BIOSANTE PHARMACEUTICALS INC Form 425 January 28, 2013

QuickLinks -- Click here to rapidly navigate through this document

Filed by BioSante Pharmaceuticals, Inc.
Pursuant to Rule 425 under the
Securities Act of 1933 (the "Securities Act") and
deemed filed pursuant to Rule 14a-6 under the
Securities Exchange Act of 1934 (the "Exchange Act")
Securities Act File Number: 333-185391
Subject Company: BioSante Pharmaceuticals, Inc.
Exchange Act File Number: 001-31812

January 28, 2013 To our Stockholders:

On October 3, 2012, BioSante Pharmaceuticals, Inc. (BioSante) and ANIP Acquisition Company d/b/a ANI Pharmaceuticals, Inc. (ANI), entered into a merger agreement pursuant to which ANI will merge with and into BioSante, with BioSante continuing as the surviving company. The accompanying joint proxy statement/prospectus provides you with detailed information about the special meetings of stockholders of BioSante and ANI to consider the merger and related business.

Included in the joint proxy statement/prospectus are BioSante's financial statements. Subsequent to the issuance of these financial statements as part of an amendment to the registration statement on Form S-4 of which the joint proxy statement/prospectus is a part, BioSante identified a misstatement in the calculation of common stock presented in its statements of stockholders' equity resulting from the reverse stock split described in Note 2 to its financial statements. This misstatement has been corrected in the financial statements included in BioSante's current report on Form 8-K, dated as of January 28, 2013, a copy of which is being provided to you with these materials. BioSante has concluded that the misstatement does not rise to the level of materiality such that an amendment to its Form S-4 registration statement is required. However, as you consider the merger and related business to be conducted at the special meetings, please read BioSante's corrected annual financial statements in the Form 8-K being provided to you with these materials instead of BioSante's financial statements in the Form S-4.

Please note that the financial statements contained in BioSante's annual report on Form 10-K for the year ended December 31, 2011 and subsequent quarterly reports on Form 10-Q filed during 2012 do not contain the misstatement.

Thank you for your attention to this matter.

Stephen M. Simes Vice Chairman, President and Chief Executive Officer BioSante Pharmaceuticals, Inc. Arthur S. Przybyl President and Chief Executive Officer ANIP Acquisition Company d/b/a ANI Pharmaceuticals, Inc.

#### **Important Additional Information for Investors and Stockholders**

This communication is being made in respect of the proposed merger between BioSante and ANI and related matters involving BioSante and ANI. In connection with the proposed transaction, BioSante has filed with the SEC and the SEC has declared effective a registration statement on Form S-4, containing a joint proxy statement/prospectus and other relevant materials. The final definitive joint proxy statement/prospectus is being provided together with this communication. Investors and security holders are urged to read the joint proxy statement/prospectus (including any amendments or supplements) and other documents filed with the SEC carefully in their entirety because they contain important information about BioSante, ANI and the proposed transaction.

Investors and security holders may obtain free copies of the registration statement and the joint proxy statement/prospectus and other documents filed with the SEC by BioSante at the SEC's web site at www.sec.gov. Free copies of the registration statement and the joint proxy statement/prospectus and other documents filed with the SEC also can be obtained by directing a request to BioSante, Attention: Investor Relations, telephone: (847) 478-0500. In addition, investors and security holders may access copies of the documents filed with the SEC by BioSante on BioSante's website at www.biosantepharma.com.

BioSante and its directors and executive officers and other persons may be deemed to be participants in the solicitation of proxies in respect of the proposed transaction described in this release. Information regarding BioSante's directors and executive officers is available in BioSante's annual report on Form 10-K for the year ended December 31, 2011, which was filed with the SEC on March 13, 2012 and BioSante's definitive proxy statement for its 2012 annual meeting of stockholders, which was filed with the SEC on April 9, 2012. If and to the extent that any of the BioSante participants will receive any additional benefits in connection with the proposed transaction that are unknown as of the date of this release, the details of those benefits will be described in the definitive joint proxy statement/prospectus relating to the proposed transaction. Investors and stockholders can obtain more detailed information regarding the direct and indirect interests of BioSante's directors and executive officers in the proposed transaction by reading the definitive joint proxy statement/prospectus.

This communication does not constitute an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction.

# QuickLinks

Filed by BioSante Pharmaceuticals, Inc. Pursuant to Rule 425 under the Securities Act of 1933 (the "Securities Act") and deemed filed pursuant to Rule 14a-6 under the Securities Exchange Act of 1934 (the "Exchange Act") Securities Act File Number: 333-185391 Subject Company: BioSante Pharmaceuticals, Inc. Exchange Act File Number: 001-31812