UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-A/A

(Amendment No. 1)

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934

METABOLIX, INC.

(Exact name of registrant as specified in charter)

Delaware (State of incorporation of organization)

04-3158289 (I.R.S. Employer Identification No.)

21 Erie Street
Cambridge, Massachusetts
(Address of principal executive offices)

02139 (Zip code)

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

Title of each class to be so registered

Name of each exchange on which each class is to be registered

Preferred Stock Purchase Rights

The NASDAQ Stock Market LLC

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), check the following box. x

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), check the following box. o

Securities Act registration statement file number to which this form relates: Not applicable.

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

EXPLANATORY NOTE

This Amendment No. 1 to Form 8-A amends and supplements the Registration Statement on Form 8-A filed by Metabolix, Inc., a Delaware corporation (the "<u>Company</u>"), with the Securities and Exchange Commission on July 8, 2009 (including the exhibits thereto, the "<u>Form 8-A</u>"). Capitalized terms used without definition herein shall have the meaning set forth in the Shareholder Rights Agreement, dated as of July 7, 2009, as amended, by and between the Company and American Stock Transfer & Trust Company, LLC, as Rights Agent (the "<u>Rights Agreement</u>").

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

Item 1 of the Form 8-A is hereby amended and supplemented by adding the following:

Amendment to Rights Agreement

On February 6, 2012, the Company entered into an Amendment No. 1 to Shareholder Rights Agreement with American Stock Transfer & Trust Company, LLC, as Rights Agent (the "Amendment"). The terms of the Amendment amend the Rights Agreement to provide that, generally, Jack W. Schuler, Renate Schuler and the Schuler Family Foundation, a tax-exempt private operating foundation of which Jack W. Schuler and Renate Schuler serve as two of the three directors (collectively, the "Schuler Stockholders"), and their Affiliates and Associates may acquire up to 19.99% of the then outstanding shares of Common Stock without becoming Acquiring Persons, so long as the Schuler Stockholders and their respective Affiliates and Associates do not at any time hold their shares of Common Stock with any purpose, or with the effect, of changing or influencing the control of the Company, or in connection with or as a participant in any transaction having that purpose or effect (such ability to acquire up to 19.99% of the Common Stock under certain circumstances without becoming Acquiring Persons is referred to herein as the "Exemption"). If the Schuler Stockholders' Beneficial Ownership of Common Stock at any time equals or exceeds 15% of the then outstanding shares of Common Stock and then subsequently decreases below 15%, the Exemption will immediately terminate. If the Schuler Stockholders' Beneficial Ownership of Common Stock at any time equals or exceeds 20% of the then outstanding shares of Common Stock, the Exemption will immediately terminate and the Schuler Stockholders will immediately become Acquiring Persons. As of the date of the Amendment, the Schuler Stockholders may be deemed to have Beneficial Ownership of up to 5,091,295 shares, or approximately 14.9%, of the Common Stock.

The Rights Agreement and the Amendment are filed as Exhibits 4.1 and 4.2, respectively, to this Amendment No. 1 to Form 8-A and incorporated herein by reference. The above description of the material terms of the Amendment as they relate to the Rights Agreement is qualified in its entirety by reference to such exhibits.

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Item 2. Exhibits.

- Certificate of Designations, Preferences and Rights of a Series of Preferred Stock of Metabolix, Inc. classifying and designating the Series A Junior Participating Cumulative Preferred Stock (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on July 8, 2009).
- 4.1 Shareholder Rights Agreement, dated as of July 7, 2009, by and between Metabolix, Inc. and American Stock Transfer & Trust Company, LLC, as Rights Agent (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on July 8, 2009).
- 4.2 Amendment No. 1 to Shareholder Rights Agreement, dated as of February 6, 2012, by and between the Company and American Stock Transfer & Trust Company, LLC, as Rights Agent (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 10, 2012).

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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.

METABOLIX, INC.

Date: February 10, 2012 By: /s/ Richard P. Eno

Name: Richard P. Eno Title: President and CEO

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EXHIBIT INDEX

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