UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

FORM S-8

REGISTRATION STATEMENT UNDER **THE SECURITIES ACT OF 1933**

AMICUS THERAPEUTICS, INC.

(Exact Name of Registrant as Specified in Its Charter)

DELAWARE

(State or Other Jurisdiction of Incorporation or Organization)

20-0422823 (I.R.S. Employer Identification No.)

6 Cedar Brook Drive, Cranbury, NJ 08512 (Address of Principal Executive Office)(Zip Code)

AMENDED AND RESTATED 2007 EQUITY INCENTIVE PLAN 2007 DIRECTOR OPTION PLAN

(Full title of the plan)

Geoffrey P. Gilmore Senior Vice President, General Counsel and Secretary Amicus Therapeutics, Inc. **6 Cedar Brook Drive** Cranbury, NJ 08512 (Name and address of Agent for Service)

(609) 662-2000

(Telephone Number for agent for service)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o

Accelerated filer o

Non-accelerated filer \square (Do not check if a smaller reporting company) Smaller reporting company o

CALCULATION OF REGISTRATION FEE

| Title Of Securities To Be Registered | Amount To Be Registered(1) | Proposed Maximum Offering Price Per Share(2) | Proposed Maximum Aggregate Offering Price(2) | Amount Of Registration Fee |
|-------------------------------------------------|----------------------------------|-------------------------------------------------------|-------------------------------------------------------|----------------------------------|
| Amended and Restated 2007 Equity Incentive Plan | | | | |
| Common Stock (par value \$0.01 per share) | 2,000,000 | \$9.86 | \$19,720,000 | \$775.00 |
| 2007 Director Option Plan | | | | |
| Common Stock (par value \$0.01 per share) | 126,423 | \$9.86 | \$ 1,246,531 | \$ 49.00 |
| TOTAL: | 2,126,423 | | \$20,966,531 | \$824.00 |

In addition, pursuant to Rule 416(c) under the Securities Act of 1933, as amended, this Registration Statement also covers an indeterminate number of (1)additional shares of common stock that may be offered or issued in the event of a stock dividend, reverse stock split, split-up, recapitalization, forfeiture of stock under those plans, or other similar event.

The proposed maximum offering price of \$9.86 per share, which is the average of the high and low prices of the Registrant's common stock as reported (2)on the NASDAQ Global Market on February 3, 2009, is set forth solely for the purpose of calculating the registration fee pursuant to Rule 457(c) and (h) under the Securities Act of 1933.

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EXPLANATORY NOTE

On August 10, 2007, we filed a Registration Statement on Form S-8 (File No. 333- 145305) (referred to in this document as the "<u>First Registration</u> <u>Statement</u>") to register under the Securities Act of 1933, as amended (the "<u>Securities Act</u>"), 2,501,307 shares of our common stock issuable by us under the Amicus Therapeutics, Inc. 2002 Equity Incentive Plan, 966,667 shares of our common stock issuable by us under the Amicus Therapeutics, Inc. 2007 Equity Incentive Plan, 200,000 shares of common stock issuable by us under the 2007 Director Option Plan and 200,000 shares issuable by us under the 2007 Employee Stock Purchase Plan

This Registration Statement on Form S-8 has been prepared and filed pursuant to and in accordance with the requirements of General Instruction E to Form S-8 for the purpose of effecting the registration under the Securities Act of (i) the additional 2,000,000 shares of our common stock subject to issuance upon the granting of awards that may be granted under the Amended and Restated 2007 Equity Incentive Plan at any time or from time to time after the date hereof under such plan and (ii) the additional 126,423 shares of our common stock subject to issuance upon the granting of awards that may be granted under the Attended and Restated 2007 Equity Incentive Plan at any time or from time to time after the date hereof under such plan. Pursuant to General Instruction E to Form S-8, Amicus Therapeutics, Inc. (the "Registrant") hereby incorporates herein by reference the contents of the First Registration Statement into this Registration Statement.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference

