PROSPECTUS SUPPLEMENT (To the prospectus dated June 10, 2010)

Page

10,588,236 Units



Units Consisting of One Share of Common Stock and a Warrant to Purchase 0.50 of a Share of Common Stock

We are offering 10,588,236 units, with each unit consisting of one share of our common stock and a warrant to purchase 0.50 of a share of our common stock (and the shares of common stock issuable from time to time upon exercise of the offered warrants), to institutional investors pursuant to this prospectus supplement and the accompanying prospectus. Each unit will be sold at a negotiated price of \$1.70. Each warrant has an exercise price of \$2.00 per share, and is exercisable immediately for a period of five years. The shares of common stock and the warrants will be issued separately but will be purchased together in this offering.

The warrants will not be listed on any national securities exchange. Our common stock is listed on the NASDAQ Global Market under the symbol "BPAX." On December 23, 2010, the last reported sale price of our common stock on the NASDAQ Global Market was \$1.575 per share. As of December 23, 2010, the aggregate market value of our outstanding common stock held by non-affiliates was approximately \$107.2 million based on 70,802,894 shares of outstanding common stock, of which 68,065,942 shares were held by non-affiliates, and a price of \$1.575 per share, which was the last reported sale price of our common stock as quoted on the NASDAQ Global Market on December 23, 2010.

This investment involves a high degree of risk. Please see the section entitled "Risk Factors" beginning on page S-6 of this prospectus supplement and page 3 of the accompanying prospectus.

Rodman & Renshaw, LLC acted as the placement agent on this transaction. The placement agent is not required to sell any specific number or dollar amount of securities. The placement agent has agreed to use its reasonable best efforts to sell the securities offered by this prospectus supplement. We have agreed to pay the placement agent the placement agent fees set forth in the table below.

	I	Per Unit	 Total
Public offering price	\$	1.70	\$ 18,000,001
Placement agent fees(1)	\$	0.102	\$ 1,080,000
Proceeds, before expenses, to BioSante Pharmaceuticals, Inc.(2)	\$	1.598	\$ 16,920,001

(1) In addition, we have agreed to issue the placement agent warrants to purchase up to 317,647 shares of our common stock at an exercise price of \$2.125 per share and to reimburse the placement agent for certain of its expenses as described under "Plan of Distribution" in this prospectus supplement.

(2) The proceeds shown exclude proceeds that we may receive upon exercise of the warrants.

Delivery of the units is expected to be made on or about December 30, 2010, against payment for such units to be received by us on the same date.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Rodman & Renshaw, LLC

The date of this prospectus supplement is December 27, 2010

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PROSPECTUS

About This Prospectus About Our Company Risk Factors Cautionary Statement Regarding Forward-Looking Statements Use of Proceeds Description of Common Stock Description of Preferred Stock Description of Warrants Description of Warrants Description of Units Anti-Takeover Effects of Provisions of Our Certificate of Incorporation, Our Bylaws and Delaware Law Plan of Distribution Legal Matters Experts Where You Can Find More Information Incorporation of Certain Documents by Reference

You should rely only on information contained in this prospectus supplement, the accompanying prospectus and the documents we incorporate by reference in this prospectus supplement and the accompanying prospectus. We have not authorized anyone to provide you with information that is different. You should not assume that the information in this prospectus supplement or the accompanying prospectus is accurate as of any date other than the date on the front of this prospectus supplement or the accompanying prospectus or that any document that we incorporated by reference in this prospectus supplement or the accompanying prospectus is accurate as of any date other than its filing date. You should not consider this prospectus supplement or the accompanying prospectus to be an offer or solicitation relating to the securities in any jurisdiction in which such an offer or solicita tion relating to the securities is not authorized. Furthermore, you should not consider this prospectus to be an offer or solicitation relating the offer or solicitation is not qualified to do so, or if it is unlawful for you to receive such an offer or solicitation.

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ABOUT THIS PROSPECTUS SUPPLEMENT

We are providing this information to you about this offering in two parts. The first part is this prospectus supplement, which provides the specific details regarding the offering. The second part is the base prospectus dated June 10, 2010, included in the registration statement on Form S-3 (No. 333-166859) which we are supplementing with the information contained in this supplement. Generally, when we refer to this "prospectus," we are referring to both documents combined. Some of the information in the base prospectus may not apply to this offering.

You should also read and consider the information in the documents that we have referred you to in "Where You Can Find More Information" on page S-17 of this prospectus supplement and the information described under "Incorporation of Certain Documents by Reference" on page S-18 of this prospectus supplement before investing in our securities. The information incorporated by reference is considered to be part of this prospectus supplement, and information that we file later with the Securities and Exchange Commission, or SEC, will automatically update and supersede this information.

If information in this prospectus supplement is inconsistent with the base prospectus, you should rely on this prospectus supplement. We have not authorized anyone to provide information different from that contained or incorporated in this prospectus supplement and the accompanying prospectus. We are offering to sell units only in jurisdictions where offers and sales are permitted. The information contained or incorporated in this prospectus supplement and the accompanying prospectus is accurate only as of the date of such information, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of our units.

In this prospectus supplement, "we," "us," "our company" and "BioSante" refer to BioSante Pharmaceuticals, Inc., unless the context otherwise requires.

We own or have the rights to use various trademarks, trade names or service marks that are used in this prospectus, including BioSante®, LibiGel®, ElestrinTM, Bio-T-GelTM, The Pill PlusTM, BioLookTM, BioVantTM, Bio-OralTM, BioAirTM and GVAXTM. All other trademarks, trade names or service marks that are used in this prospectus are the property of their respective owners.

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PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information about us, this offering and information appearing elsewhere in this prospectus supplement, in the accompanying prospectus and in the documents we incorporate by reference. This summary is not complete and does not contain all of the information that you should consider before investing in our securities. To fully understand this offering and its consequences to you, you should read this entire prospectus supplement and the accompanying prospectus carefully, including the information referred to under the heading "Risk Factors" in this prospectus supplement beginning on page S-6, and the financial statements and other information incorporated by reference in this prospectus supplement and the accompanying prospectus when making an investment decision.

