

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

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* Blum Robert I _____ (Last) (First) (Middle) 280 EAST GRAND AVENUE _____ (Street) SOUTH SAN FRANCISCO CA 94080 _____ (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol CYTOKINETICS INC [CYTK] | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) President & CEO |
| | 3. Date of Earliest Transaction (Month/Day/Year) 07/31/2008 | |
| 4. If Amendment, Date of Original Filed (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 | 07/31/2008 | | M ⁽¹⁾ | | 13,302 | A | \$2 | 44,522 | D | |
| Common Stock | 07/31/2008 | | S ⁽²⁾ | | 13,302 | D | \$5 | 31,220 | D | |
| Common Stock | 07/31/2008 | | S ⁽²⁾ | | 7,349 | D | \$5 | 23,871 | D | |
| Common Stock | | | | | | | | 12,500 | I | by Trust 1 ⁽³⁾ |
| Common Stock | | | | | | | | 12,500 | I | by Trust 2 ⁽⁴⁾ |

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 | | Date Exercisable | Expiration Date | | | | | | Title |
| Non-Qualified Stock Option (right to buy) | \$2 | 07/31/2008 | | M | | 13,302 | 12/18/2003 ⁽⁵⁾ | 12/18/2013 | Common Stock | 13,302 | \$0 | 48,692 | D | |
| Incentive Stock Option (right to buy) | \$0.58 | | | | | | 01/14/2000 ⁽⁶⁾ | 11/14/2010 | Common Stock | 5,512 | | 5,512 | D | |
| Incentive Stock Option (right to buy) | \$1.2 | | | | | | 07/10/2002 ⁽⁷⁾ | 07/10/2012 | Common Stock | 83,333 | | 83,333 | D | |
| Incentive Stock Option (right to buy) | \$1.2 | | | | | | 05/21/2003 ⁽⁸⁾ | 05/21/2013 | Common Stock | 37,500 | | 37,500 | 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) | \$2 | | | | | | | | 12/18/2003 ⁽⁵⁾ | 12/18/2013 | Common Stock | 27,500 | | 27,500 | D | | |
| Incentive Stock Option (right to buy) | \$3.37 | | | | | | | | 03/29/2008 ⁽⁹⁾ | 02/28/2018 | Common Stock | 8,334 | | 8,334 | D | | |
| Incentive Stock Option (right to buy) | \$6.59 | | | | | | | | 04/11/2005 ⁽¹⁰⁾ | 04/11/2015 | Common Stock | 45,000 | | 45,000 | D | | |
| Incentive Stock Option (right to buy) | \$6.81 | | | | | | | | 04/01/2007 ⁽¹¹⁾ | 03/14/2017 | Common Stock | 22,806 | | 22,806 | D | | |
| Incentive Stock Option (right to buy) | \$7.15 | | | | | | | | 03/01/2006 ⁽¹²⁾ | 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 | 31,667 | | 31,667 | D | | |
| Non-Qualified Stock Option (right to buy) | \$3.37 | | | | | | | | 03/29/2008 ⁽⁹⁾ | 02/28/2018 | Common Stock | 191,666 | | 191,666 | D | | |
| Non-Qualified Stock Option (right to buy) | \$6.81 | | | | | | | | 04/01/2007 ⁽¹¹⁾ | 03/14/2017 | Common Stock | 227,194 | | 227,194 | D | | |
| Non-Qualified Stock Option (right to buy) | \$7.15 | | | | | | | | 03/01/2006 ⁽¹²⁾ | 03/01/2016 | Common Stock | 71,506 | | 71,506 | D | | |

Explanation of Responses:

- The exercise reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on February 27, 2007.
- The sale reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on February 27, 2007
- Shares held by The Bridget Blum 2003 Irrevocable Trust.
- Shares held by The Brittany Blum 2003 Irrevocable Trust.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

Robert I. Blum

08/04/2008

** 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.