The following documents filed by Amicus Therapeutics, Inc. ("<u>Registrant</u>") with the Securities and Exchange Commission (the "<u>Commission</u>") pursuant to the Securities Act or the Securities Exchange Act of 1934, as amended (the "<u>Exchange Act</u>"), are hereby incorporated by reference into this Registration Statement:

- (a) The Registrant's Annual Report on Form 10-K for the year ended December 31, 2008 filed on February 5, 2009;
- (b) All other reports filed by the Registrant pursuant to Sections 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the Annual Report referred to in (a) above; and
- (c) The section entitled "Description of Registrant's Securities to be Registered" contained in the Registrant's Registration Statement on Form 8-A (file No. 001-33497) filed with the Commission on May 23, 2007, pursuant to Section 12(b) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

In addition, all documents filed with the Commission pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act subsequent to the date of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities registered hereby have been sold or which deregisters all of such securities then remaining unsold, shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing of such documents.

Item 8. Exhibits

The following exhibits are filed as part of this registration statement:

| Exhibit Number | Exhibit Description |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.1(1) | Restated Certificate of Incorporation |
| 3.2(2) | Amended and Restated By-laws |
| 4.1(3) | Third Amended and Restated Investor Rights Agreement, dated as of September 13, 2006, as amended |
| 5.1 | Opinion of Bingham McCutchen LLP with respect to the legality of the shares being registered |
| 23.1 | Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm |
| 23.2 | Consent of Bingham McCutchen LLP (included in Exhibit 5.1) |
| 24 | Power of Attorney (included in signature page hereto) |
| • | rated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form S-1 (Commission File No. 333-141700) rated by reference to Exhibit 3.4 to the Registrant's Registration Statement on Form S-1 (Commission File No. 333-141700) |

(3) Incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 (Commission File No. 333-141700)

SIGNATURES AND POWER OF ATTORNEY

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned thereunto duly authorized, in the city of Cranbury, state of New Jersey, on the 10th day of February, 2009.

AMICUS THERAPEUTICS, INC.

By: /s/ John F. Crowley

Name:John F. CrowleyTitle:President and Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned officers and directors of the Company, hereby severally constitute and appoint John Crowley, James E. Dentzer, Matthew R. Patterson and Geoffrey P. Gilmore, and all or any one of them, our true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities indicated as of the 10th day of February, 2009.

| Signature | Title | |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| /s/ John F. Crowley John F. Crowley | President and Chief Executive Officer; Director (Principal Executive Officer) | |
| /s/ James E. Dentzer James E. Dentzer | Chief Financial Officer and Treasurer (Principal Accounting and Financial Officer) | |
| /s/ Donald J. Hayden Donald J. Hayden | Director | |
| /s/ Sol J. Barer, Ph.D. Sol J. Barer, Ph.D. | Director | |
| /s/ Alexander E. Barkas, Ph.D. Alexander E. Barkas, Ph.D. | Director | |
| | | |

| Signature | Title |
|----------------------------------|----------|
| /s/ Stephen Bloch, M.D. | Director |
| Stephen Bloch, M.D. | |
| /s/ P. Sherrill Neff | Director |
| P. Sherrill Neff | |
| /s/ Michael G. Raab | Director |
| Michael G. Raab | |
| /s/ Glenn P. Sblendorio | Director |
| Glenn P. Sblendorio | |
| /s/ James N. Topper, M.D., Ph.D. | Director |
| James N. Topper, M.D., Ph.D. | |

EXHIBIT INDEX

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| (1) Incorpora | ated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form S-1 (Commission File No. 333-141700) |

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Re: Registration Statement on Form S-8

Ladies and Gentlemen:

