

INFINITY PHARMACEUTICALS, INC.  
 Form 3  
 September 13, 2006

**FORM 3 UNITED STATES SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**

OMB APPROVAL

OMB Number: 3235-0104  
 Expires: January 31, 2005  
 Estimated average burden hours per response... 0.5

**INITIAL STATEMENT OF 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 * Burke Thomas Joseph (Last) (First) (Middle)	2. Date of Event Requiring Statement (Month/Day/Year) 09/12/2006	3. Issuer Name and Ticker or Trading Symbol INFINITY PHARMACEUTICALS, INC. [INFI]	4. Relationship of Reporting Person(s) to Issuer  (Check all applicable)  <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer <input type="checkbox"/> Other (give title below) (specify below) Assistant Treasurer	5. If Amendment, Date Original Filed(Month/Day/Year)
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C/O INFINITY PHARMACEUTICALS, INC., 780 MEMORIAL DRIVE  
 (Street)

CAMBRIDGE, MA 02139  
 (City) (State) (Zip)

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

**Table I - Non-Derivative Securities Beneficially Owned**

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
No securities are beneficially owned	0	D <sup>(1)</sup>	A

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

SEC 1473 (7-02)

**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.**

**Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)	3. Title and Amount of Securities Underlying Derivative Security	4. Conversion or Exercise	5. Ownership Form of	6. Nature of Indirect Beneficial Ownership (Instr. 5)
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Date Exercisable	Expiration Date	(Instr. 4)	Amount or Number of Shares	Price of Derivative Security	Derivative Security: Direct (D) or Indirect (I)
		Title			

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Burke Thomas Joseph C/O INFINITY PHARMACEUTICALS, INC. 780 MEMORIAL DRIVE CAMBRIDGE, MA 02139	^	^	^ Assistant Treasurer	^

## Signatures

/s/ Thomas J. Burke  
Date: 09/13/2006

\*\*Signature of Reporting Person                      Date

## Explanation of Responses:

- \* If the form is filed by more than one reporting person, see Instruction 5(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) Not applicable.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, See Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.