About BioSante Pharmaceuticals, Inc.

Our Business

We are a specialty pharmaceutical company focused on developing products for female sexual health and oncology.

Our products, either approved or in development, include:

- LibiGel once daily transdermal testosterone gel in Phase III clinical development under a Special Protocol Assessment (SPA) for the treatment of female sexual dysfunction (FSD).
- Elestrin once daily transdermal estradiol (estrogen) gel approved by the U.S. Food and Drug Administration (FDA) indicated for the treatment of moderate-to-severe vasomotor symptoms (hot flashes) associated with menopause and marketed in the U.S.
- The Pill-Plus (triple component contraceptive) once daily use of various combinations of estrogens, progestogens and androgens in Phase II development for the treatment of FSD in women using oral or transdermal contraceptives.
- · Bio-T-Gel once daily transdermal testosterone gel in development for the treatment of hypogonadism, or testosterone deficiency, in men.
- · GVAX cancer vaccines a portfolio of cancer vaccines in Phase II clinical development for the treatment of various cancer types.

We believe LibiGel remains the lead pharmaceutical product in the U.S. in active development for the treatment of hypoactive sexual desire disorder (HSDD) in menopausal women, and that it has the potential to be the first product approved by the FDA for this common and unmet medical need, for which presently there is no FDA approved pharmaceutical product. We believe based on agreements with the FDA, including an SPA, that two Phase III safety and efficacy trials and one year of LibiGel exposure in a Phase III cardiovascular and breast cancer safety study with a four-year follow-up post-NDA filing and potentially post-FDA approval and product launch, are the essential requirements for submission and, if successful, approval by the FDA of a new drug application (NDA) for LibiGel for the treatment of FSD, specifically HSDD in menopausal women.

Currently, three LibiGel Phase III studies are underway and enrolling women: two LibiGel Phase III safety and efficacy clinical trials under an FDA agreed SPA and one Phase III cardiovascular and breast cancer safety study. Both Phase III safety and efficacy trials are randomized, double-blind, placebo-controlled, multi-center trials that will enroll up to approximately 500 surgically menopausal women each, exposed to LibiGel or placebo for six months. The Phase III safety study is a randomized, double-blind,

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placebo-controlled, multi-center, cardiovascular and breast cancer safety study of between 2,500 and 4,000 women exposed to LibiGel or placebo for an average of 12 months after which time we plan to submit an NDA to the FDA. Following NDA submission and potential FDA approval and product launch, we will continue to follow the women in the safety study for an average of 60 months of exposure.

In October 2010, we announced that based upon the fourth review of study conduct and unblinded safety data from the LibiGel Phase III cardiovascular and breast cancer safety study by the study's independent data monitoring committee (DMC), as well as the first unblinded statistical analysis by the DMC, the DMC unanimously recommended continuing the study as described in the FDA-agreed study protocol, with no modifications. The unblinded review of the cardiovascular events and breast cancer events by the DMC showed no safety signals. The review and statistical analysis were based on 2,500 subjects who have been enrolled in the study. Another unblinded statistical analysis will be conducted by the DMC each time there is an additional adjudicated cardiovascular event. As of the date of the DMC's review, there had been only 14 adjudicated cardiovascular (CV) events, a rat e of approximately 0.65 percent, compared to an expected rate of CV events for this study of approximately two percent. Moreover, there have been only seven diagnoses of breast cancer, a rate of approximately 0.32 percent, compared to an expected rate of approximately 0.35 percent, after approximately 2,300 women-years of exposure in the study. The data analyses of the CV events are based on predefined statistical methods, in accordance with our agreement with the FDA, to determine if LibiGel is safe for menopausal women. At each of these analyses the trial potentially could be fully enrolled. If enrollment is not completed sooner, enrollment will continue until the study reaches its predetermined maximum of 4,000 women. Upon completion of the statistical analyses of the safety study and efficacy trials, we intend to submit a NDA to the FDA, requesting approval to market LibiGel for the treatment of HSDD in menopausal women. It is our objective to submit the LibiGel NDA to the FDA in late 2011.

Elestrin is our first FDA approved product. Azur Pharma International II Limited (Azur), BioSante's licensee, is marketing Elestrin in the U.S. using Azur's women's health sales force which targets estrogen prescribing physicians in the U.S. comprised mostly of gynecologists. In December 2009, we entered into an amendment to our original licensing agreement with Azur which reduced permanently the royalty percentage due to us related to Azur's sales of Elestrin. During 2009 and 2010 we received approximately \$3.16 million in non-refundable payments in exchange for the elimination of all remaining future royalty payments that BioSante would not be required to pay to Antares under a separate agreement and certain future milestone payments. We maintain the right to receive up to \$140 million in sales-based milestone payments from Azur if Elestrin reaches c ertain predefined sales per calendar year.

GVAX cancer vaccines are designed to stimulate the patient's immune system to fight effectively the patient's own cancer. Multiple Phase II trials of these vaccines are ongoing at minimal cost to us at the Johns Hopkins Sidney Kimmel Comprehensive Cancer Center in various cancer types, including pancreatic cancer, leukemia, breast and prostate (expected to begin in the fourth quarter 2010) cancer. Three of these vaccines have been granted FDA orphan drug designation.

Company Information

Our company, which was initially formed as a corporation organized under the laws of the Province of Ontario on August 29, 1996, was continued as a corporation under the laws of the State of Wyoming on December 19, 1996 and was reincorporated under the laws of the State of Delaware on June 26, 2001. In October 2009, Cell Genesys, Inc. merged with and into us, and we survived as the surviving corporation.

