ACHILLION PHARMACEUTICALS INC Form 8-A12B October 18, 2006

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 8-A

For Registration of Certain Classes of Securities

Pursuant to Section 12(b) or 12(g) of the

Securities Exchange Act of 1934

Achillion Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State of incorporation or organization) 52-2113479 (IRS Employer

Identification No.)

300 George Street, New Haven, CT 06511

(Address of principal executive offices) (Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of Each Class

to be so Registered

Common Stock, \$0.001 par value per share

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A.(c), please check the following box. x

Name of Each Exchange on Which

Each Class is to be Registered

The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A.(d), please check the following box.

Securities Act registration statement file number to which this form relates: 333-132921

(If applicable)

Securities to be registered pursuant to Section 12(g) of the Act: None

Item 1. Description of Registrant s Securities to be Registered.

The description under the heading Description of Capital Stock relating to the Registrant s Common Stock, \$0.001 par value per share, in the Prospectus included in the Registrant s Registration Statement on Form S-1 filed with the Securities and Exchange Commission (the Registration Statement on Form S-1) (File No. 333-132921) is incorporated herein by reference.

Item 2. Exhibits.

The following exhibits are filed herewith (or incorporated by reference as indicated below):

- 1. Amended and Restated Certificate of Incorporation of the Registrant, as amended, incorporated by reference to Exhibit 3.1 to the Company s Registration Statement on Form S-1.
- 2. Amended and Restated Bylaws of the Registrant incorporated by reference to Exhibit 3.2 to the Company s Registration Statement on Form S-1.
- 3. Form of Certificate of Amendment of Certificate of Incorporation of the Registrant, incorporated by reference to Exhibit 3.3 to the Company s Registration Statement on Form S-1.
- 4. Form of Amended and Restated Certificate of Incorporation, incorporated by reference to Exhibit 3.4 to the Company s Registration Statement on Form S-1.
- 5. Form of Amended and Restated Bylaws of the Registrant, incorporated by reference to Exhibit 3.5 to the Company s Registration Statement on Form S-1.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

Achillion Pharmaceuticals, Inc.

By: /s/ Mary Kay Fenton

Mary Kay Fenton

Vice President and Chief Financial Officer

October 18, 2006