Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

METABOLIX, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

8731

(Primary Standard Industrial Classification Code Number)

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

21 Erie Street Cambridge, MA 02139 (617) 492-0505

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive office)

James J. Barber Chief Executive Officer Metabolix, Inc. 21 Erie Street Cambridge, MA 02139 (617) 492-0505

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

John M. Mutkoski, Esq. Christopher J. Denn, Esq. Robert E. Puopolo, Esq. Goodwin Procter LLP Exchange Place Boston, Massachusetts 02109 (617) 570-1000 Charles Ruck, Esq.
Joshua Tinkelman, Esq.
Latham & Watkins LLP
885 Third Avenue
Suite 1000
New York, NY 10022
(212) 906-1200

Approximate date of commencement of proposed sale to the public:

As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. o

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \boxtimes 333-135760

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box. o

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.01 par value per share	1,150,000	\$14.00	\$16,100,000	\$1,722.70

(1) Includes 150,000 shares of common stock which may not be purchased by the underwriters to cover over-allotments, if any.

This Registration Statement shall become effective upon filing with the Commission in accordance with Rule 462(b) under the Securities Act of 1933.

EXPLANATORY NOTE

This Registration Statement is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Securities Act"). The contents of the Registration Statement on Form S-1 (File No. 333-135760) filed by Metabolix, Inc. (the "Company") with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act, which was declared effective by the Commission on November 9, 2006, is incorporated by reference into this Registration Statement.

We are filing this Registration Statement for the sole purpose of increasing by 1,150,000 shares the number of shares of our common stock to be registered.

The Company hereby certifies to the Commission that it (i) has instructed its bank to transmit to the Commission the filing fee set forth on the cover page of this Registration Statement by a wire transfer of such amount to the Commission's account as soon as practicable (but no later than the close of business on November 13, 2006), (ii) will not revoke such instructions, (iii) has sufficient funds in the relevant account to cover the amount of such filing fee and (iv) will confirm receipt of such instructions by its bank during the bank's regular business hours no later than November 13, 2006.

The required opinion and consents are listed on an Exhibit Index attached hereto and filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Massachusetts, on November 13, 2006.

METABOLIX, INC.

By:	/s/ JAMES J. BARBER

Name: James J. Barber Title: President, Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated:

/s/ JAMES J. BARBER	President, Chief Executive Officer, and Director (Principal Executive Officer)	November 13, 2006	
James J. Barber	•		
*	Chief Scientific Officer, Vice President Research and Director	November 13, 2006	
Dr. Oliver P. Peoples			
/s/ THOMAS G. AUCHINCLOSS, JR.	Vice President and Chief Financial Officer (Principal Financial Officer)	November 13, 2006	
Thomas G. Auchincloss, Jr.			
/s/ ANINDA KATRAGADDA	Director of Finance and Corporate Controller (Principal Accounting Officer)	November 13, 2006	
Aninda Katragadda	5		
*	Chairman of the Board, Director	November 13, 2006	
Edward M. Muller			
*			
Edward M. Giles	Director	November 13, 2006	
*			
Dr. Jay Kouba	Director	November 13, 2006	
*			
Jack W. Lasersohn	Director	November 13, 2006	
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	Dr. Anthony J. Sinskey	 Director	November 13, 2006
	*		
	Dr. Matthew Strobeck	Director	November 13, 2006
	*	_	
	Robert L. Van Nostrand	Director	November 13, 2006
*By:	/s/ JAMES J. BARBER		
	James J. Barber Attorney-in-fact		
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EXHIBIT INDEX

Number	Description		
5.1	Opinion of Goodwin Procter LLP		
23.1	Consent of Goodwin Procter LLP (included in Exhibit 5.1)		
23.2	Consent of PricewaterhouseCoopers LLP		
24.1	Power of Attorney (incorporated herein by reference to Exhibit 24.1 to the Registration Statement on Form S-1 of Metabolix, Inc. filed on July 14, 2006, September 21, 2006 and October 20, 2006, Registration No. 333-135760)		

QuickLinks

EXPLANATORY NOTE SIGNATURES EXHIBIT INDEX Metabolix, Inc. 21 Erie Street Cambridge, MA 02139

Re: Securities Being Registered under Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel for Metabolix, Inc. a Delaware corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission (the "Commission") of (i) a Registration Statement on Form S-1, Registration No. 333-135760 (the "Initial Registration Statement"), and (ii) a second Registration Statement on Form S-1 to be filed pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended (the "462(b) Registration Statement," and together with the Initial Registration Statement, the "Registration Statement"). This opinion letter is furnished to you in connection with your filing of the 462(b) Registration Statement, pursuant to which the Company is registering 1,150,000 shares (the "Shares") of the Company's Common Stock, \$0.01 par value per share, including 150,000 Shares purchasable by the underwriters upon their exercise of an over-allotment option granted to the underwriters by the Company. The Shares are being sold to the several underwriters named in, and pursuant to, an underwriting agreement, dated November 9, 2006, among the Company and such underwriters substantially in the form filed as an Exhibit to the Registration Statement (the "Purchase Agreement").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions expressed below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company.

The opinion expressed below is limited to the Delaware General Corporation Law (which includes applicable provisions of the Delaware Constitution and reported judicial decisions interpreting the Delaware General Corporation Law and the Delaware Constitution).

Based on the foregoing, we are of the opinion that the Shares have been duly authorized, and upon issuance and delivery against payment therefor in accordance with the terms of the Purchase Agreement, will be validly issued, fully paid and non-assessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption "Legal Matters" in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-1 of our report dated June 26, 2006, except for Note 15 for as to which the date is November 3, 2006, relating to the financial statements, which appears in Metabolix Inc.'s Registration Statement on Amendment #4 to Form S-1, filed on November 6, 2006.

/s/ PricewaterhouseCoopers LLP Boston, Massachusetts November 9, 2006