This opinion is furnished in connection with the registration, pursuant to a Registration Statement on Form S-8 under the Securities Act of 1933, as amended (the "<u>Securities Act</u>"), to be filed with the Securities and Exchange Commission on or about February 10, 2009 (the "<u>Registration Statement</u>"), of an aggregate of 2,126,423 shares (the "<u>Shares</u>") of common stock, par value \$0.01 per share (the "<u>Common Stock</u>"), of Amicus Therapeutics, Inc., a Delaware corporation (the "<u>Company</u>"), 2,000,000 of which are or will be issuable to employees, directors and consultants of the Company upon the exercise of options granted pursuant to the Company s Amended and Restated 2007 Equity Incentive Plan (the "<u>2007 Plan</u>") or which the Company may issue as restricted stock or pursuant to awards of restricted stock units or fully-vested stock under the 2007 Plan, and 126,423 of which are or will be issuable to directors upon the exercise of options granted pursuant to the Company's 2007 Director Option Plan (the "<u>2007 Director Plan</u>"; each of the 2007 Plan and 2007 Director Plan, a "<u>Plan</u>" and, collectively, the "<u>Plans</u>").

We have acted as counsel to the Company in connection with the foregoing registration of the Shares. We have examined and relied upon originals or copies of such records, instruments, certificates, memoranda, and other documents as we have deemed necessary or advisable for purposes of this opinion and have assumed, without independent inquiry, the accuracy of those documents. In that examination, we have assumed the genuineness of all signatures, the conformity to the originals of all documents reviewed by us as copies, the authenticity and completeness of all original documents reviewed by us in original or copy form, and the legal competence of each individual executing such documents. We have further assumed that all options granted or to be granted pursuant to the Plans were or will be validly granted in accordance with the terms of the respective Plan, that all Shares to be issued upon exercise of such options will be issued in accordance with the terms of such options and the respective Plan, and that all Shares sold or granted as restricted stock or pursuant to awards of restricted stock units or fully-vested stock will be sold or granted in accordance with the terms of the respective Plan and for the benefits to the Company authorized by the Board of Directors.

This opinion is limited solely to the Delaware General Corporation Law (the "<u>DGCL</u>"), as applied by courts located in Delaware, the applicable provisions of the Delaware Constitution and the reported judicial decisions interpreting those laws.

Based upon and subject to the foregoing, we are of the opinion that:

1. Upon the issuance and the delivery of the Shares upon the exercise of options granted pursuant to the Plans in accordance with the terms of such options and the respective Plan, and upon the Company's receipt of the full exercise price therefor, as determined by the Board of Directors of the Company and as specified in the documents governing such grants and the respective Plan, the Shares will be validly issued, fully paid, and nonassessable.

2. Upon the issuance and delivery of the Shares pursuant to awards of restricted stock in accordance with the terms of the awards of such restricted stock and the 2007 Plan, and upon the Company's receipt of lawful consideration in accordance with the DGCL, the Shares will be validly issued, fully paid, and nonassessable.

3. Upon the issuance and delivery of the Shares pursuant to awards of restricted stock units in accordance with the terms of the awards of such restricted stock units and the 2007 Plan, and upon the Company's receipt of lawful consideration in accordance with the DGCL, the Shares will be validly issued, fully paid, and nonassessable.

4. Upon the issuance and delivery of the Shares pursuant to awards of fully-vested stock in accordance with the terms of the awards of fully-vested stock and the 2007 Plan, and upon the Company's receipt of lawful consideration in accordance with the DGCL, the Shares will be validly issued, fully paid, and nonassessable.

We consent to the filing of a copy of this opinion as an exhibit to the Registration Statement.

Very truly yours,

/s/ Bingham McCutchen LLP BINGHAM MCCUTCHEN LLP



Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-000000) pertaining to the: 1) Amicus Therapeutics, Inc. Amended and Restated 2007 Equity Incentive Plan and 2) Amicus Therapeutics, Inc. 2007 Director Option Plan of our report dated February 4, 2009, with respect to the consolidated financial statements of Amicus Therapeutics, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2008 filed with the Securities and Exchange Commission.

Ernst & Jamy, LLP

MetroPark, New Jersey February 4, 2009