UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

SCHEDULE 14D-9
(AMENDMENT NO. 2)
SOLICITATION/RECOMMENDATION STATEMENT UNDER
SECTION 14(d)(4) OF THE SECURITIES EXCHANGE ACT OF 1934

EXEGENICS INC.

(NAME OF SUBJECT COMPANY)

EXEGENICS INC.

(NAME OF PERSON FILING STATEMENT)

COMMON STOCK, PAR VALUE \$0.01 PER SHARE SERIES A CONVERTIBLE PREFERRED STOCK, PAR VALUE \$0.01 PER SHARE

(TITLE OF CLASS OF SECURITIES)

301610 (COMMON STOCK)

(CUSIP NOT APPLICABLE FOR PREFERRED STOCK) (CUSIP NUMBER OF CLASS OF SECURITIES)

RONALD L. GOODE, PH.D. EXEGENICS INC. 2110 RESEARCH ROW DALLAS, TEXAS 75235 (214) 358-2000

(NAME, ADDRESS AND TELEPHONE NUMBER OF PERSON AUTHORIZED TO RECEIVE NOTICE AND COMMUNICATIONS ON BEHALF OF THE PERSON FILING STATEMENT)

COPY TO:

JOEL I. PAPERNIK, ESQ.
MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.
666 THIRD AVENUE
24TH FLOOR
NEW YORK, NEW YORK 10017
(212) 935-3000

☐ Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

This Amendment No. 2 amends and supplements the Solicitation/Recommendation Statement on Schedule 14D-9 initially filed with the Securities and Exchange Commission on July 25, 2003 (the "Schedule 14D-9"), by eXegenics Inc., a Delaware corporation ("eXegenics"), relating to the exchange offer made by AVI BioPharma, Inc. (the "Purchaser"), an Oregon corporation, as set forth in a Tender Offer Statement filed by the Purchaser on Schedule TO, dated July 25, 2003 (the "Schedule TO"), for all of the outstanding common stock, par value \$0.01 per share, of eXegenics, and Series A convertible preferred stock, par value \$0.01 per share of eXegenics (together, the "Shares"), upon the terms and subject to the conditions set forth in the Schedule TO. Unless otherwise indicated, all capitalized terms used but not defined herein shall have the meanings ascribed to them in the Schedule 14D-9.

ITEM 8. ADDITIONAL INFORMATION.

Item 8 of the Schedule 14D-9 is hereby amended to add the following:

On August 1, 2003, eXegenics issued a press release announcing that on July 31, 2003, eXegenics received an amendment to the unsolicited tender offer from EI Acquisition Inc. and Foundation Growth Investments LLC to acquire all of the Shares of eXegenics. The press release announced that the amendment extends the expiration date of the unsolicited tender offer until 12:00 Midnight, New York City time, on Friday, August 15, 2003, and increases the offering price from \$0.37 per Share to \$0.51 per Share, net to the seller in cash. A copy of the press release is filed herewith as Exhibit 13 and incorporated herein by reference.

The information set forth in Exhibit 13 is incorporated herein by reference.

ITEM 9. EXHIBITS.

Item 9 of the Schedule 14D-9 is hereby amended by adding the following thereto:

EXHIBIT NO.

Exhibit 13.

Press Release issued by eXegenics on August 1, 2003.

SIGNATURE

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

EXEGENICS INC.

By:

/s/ RONALD L. GOODE

Ronald L. Goode Chairman, Chief Executive Officer and President

Dated: August 1, 2003

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ITEM 8. ADDITIONAL INFORMATION. ITEM 9. EXHIBITS. EXHIBIT NO.

SIGNATURE

Exhibit 13

Press Release

Contact: WaLisa M. Davenport eXegenics Inc. (214) 358-2000

E. Blair Clark (Investors) Burns McClellan (212) 213-0006

EXEGENICS RECEIVES NOTICE OF FOUNDATION'S EXTENSION OF UNSOLICITED TENDER OFFER EXPIRATION DATE AND INCREASE IN PURCHASE PRICE

Dallas, August 1, 2003—eXegenics Inc. (Nasdaq: EXEG) yesterday received an amendment to the unsolicited tender offer from EI Acquisition Inc. and Foundation Growth Investments LLC to acquire all of the outstanding common stock and Series A convertible preferred stock of eXegenics. The amendment extends the expiration date of the unsolicited tender offer until 12:00 Midnight, New York City time, on Friday, August 15, 2003, and increases the price to purchase all outstanding shares of eXegenics common stock and Series A convertible preferred stock from \$0.37 per share to \$0.51 per share. eXegenics' management, Board of Directors and professional advisors will evaluate the amended offer, and the Board will advise eXegenics' stockholders of its response to the amended offer. In the interim, eXegenics respectfully requests that its stockholders defer making any determination with respect to the amended offer until they have been advised of eXegenics' position with respect to the amended offer.

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Safe Harbor

This release contains forward-looking statements. The words "believe," "expect," "intend," "anticipate," variations of such words, and similar expressions identify forward-looking statements, but their absence does not mean that the statement is not forward-looking. These statements are subject to certain risks, uncertainties and assumptions that are difficult to predict. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this release. eXegenics undertakes no obligation to update any forward-looking statement to reflect new information, events or circumstances after the date of this release or to reflect the occurrence of unanticipated events.

QuickLinks

Exhibit 13

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