

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

WASHINGTON, D.C. 20549

**FORM S-1**

REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933

**ACCURAY INCORPORATED**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction  
of incorporation or organization)

3841  
(Primary Standard Industrial  
Classification Code Number)

20-8370041  
(I.R.S. Employer  
Identification Number)

1310 Chesapeake Terrace, Sunnyvale, California 94089  
(408) 716-4600  
(Address, including zip code, and telephone number, including  
area code, of registrant's principal executive offices)

Euan S. Thomson, Ph.D.  
Chief Executive Officer  
Accuray Incorporated  
1310 Chesapeake Terrace  
Sunnyvale, California 94089  
(408) 716-4600

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

Copies To:

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Latham & Watkins LLP  
140 Scott Drive  
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Approximate date of commencement of the 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.

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.  333-138622

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.

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.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Number of Shares to be Registered(1)	Proposed Maximum Aggregate Offering Price per Share(2)	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee
Common Stock, \$0.001 par value	3,066,665	\$18.00	\$55,199,970	\$5,907

(1) Includes 399,998 shares that the underwriters have the option to purchase to cover over-allotments, if any.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.



### **Explanatory Note**

This Registration Statement is being filed pursuant to Rule 462(b) solely to increase the amount of securities which may be issued by us. This Registration Statement relates to the initial public offering of common stock contemplated by the Registration Statement on Form S-1 (File No. 333-138622), which we initially filed on November 13, 2006, as amended, and which was declared effective by the Securities and Exchange Commission on February 7, 2007. Pursuant to Rule 462(b) the contents of the Registration Statement on Form S-1 (File No. 333-138622) including the exhibits thereto and each of the documents incorporated therein by reference, are hereby incorporated into this Registration Statement.

### **Certification**

The Registrant hereby certifies to the Securities and Exchange Commission that (i) it has instructed its bank to pay the filing fee set forth on the cover page of this Registration Statement by a wire transfer of such amount to the Securities and Exchange Commission's account at Mellon Bank as soon as practicable (but no later than the close of business as of February 8, 2007), (ii) it will not revoke such instructions, (iii) it has sufficient funds in the relevant account to cover the amount of such filing fee and (iv) it will confirm receipt of such instructions by its bank during regular business hours no later than February 8, 2007.



## EXHIBIT INDEX

Exhibit No.	Description of Exhibit
5.1	Form of Opinion of Latham & Watkins LLP (included in the Registrant's Amendment No. 6 to Registration Statement on Form S-1 (Registration No. 333-138622) filed with the Securities and Exchange Commission on February 7, 2007).
23.1	Consent of Latham & Watkins LLP (included in Exhibit 5.1).
23.2	Consent of Grant Thornton LLP, independent registered public accounting firm.
24.1	Power of Attorney (included in the Registrant's Registration Statement on Form S-1 (Registration No. 333-138622) and Amendment No. 2 to the Registration Statement filed with the Securities and Exchange Commission on November 13, 2006 and January 16, 2007, respectively).

## QuickLinks

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**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We have issued our report dated November 7, 2006, accompanying the consolidated financial statements of Accuray Incorporated contained in Amendment No. 6 to the Registration Statement (Form S-1 No. 333-138622) and Prospectus. We consent to the incorporation by reference in this Registration Statement on Form S-1 filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended, of the aforementioned report and to the use of our name as it appears under the caption "Experts."

/s/ Grant Thornton LLP

San Francisco, California  
February 7, 2007

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QuickLinks

[Exhibit 23.2](#)

[CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM](#)