Our principal executive offices are located at 111 Barclay Boulevard, Lincolnshire, Illinois 60069. Our telephone number is (847) 478-0500 and our Internet web site address is www.biosantepharma.com. We make available on our website free of charge a link to our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports as soon as practicable after we

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electronically file such material with the Securities and Exchange Commission, or SEC. Except for the documents specifically incorporated by reference into this prospectus, information contained on our website or that can be accessed through our website does not constitute a part of this prospectus. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

Common stock offered by us	10,588,236 shares
Common stock to be outstanding after this offering	81,391,130 shares
Warrants offered by us	Warrants to purchase up to 5,294,118 shares of our common stock (excluding warrants to purchase up to 317,647 shares of our common stock to be issued to our placement agent upon the completion of this offering). Each warrant has an exercise price of \$2.00 per share and is exercisable immediately for a period of five years. This prospectus supplement also relates to the offering of the shares of common stock issuable upon exercise of the warrants. There is currently no market for the warrants and none is expected to develop after this offering.
Use of proceeds	We intend to use the net proceeds from the sale of the securities under this prospectus supplement for general corporate purposes, including, without limitation, to fund our Phase III clinical study program for LibiGel, and for working capital. Please see the section entitled "Use of Proceeds" on page S-10 of this prospectus supplement.
NASDAQ Global Market symbol	BPAX
Risk factors	This investment involves a high degree of risk. Please see the section entitled "Risk Factors" beginning on page S-6 of this prospectus supplement.

The number of shares of our common stock to be outstanding immediately after this offering is based on 70,802,894 shares of our common stock outstanding as of December 23, 2010. Unless we specifically state otherwise, the share information in this prospectus supplement does not include:

- 5,294,118 shares of our common stock issuable upon the exercise of warrants to be issued to purchasers in this offering and an additional 317,647 shares of our common stock issuable upon the exercise of warrants to be issued to the placement agent in this offering;
- 5,611,348 shares of our common stock issuable upon the conversion of senior convertible notes of Cell Genesys assumed by us in connection with our merger with Cell Genesys;
- 13,806,825 shares of our common stock issuable upon the exercise of warrants outstanding at a weighted average exercise price of \$4.49 per share;

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- 3,730,536 shares of our common stock issuable upon the exercise of options outstanding at a weighted average exercise price of \$3.69 per share;
- 2,337,750 shares of our common stock available for future issuance under the BioSante Pharmaceuticals, Inc. Amended and Restated 2008 Stock Incentive Plan; and
- 391,286 shares of our common stock issuable upon the one-for-one exchange of our shares of class C special stock at an exchange price of \$2.50 per share at the option of the holder of such class C special shares.

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RISK FACTORS

An investment in our securities involves a high degree of risk. Our business, financial condition, operating results and prospects can be impacted by a number of factors, any one of which could cause our actual results to differ materially from recent results or from our anticipated future results. As a result, the trading price of our common stock and the value of the warrants offered hereby could decline, and you could lose part or all of your investment. You should carefully consider the risks described below with all of the other information included in this prospectus supplement, our annual report on Form 10-K for the fiscal year ended December 31, 2009, our subsequent quarterly reports on Form 10-Q and our other filings with the SEC. Failure to satisfactorily

achieve any of our objectives or avoid any of the risks below would likely have a material adve rse effect on our business, operating results and financial condition and could cause the trading price of our common stock to decrease.

Risks Related to this Offering

Since we have broad discretion in how we use the proceeds from this offering, we may use the proceeds in ways in which you disagree.

We intend to use the net proceeds from the sale of the securities under this prospectus supplement for general corporate purposes, including, without limitation, to fund our Phase III clinical study program for LibiGel, and for working capital. Because we have not allocated specific amounts of the net proceeds from this offering for any specific purposes, our management will have significant flexibility in applying the net proceeds of this offering. Accordingly, you will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for our company. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flow.

Investors in this offering will pay a higher price than the book value of our stock.

If you purchase securities in this offering, you will incur an immediate and substantial dilution in net tangible book value, after giving effect to the sale by us of the shares of common stock offered in this offering.

We do not intend to pay any cash dividends in the foreseeable future and, therefore, any return on your investment in our common stock must come from increases in the fair market value and trading price of our common stock.

We do not intend to pay any cash dividends in the foreseeable future and, therefore, any return on your investment in our common stock must come from increases in the fair market value and trading price of our common stock.

Risks Related to the Warrants

There is no public market for the warrants to purchase common stock being offered in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any securities exchange. Without an active market, the liquidity of the warrants will be limited.

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Holders of our warrants will have no rights as a common stockholder until such holders exercise their warrants and acquire our common stock.

Until you acquire shares of our common stock upon exercise of your warrants, you will have no rights with respect to the shares of our common stock underlying such warrants. Upon exercise of your warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

Risks Related to Our Common Stock

There are a substantial number of shares of our common stock eligible for future sale in the public market. The sale of these shares could cause the market price of our common stock to fall. Any future equity issuances by us may have dilutive and other effects on our existing stockholders.

As of December 23, 2010, there were approximately 70.8 million shares of our common stock outstanding, and in addition, security holders held options, warrants, convertible notes or other convertible securities, which, if vested, exercised or converted, would obligate us to issue up to approximately 23 million additional shares of common stock. A substantial number of those shares, when we issue them upon exercise or conversion, will be available for immediate resale in the public market. The market price of our common stock could fall as a result of sales of any of these shares of common stock due to the increased number of shares available for sale in the market.

We primarily have financed our operations, and we anticipate that we will have to finance a large portion of our operating cash requirements, by issuing and selling our common stock or securities convertible into or exercisable for shares of our common stock. We have shelf registration statements, which subject to certain limitations, permits us to sell additional securities, some or all of which may be shares of our common stock or securities convertible into or exercisable for resale in the market. Any issuances by us of equity securities may be at or below the prevailing market price of our common stock and may have a dilutive impact on our existing stockholders. These issuances or other dilutive issuances also would cause our net income, if any, per share to decrease in future periods. As a result, the market price of our common stock could decrease.

The price of our common stock has been and likely will continue to be volatile. As a result, we could become subject to class action litigation, which even if without merit, could be costly to defend and could divert the time and attention of our management, which could harm our business and financial condition.

