

RXI PHARMACEUTICALS CORP
 Form 4
 September 25, 2009

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 *
 CYTRX CORP

2. Issuer Name and Ticker or Trading Symbol
 RXI PHARMACEUTICALS CORP
 [RXii]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)
 11726 SAN VICENTE
 BOULEVARD, SUITE 650
 (Street)

3. Date of Earliest Transaction
 (Month/Day/Year)
 09/23/2009

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

LOS ANGELES, CA 90049

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 (D) Price			
Common Stock	09/23/2009		S	500,000 D \$ 2.5	5,768,881	D	

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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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

