

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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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 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 *
 Moss Franklin

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)
 C/O MIT, MEDIA LAB, 20 AMES STREET, E15-401
 (Street)

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

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

CAMBRIDGE, MA 02139

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

(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 Ownership (Instr. 4)
			Code	V	Amount (A) or (D) Price		
Common Stock	09/12/2006		A		5,663 ⁽¹⁾	D	
Common Stock	09/12/2006		A		9,818 ⁽¹⁾	D	
Common Stock	09/12/2006		A		7,491 ⁽¹⁾	D	
Common Stock	09/12/2006		A		33,154 ⁽¹⁾	D	
Common Stock	09/12/2006		A		3,683 ⁽¹⁾ ⁽¹³⁾	I	By The Frankin H.

Common Stock	09/12/2006	A	<u>3,683</u> (1) (13)	A	(7)	3,683 (1)	I	Moss Gift Trust - I
								By The Frankin H. Moss Gift Trust - II
Common Stock	09/12/2006	A	<u>3,683</u> (1) (13)	A	(8)	3,683 (1)	I	By The Frankin H. Moss Gift Trust - III

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	Amount or Number of Shares
Stock Option (right to buy)	\$ 15.04 (1)	09/12/2006		A	28,125 (1)	(9) 09/12/2016	Common Stock	28,125 (1)	
Stock Option (right to buy)	\$ 3.48 (12)	09/12/2006		A	2,210 (1)	(10) 09/12/2016	Common Stock	2,210 (1)	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Moss Franklin C/O MIT, MEDIA LAB 20 AMES STREET, E15-401			X	

CAMBRIDGE, MA 02139

Signatures

/s/ Franklin
Moss

09/13/2006

__Signature of
Reporting Person

Date

Explanation of Responses:

- * 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).
- (1) Reflects a 1-for-4 reverse stock split, which became effective on September 12, 2006.
- (2) Received in exchange for 25,625 shares of Infinity Discovery, Inc. ("IPI") common stock in connection with the merger of IPI into Infinity Pharmaceuticals, Inc. (the "Merger") based on a conversion ratio of 0.88411.
- (3) Received in exchange for 50,000 shares of IPI Series A Preferred Stock in connection with the Merger based on a conversion ratio of 0.78550. The Series A Preferred Stock had no expiration date.
- (4) Received in exchange for 26,667 shares of IPI Series B Preferred Stock in connection with the Merger based on a conversion ratio of 1.12375. The Series B Preferred Stock had no expiration date.
- (5) Received in exchange for 150,000 shares of IPI Common Stock in connection with the Merger based on a conversion ratio of 0.88411. These shares are held by Franklin H. Moss and Kimberly S. Moss, JTWROS.
- (6) Received in exchange for 16,667 shares of IPI Common Stock in connection with the Merger based on a conversion ratio of 0.88411.
- (7) Received in exchange for 16,667 shares of IPI Common Stock in connection with the Merger based on a conversion ratio of 0.88411.
- (8) Received in exchange for 16,666 shares of IPI Common Stock in connection with the Merger based on a conversion ratio of 0.88411. The option vests as to 9,375 of the shares on the first anniversary of the grant date, which grant date was September 12, 2006, and the remainder in quarterly installments of 2,343 shares beginning at the end of the first quarter thereafter, provided that the holder continues to serve as a director.
- (9) The option vests as to 552 shares on June 12, 2006, 184 shares on June 30, 2006 and the remainder in equal monthly installments through February 2007.
- (10) Received in the Merger in exchange for a stock option to acquire 10,000 shares of IPI Common Stock for \$0.77 per share based on a conversion ratio of 0.88411.
- (11) The exercise price reflects the exercise price of each option to purchase IPI common stock prior to the closing of the Merger divided by a conversion ratio of 0.88411, as adjusted to reflect the 1-for-4 reverse stock split.
- (12) The reporting person disclaims beneficial ownership of the reported securities except to the extent of his pecuniary interest therein.

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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