Director 10% Owner				wner
(Last)	(Fi	rst) ((Middle)			3. Date of Earliest Transaction (Month/Day/Year) 01/05/2010									Officer (give title below)			specify
	ST GRAND	, ,											below) below) President & CEO					
	4. If A	4. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable											pplicable					
(Street)				,				Line	e)			•	.					
SOUTH SAN FRANCISCO CA 94080													X Form filed by One Reporting Person Form filed by More than One Reporting					
					-									Persor	-	ie iliai	TOTIE REPO	Jilling
(City)	(St	tate) ((Zip)															
		Tab	le I - N	lon-Deri	vative \$	Sec	uriti	es Ac	quired, [Disp	osed of	f, or Be	neficial	ly Owned				
				2. Transa			Deen		3. 4. Securities Acquired							6. Ownership	wnership	7. Nature
		Date (Month/D	ay/Year)		Execution Date, if any		Transact Code (In									of Indirect Beneficial		
						(Mo	(Month/Day/Year)		r) 8)			_		- Followi	Owned Ind			Ownership (Instr. 4)
								Code	v	Amount	(A) o	Price	Transac					
Common Stock				01/05/	01/05/2010				M ⁽¹⁾		500	A	\$1.2	18	8,916		D	
Common	mmon Stock mmon Stock mmon Stock Tabl		01/05/	2010				S ⁽²⁾		500	D	\$3.1	1 18	,416		D		
Common	Stock													12	,500			by Trust
Common Stock											12	12,500			by Trust 2 ⁽⁴⁾			
			Tabl						quired, Di					wned				
	-	1				call	ls, wa		s, options					1	I	_		T
Security or Exercise (Month/Day/Year) if any			emed on Date, /Day/Year)		nsaction de (Instr.		nber	6. Date Exercisable and Expiration Date (Month/Day/Year)			7. Title and Amount of Securities Underlying Derivative Secu (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.	Beneficial Ownership	
							(A) c	or posed D) tr. 3,				(msu. 3 a	iiu 4)		Reported Transacti	Ī	4)	
						Г	(A) of (E) (Inst	or posed D) tr. 3,				(msu. 3 a	Amount		Reported Transacti	Ī	4)	
							(A) of (E) (Inst	or posed D) tr. 3, d 5)	Date	E		(msu. 3 a	,		Reported Transacti	Ī	4)	
					Code	v	(A) of (E) (Inst	or posed D) tr. 3, d 5)	Date Exercisable		xpiration	Title	Amount or Number		Reported Transacti	Ī	4)	
Incentive Stock Option (right to buy)		01/05/2010			Code	v	(A) of Disp of (I (Inst 4 an	or posed (b) (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d		D	xpiration		Amount or Number of	\$0	Reported Transacti	ion(s)	D	
Stock Option (right to buy)	Security	01/05/2010				v	(A) of Disp of (I (Inst 4 an	or posed (b) (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	Exercisable	D	xpiration ate	Title Common	Amount or Number of Shares	\$0	Reported Transacti (Instr. 4)	ion(s)		
Stock Option (right to buy)	Security	01/05/2010				v	(A) of Disp of (I (Inst 4 an	or oosed (b) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	Exercisable	5) 0:	xpiration ate	Title Common	Amount or Number of Shares	\$0	Reported Transacti (Instr. 4)	ion(s)		
Stock Option (right to buy) Incentive Stock Option (right to buy) Incentive	\$1.2	01/05/2010				v	(A) of Disp of (I (Inst 4 an	or oosed (b) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	05/21/2003 ⁽³	5) 0:	xpiration ate	Title Common Stock	Amount or Number of Shares	\$0	Reported Transacti (Instr. 4)	ion(s)	D	
Stock Option (right to buy) Incentive Stock Option (right to buy)	\$1.2	01/05/2010				v	(A) of Disp of (I (Inst 4 an	(D)	05/21/2003 ⁽³	D. 03	xpiration ate	Title Common Stock	Amount or Number of Shares	\$0	Reported Transacti (Instr. 4)	on(s)	D	
Stock Option (right to buy) Incentive Stock Option (right to buy) Inentive Stock Option (right to buy) Incentive Incentive Incentive	\$1.2 \$0.58	01/05/2010				v	(A) of Disp of (I (Inst 4 an	(D)	05/21/2003 ⁽³⁾ 01/14/2000 ⁽⁴⁾	D. 03	xpiration ate 5/21/2013	Title Common Stock Common Stock	Amount or Number of Shares	\$0	Reported Transacti (Instr. 4)	on(s)	D D	
Stock Option (right to buy) Incentive Stock Option (right to buy) Incentive Stock Option (right to buy)	\$1.2 \$0.58	01/05/2010				v	(A) of Disp of (I (Inst 4 an	(D)	05/21/2003 ⁽³⁾ 01/14/2000 ⁽⁴⁾	DE DE DE DE DE DE DE DE	xpiration ate 5/21/2013	Title Common Stock Common Stock	Amount or Number of Shares	\$0	Reported Transacti (Instr. 4)	ion(s)	D 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	rcise (Month/Day/Year) of tive	3A. Deemed Execution Date,	4. Transaction Code (Instr.		5. Number		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)	Beneficial Ownership
				Code	v	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Incentive Stock Option (right to buy)	\$2							12/18/2003 ⁽⁹⁾	12/18/2013	Common Stock	27,500		27,500	D	
Incentive Stock Option (right to buy)	\$3.37							03/29/2008 ⁽¹⁰⁾	02/28/2018	Common Stock	8,334		8,334	D	
Incentive Stock Option (right to buy)	\$6.59							04/11/2005 ⁽¹¹⁾	04/11/2015	Common Stock	45,000		45,000	D	
Incentive Stock Option (right to buy)	\$6.81							04/01/2007 ⁽¹²⁾	03/14/2017	Common Stock	22,806		22,806	D	
Incentive Stock Option (right to buy)	\$7.15							03/01/2006 ⁽¹³⁾	03/01/2016	Common Stock	28,494		28,494	D	
Non- Qualified Stock Option (right to buy)	\$1.2							07/10/2002 ⁽⁷⁾	07/10/2012	Common Stock	12,264		12,264	D	
Non- Qualified Stock Option (right to buy)	\$1.85							03/26/2009 ⁽⁸⁾	02/26/2019	Common Stock	224,667		224,667	D	
Non- Qualified Stock Option (right to buy)	\$2							12/18/2003 ⁽⁹⁾	12/18/2013	Common Stock	48,692		48,692	D	
Non- Qualified Stock Option (right to buy)	\$3.37							03/29/2008 ⁽¹⁰⁾	02/28/2018	Common Stock	191,666		191,666	D	
Non- Qualified Stock Option (right to buy)	\$6.81							04/01/2007 ⁽¹²⁾	03/14/2017	Common Stock	227,194		227,194	D	
Non- Qualified Stock Option (right to buy)	\$7.15							03/01/2006 ⁽¹³⁾	03/01/2016	Common Stock	71,506		71,506	D	

