

INFINITY PHARMACEUTICALS, INC.
 Form 4
 September 13, 2006

FORM 4 UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

OMB APPROVAL

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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

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

(Print or Type Responses)

1. Name and Address of Reporting Person *
 TANANBAUM JAMES B

2. Issuer Name and Ticker or Trading Symbol
 INFINITY PHARMACEUTICALS, INC. [INFI]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)

3. Date of Earliest Transaction (Month/Day/Year)
 09/12/2006

Director 10% Owner
 Officer (give title below) Other (specify below)

C/O PROSPECT VENTURE PARTNERS, 435 TASSO STREET, SUITE 200

(Street)

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

PALO ALTO, CA 94301

(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)
Common Stock	09/12/2006		A	(A) 134,688 (1)	(2) 134,688 (1)	I	By Tananbaum Family Trust
Common Stock	09/12/2006		A	(A) 107,750 (1) (3)	(4) 107,750 (1)	I	By Prospect Venture Partners II, L.P.
Common Stock	09/12/2006		A	(A) 510,575 (1) (3)	(5) 510,575 (1)	I	By Prospect Venture Partners II,

Common Stock	09/12/2006	A	799,152 <u>(1)</u> <u>(3)</u>	A	<u>(6)</u>	799,152 <u>(1)</u>	I	L.P. By Prospect Venture Partners II, L.P.
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Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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 control number.

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(9-02)

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. Amount or Number of Shares
				Code V	(A) (D)	Date Exercisable Expiration Date	Title	
Stock Option (right to buy)	\$ 15.04 <u>(1)</u>	09/12/2006		A	28,125 <u>(1)</u>	<u>(7)</u> 09/12/2016	Common Stock	28,125 <u>(1)</u>
Stock Option (right to buy)	\$ 15.04 <u>(1)</u>	09/12/2006		A	1,875 <u>(1)</u>	<u>(8)</u> 09/12/2016	Common Stock	1,875 <u>(1)</u>

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
TANANBAUM JAMES B C/O PROSPECT VENTURE PARTNERS 435 TASSO STREET, SUITE 200 PALO ALTO, CA 94301	X			