Since January 1, 2009, the closing sale price of our common stock has ranged from a low of \$1.14 to a high of \$2.59. It is likely that the price of our common stock will continue to fluctuate in the future. The securities of small capitalization, biopharmaceutical companies, including our company, from time to time experience significant price fluctuations, often unrelated to the operating performance of these companies. In particular, the market price of our common stock may fluctuate significantly due to a variety of factors, including:

- general stock market and general economic conditions in the United States and abroad, not directly related to our company or our business;
- our ability to obtain additional financing when needed and on acceptable terms;

governmental agency actions, including in particular decisions or actions by the FDA or FDA advisory committee panels with respect to our products or our competitors' products;

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- the results of our current and any future clinical studies, including in particular our LibiGel Phase III clinical study program;
- the results of clinical trials conducted by others on products that would compete with our products;
- the results and timing of regulatory reviews relating to the approval of our products, including in particular LibiGel;
- · failure of any of our products, if approved, to achieve commercial success;
- · public concern as to the safety or efficacy of or market acceptance of products developed by the us or our competitors;
- the entry into, or termination of, key license and sublicense agreements;
- · announcements by licensors or licenses of our technology;
- the initiation of, material developments in, or conclusion of litigation to enforce or defend any of our intellectual property rights;
- · general and industry-specific economic conditions that may affect our research and development expenditures;
- · issues in manufacturing our products;
- the loss of key employees;
- the introduction of technological innovations or new commercial products by our competitors;
- · changes in estimates or recommendations by securities analysts, if any, who cover our common stock;
- · future sales of our securities;
- · changes in the structure of health care payment systems;
- period-to-period fluctuations in our financial results, including our cash, cash equivalents and short-term investment balance, operating expenses, cash burn rate or revenues; and
- other potentially negative financial announcements, including delisting of our common stock from the NASDAQ Global Market, changes in accounting treatment or restatement of previously reported financial results, delays in our filings with the SEC or our failure to maintain effective internal control over financial reporting.

Also, certain dilutive securities such as warrants can be used as hedging tools which may increase volatility in our stock and cause a price decline. While a decrease in market price could result in direct economic loss for an individual investor, low trading volume could limit an individual investor's ability to sell our common stock, which could result in substantial economic loss as well. In addition, due in large part to the current global economic crisis many institutional investors that historically had invested in specialty pharmaceutical companies have ceased operations or further investment in these companies, which has had negatively impacted trading volume for our stock. In addition, the occurrence of any of the risks described in

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this report or otherwise in reports we file with or submit to the SEC from time to time could have a material and adverse impact on the market price of our common stock.

Securities class action litigation is sometimes brought against a company following periods of volatility in the market price of its securities or for other reasons. We may become the target of similar litigation. Securities litigation, whether with or without merit, could result in substantial costs and divert management's attention and resources, which could harm our business and financial condition, as well as the market price of our common stock.

Shares of our common stock represent equity interests in our company and are subordinate to all of our existing and future indebtedness.

Shares of our common stock represent equity interests in our company and, as such, rank junior to any indebtedness of our company now existing or created in the future, as well as to the rights of any preferred shares that may be issued in the future. There is no limitation on the amount of indebtedness we may incur in the future. Accordingly, we may incur substantial amounts of debt and other obligations that will rank senior to our common stock or to which our common stock will be structurally subordinated.

Provisions in our charter documents and Delaware law could discourage or prevent a takeover, even if an acquisition would be beneficial to our stockholders.

Provisions of our certificate of incorporation and bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our stockholders. These provisions include:

- authorizing the issuance of "blank check" preferred shares that could be issued by our board of directors to increase the number of outstanding shares and thwart a takeover attempt;
- prohibiting cumulative voting in the election of directors, which would otherwise allow less than a majority of our stockholders to elect director candidates; and
- advance notice provisions in connection with stockholder proposals that may prevent or hinder any attempt by our stockholders to bring business to be considered by our stockholders at a meeting or replace our board of directors.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents that we incorporate by reference herein and therein, contain forwardlooking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts included in or incorporated by reference into this prospectus supplement and any accompanying prospectus supplement that address activities, events or developments that we expect, believe or anticipate will or may occur in the future are forward-looking statements. Our forward-looking statements generally include statements about our plans, objectives, strategies and prospects regarding, among other things, our business, results of operations, liquidity and financial condition. Some of the forward-looking statements included or incorporated by reference into this prospectus supplement in clude statements regarding:

• the timing of the commencement, enrollment and successful completion of our clinical studies, the submission of new drug applications and other regulatory status of our products in development;

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- approval by the U.S. Food and Drug Administration of our products that are currently in clinical development;
- our spending capital on research and development programs, pre-clinical studies and clinical studies, regulatory processes, establishment of sales and marketing capabilities and licensure or acquisition of new products;
- our efforts to continue to evaluate various strategic alternatives with respect to our products and our company;
- the future market size and market acceptance of our products;
- the effect of new accounting pronouncements and future health care, tax and other legislation;
- whether and how long our existing cash will be sufficient to fund our operations;
- our need, ability and expected timing of any actions to raise additional capital through future equity and other financings; and
- our substantial and continuing losses.

In some cases, we have identified forward-looking statements with words like "believe," "may," "could," "might," "possible," "potential," "project," "will," "should," "expect," "intend," "plan," "predict," "anticipate," "estimate," "approximate," "contemplate" or "continue" or the negative of these words or other words and terms of similar meaning.

Forward-looking statements involve risks and uncertainties. These uncertainties include factors that affect all businesses as well as matters specific to us. Some of the factors known to us that could cause our actual results to differ materially from what we have anticipated in our forward-looking statements are described under the section entitled "Risk Factors" included elsewhere in this prospectus supplement and in the accompanying prospectus and under similar sections in the documents we incorporate by reference into this prospectus. We wish to caution readers not to place undue reliance on any forward-looking statement that speaks only as of the date made and to recognize that forward-looking statements are predictions of future results, which may not occur as anticipated. Actual results could differ materially from those anticipated in the forward-looking statements and from historical results, due to the risks and uncertainties described under the section entitled "Risk Factors" included elsewhere in this prospectus supplement and in the accompanying prospectus and under similar sections in the documents we incorporate by reference into this prospectus, as well as others that we may consider immaterial or do not anticipate at this time. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we do not know whether our expectations will prove correct. We assume no obligation to update forward-looking statements to reflect actual results or changes in factors or assumptions affecting such forward-looking statements, except if we otherwise are required by law. We advise you, however, to consult any further disclosures we make on related subjects in our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K we file with or furnish to the SEC.