${\bf Explanation\ of\ Responses:}$

- $1. \ The exercise \ reported \ in \ this \ Form \ 4 \ was \ effected \ pursuant \ to \ a \ Rule \ 10b5-1 \ trading \ plan \ adopted \ by \ the \ reporting \ person \ on \ February \ 13, \ 2009.$
- 2. The sales reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on February 13, 2009.
- 3. Shares held by The Bridget Blum 2003 Irrevocable Trust.
- 4. Shares held by The Brittany Blum 2003 Irrevocable Trust.

- 5. This option is immediately exercisable upon grant and shall vest as to 781 shares on 04/01/03 and the balance of 36,719 divided into equal monthly installments thereafter such that the option shall be 100% vested on 03/01/07.
- 6. This option is immediately exercisable upon grant and shall vest as to 25,000 shares on 11/14/00 and the balance of 87,500 divided into equal monthly installments thereafter such that the option shall be 100% vested on 11/14/05.
- 7. When the ISO and NQ dated 07/10/02 are combined for a total grant of 150,000 shares, the option is immediately exercisable upon grant and shall vest as to 2,500 shares on 04/15/02 and the balance of 147,500 divided into equal monthly installments thereafter such that the option shall be 100% vested on 03/15/07.
- 8. When the ISO and NQ dated 02/26/2009 are combined for a total grant of 275,000 shares, the option shall vest and become exercisable as to 5,729 shares on 03/26/09 and the balance of 269,271 divided into equal monthly installments thereafter such that the option shall be 100% vested on 02/26/13.
- 9. When the ISO and NQ dated 12/18/03 are combined for a total grant of 141,925 shares, the option is immediately exercisable upon grant and shall vest as to 2,365 shares on 01/18/04 and the balance of 139,560 divided into equal monthly installments thereafter such that the option shall be 100% vested on 12/18/08.
- 10. When the ISO and NQ dated 02/29/2008 are combined for a total grant of 200,000 shares, the option shall vest and become exercisable as to 4,166 shares on 03/29/08 and the balance of 195,834 divided into equal monthly installments thereafter such that the option shall be 100% vested on 02/29/12.
- 11. This option shall vest and become exercisable as to 45,000 shares divided into equal monthly installments such that the option shall be 100% vested on 03/01/2009.
- 12. When the ISO and NQ dated 03/14/2007 are combined for a total grant of 250,000 shares, the option shall vest and become exercisable as to 5,208 shares on 04/01/07 and the balance of 244,792 divided into equal monthly installments thereafter such that the option shall be 100% vested on 03/01/11.
- 13. When the ISO and NQ dated 03/01/2006 are combined for a total grant of 100,000 shares, the option shall vest and become exercisable as to 100,000 shares divided into equal monthly installments such that the option shall be 100% vested on 03/01/2010.

<u>Robert I. Blum</u> <u>01/06/2010</u>

** 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.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.