FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| OMB APPR | OVAL | | | | | | | |
|--------------------------|-----------|--|--|--|--|--|--|--|
| OMB Number: | 3235-0287 | | | | | | | |
| Estimated average burden | | | | | | | | |
| hours per response: | 0.5 | | | | | | | |

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

| | | | | | | 2. Issuer Name and Ticker or Trading Symbol CYTOKINETICS INC [CYTK] | | | | | | | | Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner | | | | | | |
|---|---|-------------------------|------------------|----------|---------------------|--|---|--------------------------|------------|-------|------------|---|--|--|------------------------------|---|---------------------|---|-------------------------|--|
| | | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 02/28/2011 | | | | | | | | | | | Other (sp | | specify | |
| (Street) | | | | | | If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | | | Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person | | | | |
| FRANCI (City) | ISCO | | | | - | | | | | | | | | | | | e thar | n One Rep | orting | |
| | | Tab | le I - N | on-Deri | vative \$ | Sec | urities | Acc | quired, [| Disp | osed of | , or Be | nefic | ially | Owned | l | | | | |
| Date | | | | | Execution D | | | Transaction Code (Instr. | | | | | | 5. Amount of Securities Beneficially Owned | | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | | |
| | | | | | | | Code | v | Amount | (A) c | or Pri | ce | Reported Transaction(s) (Instr. 3 and 4) | | | | | | | |
| Common | Stock | CYTOKINETICS INC CYTK | | | | | | | | | | | | | | | | | | |
| Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | | | | | | | | | | | | | | | | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | Date | Execution if any | on Date, | Transac Code (Ir | | of Derivation Securities Acquire (A) or Dispose of (D) (Instr. 3 | ve es ed | Expiration | Dat | е | Amount Securitie Underly Derivatie Security | of es ing ve | | of Derivative Security | derivative Securities Beneficia Owned Following Reported Transacti | e s illy g | Ownership Form: Direct (D) or Indirect (I) (Instr. | Beneficial Ownership | |
| | | | | | Code | v | (A) | (D) | | | | Title | or Numl of | oer | | | | | | |
| Incentive Stock Option (right to buy) | \$1.57 | 02/28/2011 | | | A | | 58,336 | | 03/31/2011 | (1) | 02/28/2021 | | 58,3 | 36 | \$0 | 58,33 | 6 | D | | |
| Non- Qualified Stock Option (right to buy) | \$1.57 | 02/28/2011 | | | A | | 141,664 | | 03/31/2011 | (1) | 02/28/2021 | | 141,0 | 664 | \$0 | 141,66 | 54 | D | | |
| Incentive Stock Option (right to buy) | \$1.85 | | | | | | | | 03/26/2009 | (2) | 02/26/2019 | | 37,9 | 17 | | 37,91 | 7 | D | | |
| Incentive Stock Option (right to buy) | \$3.08 | | | | | | | | 03/24/2010 | (3) | 02/24/2020 | 1 | 42,0 | 84 | | 42,08 | 4 | D | | |
| Incentive Stock Option (right to buy) | \$3.37 | | | | | | | | 03/29/2008 | (4) | 02/28/2018 | | 27,9 | 35 | | 27,93 | 5 | D | | |
| Incentive Stock Option (right to buy) | \$6.59 | | | | | | | | 04/11/2005 | (5) | 04/11/2015 | Common Stock | 78 | 1 | | 781 | | D | | |
| Stock Option (right to buy) Incentive Stock Option (right to buy) | \$3.08 \$3.37 | | | | | | | | 03/24/2010 | (4) | 02/24/2020 | Common Stock Common Stock | 42,0 | 35 | | 42,08 27,93 | 4 | 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 | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | | 5. Number of | | 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) | \$6.81 | | | | | | | 04/01/2007 ⁽⁶⁾ | 03/14/2017 | Common Stock | 14,185 | | 14,185 | D | |
| Incentive Stock Option (right to buy) | \$7.15 | | | | | | | 03/01/2006 ⁽⁷⁾ | 03/01/2016 | Common Stock | 17,019 | | 17,019 | D | |
| Incentive Stock Option (right to buy) | \$9.91 | | | | | | | 09/20/2005 ⁽⁸⁾ | 10/20/2014 | Common Stock | 40,360 | | 40,360 | D | |
| Non- Qualified Stock Option (right to buy) | \$1.85 | | | | | | | 03/26/2009 ⁽²⁾ | 02/26/2019 | Common Stock | 92,083 | | 92,083 | D | |
| Non- Qualified Stock Option (right to buy) | \$3.08 | | | | | | | 03/24/2010 ⁽³⁾ | 02/24/2020 | Common Stock | 92,916 | | 92,916 | D | |
| Non- Qualified Stock Option (right to buy) | \$3.37 | | | | | | | 03/29/2008 ⁽⁴⁾ | 02/28/2018 | Common Stock | 97,065 | | 97,065 | D | |
| Non- Qualified Stock Option (right to buy) | \$6.59 | | | | | | | 04/11/2005 ⁽⁵⁾ | 04/11/2015 | Common Stock | 11,719 | | 11,719 | D | |
| Non- Qualified Stock Option (right to buy) | \$6.81 | | | | | | | 04/01/2007 ⁽⁶⁾ | 03/14/2017 | Common Stock | 40,815 | | 40,815 | D | |
| Non- Qualified Stock Option (right to buy) | \$7.15 | | | | | | | 03/01/2006 ⁽⁷⁾ | 03/01/2016 | Common Stock | 42,981 | | 42,981 | D | |
| Non- Qualified Stock Option (right to buy) | \$9.91 | | | | | | | 09/20/2005 ⁽⁸⁾ | 10/20/2014 | Common Stock | 69,640 | | 69,640 | D | |

Explanation of Responses:

- 1. When the ISO and NQ dated 02/28/2011 are combined for a total grant of 200,000 shares, the option shall vest and become exercisable as to 4,166 shares on 03/31/2011 and the balance of 195,834 divided into equal monthly installments thereafter such that the option shall be 100% vested on 02/28/2015.
- 2. When the ISO and NQ dated 02/26/2009 are combined for a total grant of 130,000 shares, the option shall vest and become exercisable as to 2,708 shares on 03/26/09 and the balance of 127,292 divided into equal monthly installments thereafter such that the option shall be 100% vested on 02/26/13.
- 3. 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.
- 4. 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.
- 5. When the ISO and NQ dated 04/11/05 are combined for a total grant of 12,500 shares, the option shall vest and become exercisable as to 12,500 shares divided into equal monthly installments such that the option shall be 100% vested on 03/01/2009.
- 6. When the ISO and NQ dated 03/14/2007 are combined for a total grant of 55,000 shares, the option shall vest and become exercisable as to 1,146 shares on 04/01/07 and the balance of 53,854 divided into equal monthly installments thereafter such that the option shall be 100% vested on 03/01/11.
- 7. 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.

8. When the ISO and NQ dated 10/20/04 are combined for a total grant of 110,000 shares, the option shall vest and become exercisable as to 27,500 shares on 09/20/05 and the balance of 82,500 divided into equal monthly installments thereafter such that the option shall be 100% vested on 09/20/08.

Andrew A. Wolff, M.D. 03/01/2011

** 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.