USE OF PROCEEDS

We expect the net proceeds from this offering to be up to approximately \$16.9 million after deducting the placement agent fees (excluding the cost of the warrants issued to the placement agent), as described in "Plan of Distribution," and other estimated offering expenses payable by us, which include legal, accounting, filing fee and various other fees and expenses associated with registering the securities and listing the common stock, and excluding the proceeds, if any, from the exercise of the warrants issued in this

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offering. We intend to use the net proceeds from the sale of the securities under this prospectus supplement for general corporate purposes, including, without limitation, to fund our Phase III clinical study program for LibiGel, and for working capital.

As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses of the proceeds from this offering. Accordingly, we will retain broad discretion over the use of such proceeds. The amounts and timing of our actual expenditures will depend on numerous factors, including the progress in, and costs of, our Phase III clinical studies for LibiGel, the timing of revenues, if any, from any future collaborations or similar transactions and the amount of cash used by our operations. Pending the uses described above, we intend to deposit the proceeds temporarily in our non-interest bearing checking account or to invest them temporarily in U.S. treasury notes or short-term or marketable securities until we use them for their stated purpose.

DILUTION

Our net tangible book value on September 30, 2010 was approximately \$15.3 million, or approximately \$0.22 per share of common stock. Net tangible book value per share is determined by dividing our net tangible book value, which consists of tangible assets less total liabilities, by the number of shares of common stock outstanding on that date. Without taking into account any other changes in our net tangible book value after September 30, 2010, other than to give effect to our receipt of the estimated net proceeds from the sale of 10,588,236 units at an offering price of \$1.70 per unit, less the placement agent fees and our estimated offering expenses, our net tangible book value as of September 30, 2010, after giving effect to the items above, would have been approximately \$32.2 million, or \$0.40 per share. This represents an immediate increase in net tangible book value of \$0.18 per share of common stock to our existing stockholders and an immediate dilution in net tangible book value of \$1.30 per share of common stock to purchasers of units in this offering. The following table illustrates this per share dilution:

i ubic olicing price per unit		Ψ	1.70
Net tangible book value per share as of September 30, 2010	\$ 0.22		
Increase in net tangible book value per share attributable to this offering	0.18		
Pro forma net tangible book value per share as of September 30, 2010, after giving effect to this offering			0.40
Dilution in net tangible book value per share to new investors in this offering		\$	1.30

The above table is based on 70,802,894 shares of our common stock outstanding as of September 30, 2010 and excludes, as of September 30, 2010:

1 70

- 5,294,118 shares of our common stock issuable upon the exercise of warrants to be issued to purchasers in this offering and an additional 317,647 shares of our common stock issuable upon the exercise of warrants to be issued to the placement agent in this offering;
- 5,611,348 shares of our common stock issuable upon the conversion of senior convertible notes of Cell Genesys assumed by us in connection with our merger with Cell Genesys;
- 14,390,575 shares of our common stock issuable upon the exercise of warrants outstanding at a weighted average exercise price of \$4.74 per share;
- · 3,680,703 shares of our common stock issuable upon the exercise of options outstanding at a weighted average exercise price of \$3.73 per share;
- 2,387,583 shares of our common stock available for future issuance under the BioSante Pharmaceuticals, Inc. Amended and Restated 2008 Stock Incentive Plan; and

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391,286 shares of our common stock issuable upon the one-for-one exchange of our shares of class C special stock at an exchange price of \$2.50 per share at the option of the holder of such class C special shares.

To the extent that any of these shares are issued or options or warrants are exercised, new options or other equity incentive awards are issued under the BioSante Pharmaceuticals, Inc. Amended and Restated 2008 Stock Incentive Plan or we otherwise issue additional shares of common stock in the future, there will be further dilution to the new investors.

DESCRIPTION OF SECURITIES WE ARE OFFERING

In this offering, we are offering a maximum of 10,588,236 units, consisting of 10,588,236 shares of common stock and warrants to purchase 5,294,118 shares of common stock. Each unit consists of one share of common stock and warrants to purchase 0.50 of a share of common stock at an exercise price of \$2.00 per share. The shares of common stock and the warrants will be issued separately but will be purchased together in this offering. This prospectus supplement also relates to the offering of shares of our common stock upon the exercise, if any, of the warrants issued in this offering.

Common Stock

The following description of our common stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of our common stock that we may offer under this prospectus. For the complete terms of our common stock, please refer to our certificate of incorporation and bylaws, which are incorporated by reference into the registration statement which includes this prospectus. Copies of our certificate of incorporation and bylaws are on file with the SEC as exhibits to registration statements previously filed by us. See "Where You Can Find More Information." The terms of our common stock also may be affected by Delaware law.

Authorized Common Stock. We are authorized to issue 200,000,000 shares of common stock, \$0.0001 par value per share.

Voting Rights. For all matters submitted to a vote of stockholders, each holder of common stock is entitled to one vote for each share registered in the holder's name on our books. Our common stock does not have cumulative voting rights.

Dividends. Subject to limitations under Delaware law and preferences that may be applicable to any then outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared by our board of directors out of legally available funds.

Liquidation. Upon our liquidation, dissolution or winding up, the holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities of our company, subject to the prior rights of any preferred stock then outstanding.

Fully Paid and Nonassessable. All shares of our outstanding common stock are fully paid and nonassessable and any additional shares of common stock that we issue will be fully paid and nonassessable.

Other Rights and Restrictions. Holders of our common stock do not have preemptive or subscription rights, and they have no right to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of common stockholders are subject to the rights of the stockholders of any series of preferred

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stock which we may designate in the future. Our certificate of incorporation and bylaws do not restrict the ability of a holder of common stock to transfer the holder's shares of common stock.

Listing. Our common stock is listed on the Nasdaq Global Market under the symbol "BPAX."

Transfer Agent and Registrar. The transfer agent and registrar for our common stock is Computershare Investor Services, LLC.

Warrants

The material terms and provisions of the warrants being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. A form of the warrants is being filed as an exhibit to our current report on Form 8-K that we will file with the SEC in connection with this offering and reference is made thereto for a complete description of the warrants.

Term; Exercise Price and Exercisability. The warrants to be issued in this offering represent the rights to purchase up to 5,294,118 shares of our common stock at an exercise price of \$2.00 per share. Each warrant will be exercisable for a period of five years commencing immediately. The number of warrant shares that may be acquired by any holder upon any exercise of the warrant will be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of common stock then beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, does not exceed 4.99% (or 9.99% in the case of certain investors) of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise), or beneficial ownership limitation. The holder may elect to change this beneficial ownership limitation from 4.99% to 9.99% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise) upon 61 days' prior written notice.

Manner of Exercise. Holders of the warrants may exercise their warrants to purchase shares of our common stock on or before the expiration date by delivering (i) notice of exercise, appropriately completed and duly signed, and (ii) if such holder is not utilizing the cashless exercise provisions with respect to the warrants, payment of the exercise price for the number of shares with respect to which the warrant is being exercised. Warrants may be exercised in whole or in part, but only for full shares of common stock. We provide certain buy-in rights to a holder if we fail to deliver the shares of common stock underlying the warrants by the third trading day after the date on which delivery of the stock certificate is required by the warrant. The buy-in rights apply if after the third trading day on which delivery of the stock certificate is required by the warrant. The buy-in rights apply if after the third trading day on which deliver in satisfaction of a sale by the holder of the warrant shares that the holder anticipated receiving from us upon exercise of the warrant. In this event, we will:

- pay in cash to the holder the amount equal to the excess (if any) of the buy-in price over the product of (A) such number of shares of common stock, times (B) the price at which the sell order giving rise to holder's purchase obligation was executed; and
- at the election of holder, either (A) reinstate the portion of the warrant as to such number of shares of common stock, or (B) deliver to the holder a certificate or certificates representing such number of shares of common stock.

In addition, the warrant holders are entitled to a "cashless exercise" option if, at any time of exercise, there is no effective registration statement registering, or no current prospectus available for, the issuance or resale of the shares of common stock underlying the warrants. This option entitles the warrant holders to

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elect to receive fewer shares of common stock without paying the cash exercise price. The number of shares to be issued would be determined by a formula based on the total number of shares with respect to which the warrant is being exercised, the daily volume weighted average price for the shares of our common stock on the trading day immediately prior to the date of exercise and the applicable exercise price of the warrants.

The shares of common stock issuable on exercise of the warrants will be, when issued and paid for in accordance with the warrants, duly authorized, validly issued and fully paid and non-assessable. We will authorize and reserve at least that number of shares of common stock equal to the number of shares of common stock issuable upon exercise of all outstanding warrants.

Fundamental Transaction. If, at any time while the warrants are outstanding, (1) we consolidate or merge with or into another corporation, (2) we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets, (3) any purchase offer, tender offer or exchange offer (whether by us or another individual or entity) is completed pursuant to which holders of our common stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of our outstanding common stock, (4) we effect any reclassification or recapitalization of our common stock or any compulsory share exchange pursuant to which our common stock is converted into or

exchanged for other securities, cash or proper ty, or (5) we consummate a stock or share purchase agreement or other business combination with another person or entity whereby such other person or entity acquires more than 50% of the outstanding shares of our common stock (or the occurrence of any analogous proceeding) affecting our company each, a "Fundamental Transaction," then upon any subsequent exercise of the warrants, the holders thereof will have the right to receive the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction, if it had been, immediately prior to such Fundamental Transaction, the holder of the number of warrant shares then issuable upon exercise of the warrant, and any additional consideration payable as part of the Fundamental Transaction. Any successor to us or surviving entity will assume the obligations under the warrant.

Certain Adjustments. The exercise price and the number of shares of common stock purchasable upon the exercise of the warrants are subject to adjustment upon the occurrence of specific events, including stock dividends, stock splits, combinations and reclassifications of our common stock. If the holders of our common stock shall have received or become entitled to receive, without payment therefor, (1) common stock or any shares of stock or other securities which are at any time directly or indirectly convertible into or exchangeable for our common stock, or any rights or options to subscribe for, purchase or otherwise acquire any of the foregoing by way of dividend or other distribution, (2) any cash paid or payable otherwise than as a cash dividend; or (3) common stock or additional stock or ot her securities or property (including cash) by way of spinoff, split-up, reclassification, combination of shares or similar corporate rearrangement, then and in each such case, the holder of the warrants will, upon the exercise of the warrant, be entitled to receive, in addition to the number of shares of our common stock receivable thereupon, and without payment of any additional consideration therefor, the amount of stock and other securities and property (including cash in the cases referred to in clauses (2) and (3) above) which such holder would hold on the date of such exercise had such holder been the holder of record of such common stock as of the date on which holders of common stock received or became entitled to receive, such shares or all other additional stock and other securities and property.

Delivery of Certificates. Upon the holder's exercise of a warrant, we will promptly, but in no event later than three trading days after the exercise date (referred to as the "exercise share delivery date"), issue and deliver, or cause to be issued and delivered, a certificate for the shares of common stock issuable upon exercise of the warrant. In addition, we will, if the holder provides the necessary information to us, issue and deliver the shares electronically through The Depository Trust Corporation through its Deposit Withdrawal Agent Commission System (DWAC) or another established clearing corporation performing similar functions.

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Notice of Corporate Action. We will provide at least 20 days prior notice to holders of the warrants to provide them with the opportunity to exercise their warrants and hold common stock in order to participate in or vote on the following corporate events:

- if we shall take a record of the holders of our common stock for the purpose of entitling them to receive a dividend or other distribution, or any right to subscribe for or purchase any shares of stock of any class or any other right;
- if we authorize or approve, enter into any agreement contemplating, or solicit stockholder approval for any transaction that would be deemed a Fundamental Transaction as described above; or
- a voluntary dissolution, liquidation or winding up of our company.

Additional Provisions. We are not required to issue fractional shares upon the exercise of the warrants. No holders of the warrants will possess any rights as a stockholder under those warrants until the holder exercises those warrants. The warrants may be transferred independent of the common stock they were issued with, on a form of assignment, subject to all applicable laws.

PLAN OF DISTRIBUTION

We have entered into a placement agency agreement, dated as of December 27, 2010, with Rodman & Renshaw, LLC, as placement agent which we refer to as the placement agency agreement. Subject to the terms and conditions contained in the placement agency agreement, Rodman & Renshaw, LLC has agreed to act as our placement agent in connection with this offering. In addition, we have retained JMP Securities LLC, Roth Capital Partners, LLC, Trout Capital LLC and Oppenheimer & Co. Inc. as financial advisors in connection with the offering. The placement agent is not required to arrange the purchase or sale of any additional specific number or dollar amount of the securities.

The placement agent has agreed to use its reasonable best efforts to arrange for the sale of all of the securities in this offering. There is no requirement that any minimum number of units or dollar amount of units be sold in this offering and there can be no assurance that we will sell all or any of the units being offered. We will enter into securities purchase agreements directly with the investors who purchase securities in this offering.

The placement agency agreement provides that the obligations of the placement agent and the investors are subject to certain conditions precedent, including, among other things, the absence of any material adverse change in our business and the receipt of certain opinions, letters and certificates from us or our counsel.

We currently anticipate that the closing of this offering will take place on or about December 30, 2010. On the closing date, the following will occur:

- we will receive funds in the amount of the aggregate purchase price;
- the placement agent will receive the placement agent fees in accordance with the terms of the placement agency agreement; and
- we will deliver the units to the investors.

The placement agent proposes to arrange for the sale to one or more purchasers of the securities offered pursuant to this prospectus supplement and the accompanying prospectus.

We will pay the placement agent an aggregate cash commission equal to 6.0% of the gross proceeds from the sale of the units in this offering. We have engaged four financial advisors, who will be compensated out of the placement agent's cash compensation, as follows: JMP Securities LLC will be paid \$100,000 out of the placement agent's commission. Roth Capital Partners, LLC will be paid \$100,000 out of the placement agent's commission. Trout Capital LLC will be paid \$50,000 out of the placement agent's commission. Subject to compliance with Financial Industry Regulatory Authority, or FINRA, Rule 5110(f)(2)(D), we will also reimburse the placement agent for legal and other expenses incurred by it in connection with this offering in an amount equal to 0.8% of the aggregate offering proceeds but in no event more than \$25,000. The placement agent also will receive warrants to purchase up to 317,647 shares of our common stock or 3% of the aggregate number of shares of common stock included in the units that are sold in the offering with an exercise price of \$2.125 per share (125% of the public offering price) and an expiration date of June 9, 2015 (the five year anniversary of the effective date of the registration statement).

The estimated offering expenses payable by us, in addition to the aggregate fee of \$1.08 million due to the placement agent, are approximately \$0.1 million which includes legal, accounting and filing fees various other fees and expenses associated with registering the securities and listing the common stock. After deducting certain fees due to the placement agent and our estimated offering expenses, we expect the net proceeds from this offering to be approximately \$16.9 million if the maximum number of units are sold.

The following table shows the per unit and total commissions we will pay to the placement agent in connection with the sale of the units offered pursuant to this prospectus supplement and the accompanying prospectus, assuming the purchase of all of the units offered hereby and excluding proceeds that we may receive upon exercise of the warrants.

Per unit placement agent fees	\$ 1,080,000
Maximum offering total	\$ 18,000,001

Because there is no minimum offering amount required as a condition to closing in this offering, the actual total offering fees, if any, are not presently determinable and may be substantially less than the maximum amount set forth above.

Rodman & Renshaw, LLC and any broker-dealer or agent acting on its behalf may be deemed to be underwriters and as such are required to comply with the requirements of the Securities Act and the Exchange Act, including without limitation, Rule 10b-5 and, to the extent applicable, Regulation M under the Exchange Act. Under these rules and regulations, Rodman & Renshaw, LLC and any broker-dealer or agent acting on its behalf:

- may not engage in any stabilization activity in connection with our securities;
- must furnish each broker which offers securities covered by this prospectus with the number of copies of this prospectus and any prospectus supplement that are required by each broker; and
- may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

We have agreed to indemnify the placement agent and certain other persons against certain liabilities relating to or arising out of the placement agent's activities under the placement agency agreement. We also have agreed to contribute to payments the placement agent may be required to make in respect of such liabilities.

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From time to time in the ordinary course of business, the placement agent or its affiliates may in the future engage in investment banking and/or other services with us for which they may receive compensation, but we have no current agreement in place with the placement agent.

A copy of the placement agency agreement, the form of securities purchase agreement we entered into with the purchasers and the form of warrant will be included as exhibits to our current report on Form 8-K that will be filed with the SEC in connection with the consummation of this offering.

The transfer agent for our common stock to be issued in this offering is Computershare Investor Services, LLC. We will act as transfer agent for the warrants being offered hereby.

Our common stock is traded on the NASDAQ Global Market under the symbol "BPAX." The warrants to purchase common stock issued to the investors in this offering are not expected to be eligible for trading on any market.

The purchase price per unit and the exercise price for the warrants were determined based on negotiations with the purchasers and discussions with the placement agent based on current market factors.

LEGAL MATTERS

The validity of the issuance of the securities offered hereby will be passed upon for us by Oppenheimer Wolff & Donnelly LLP, Minneapolis, Minnesota. The placement agent is being represented in connection with this offering by Weinstein Smith LLP, New York, New York.

EXPERTS

The financial statements incorporated in this Prospectus by reference from the Company's Annual Report on Form 10-K have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are a public company and file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room. Our SEC filings are also available to the public at the SEC's web site at http://www.sec.gov.

Our common stock is listed on the NASDAQ Global Market. Reports and other information concerning BioSante may also be inspected at the offices of the Nasdaq OMX Group, Inc., 9600 Blackwell Road, Rockville, MD 20850 or on the NASDAQ OMX Group, Inc. website at http://www.nasdaq.com.

We also file annual audited and interim unaudited financial statements, proxy statements and other information with the Ontario, Alberta and British Columbia Securities Commissions. Copies of these documents that are filed through the System for Electronic Document Analysis and Retrieval "SEDAR" of the Canadian Securities Administrators are available at its web site http://www.sedar.com.

In addition, we maintain a web site that contains information regarding our company, including copies of reports, proxy statements and other information we file with the SEC. The address of our web site is www.biosantepharma.com. Except for the documents specifically incorporated by reference into this

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prospectus, information contained on our website or that can be accessed through our website does not constitute a part of this prospectus. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

This prospectus supplement and the accompanying prospectus are part of a registration statement on Form S-3 that we filed with the SEC registering the securities that may be offered and sold hereunder. The registration statement, including exhibits thereto, contains additional relevant information about us and these securities that, as permitted by the rules and regulations of the SEC, we have not included in this prospectus supplement or the accompanying prospectus. A copy of the registration statement can be obtained at the address set forth above. You should read the registration statement for further information about us and these securities.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus supplement the information contained in the documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement, and later information that we file with the SEC will update and supersede this information. We are incorporating by reference the following documents into this prospectus supplement:

- our annual report on Form 10-K for the year ended December 31, 2009 (including information specifically incorporated by reference into our Form 10-K from our definitive proxy statement for our 2010 annual meeting of stockholders);
- our quarterly reports on Form 10-Q for the quarters ended March 31, 2010, June 30, 2010 and September 30, 2010;
- our current reports on Form 8-K as filed with the SEC on March 5, 2010, May 3, 2010 (and as amended on June 7, 2010), June 11, 2010, June 21, 2010, November 17, 2010 and December 23, 2010; and
- the description of our common stock contained in our registration statement on Form 8-A and any amendments or reports filed for the purpose of updating such description.

We also are incorporating by reference any future filings we make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934 after the date of this prospectus supplement and prior to the sale of all securities registered hereunder or termination of the registration statement. In no event, however, will any of the information that we "furnish" to the SEC in any current report on Form 8-K or any other report or filing be incorporated by reference into, or otherwise included in, this prospectus supplement.

You may access our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statement, and amendments, if any, to those documents filed or furnished pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act with the SEC free of charge at the SEC's website or our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Except for the documents specifically incorporated by reference into this prospectus, information contained on our website or that can be accessed through our website does not constitute a part of this prospectus. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

You may request of copy of these filings, including exhibits to such documents that are specifically incorporated by reference, at no cost, by writing to Phillip B. Donenberg, Chief Financial Officer, Treasurer

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and Secretary, BioSante Pharmaceuticals, Inc., 111 Barclay Boulevard, Lincolnshire, Illinois 60069, by telephone at (847) 478-0500 ext. 101 or by email at pdonenberg@biosantepharma.com.

Any statement contained in a document incorporated by reference into this prospectus supplement will be deemed modified or superseded to the extent that a statement contained in this prospectus supplement or in any other subsequently filed document which also is incorporated by reference into this prospectus supplement modifies or supersedes such statement. Statements contained in this prospectus supplement as to the contents of any contract or other

documents are not necessarily complete, and in each instance investors are referred to the copy of the contract or other document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference and the exhibits and schedules thereto.

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PROSPECTUS



\$75,000,000

Common Stock Preferred Stock Warrants Units

We may offer and sell from time to time up to \$75,000,000 in total of any combination of the securities described in this prospectus, either individually or in units. We also may offer common stock upon conversion of preferred stock or common stock or preferred stock upon the exercise of warrants. This prospectus provides a general description of the securities we may offer. Each time we offer securities, we will provide a prospectus supplement containing more information about the particular offering together with this prospectus. The prospectus supplement also may add, update or change information contained in this prospectus. This prospectus may not be used to offer and sell securities without a prospectus supplement.

The securities may be sold directly by us to investors, through agents designated from time to time or to or through underwriters or dealers. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution" in this prospectus. If any agents or underwriters are involved in the sale of any securities, the names of such agents or underwriters and any applicable fees, commissions, discounts and over-allotment options will be set forth in the applicable prospectus supplement.

Our common stock is listed on the Nasdaq Global Market under the symbol "BPAX." On June 10, 2010, the reported closing price of our common stock was \$1.89 per share.

Investing in our securities involves a high degree of risk. We refer you to the section entitled "Risk Factors" of this prospectus on page 3 and in the applicable prospectus supplement and under similar sections in the documents we incorporate by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is June 10, 2010

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In this prospectus, references to "BioSante," the "company," "we," "our" or "us," unless the context otherwise requires, refer to BioSante Pharmaceuticals, Inc.

We own or have the rights to use various trademarks, trade names or service marks that are used in this prospectus, including BioSante[®], ElestrinTM, LibiGel[®], Bio-T-GelTM, The Pill PlusTM, BioLookTM, CAP-OralTM, BioAirTM and GVAXTM.

You should rely only on the information contained in this prospectus, including information incorporated by reference as described above, or any prospectus supplement that we have specifically referred you to. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of those documents or that any document incorporated by reference is accurate as of any date other than its filing date. You should not consider this prospectus to be an offer or solicitation relating to the securities is not authorized. Furthermore, you should not consider this prospectus to be an offer or solicitation relating to the securities if the person making the offer or solicitation is not qualified to do so, or if it is unlawful for you to receive such an offer or solicitation.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration process. Under this shelf registration process, we may offer to sell any one or more or a combination of the securities described in this prospectus in one or more offerings up to a total dollar amount of \$75,000,000 (or its equivalent based on the applicable exchange rate at the time of the sale in one or more foreign currencies, currency units or composite currencies that we may designate). We have provided to you in this prospectus a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. We also may add, update or change in the prospectus supplement any of the information contained in this prospectus supplement. You should read carefully both this prospectus and the applicable prospectus supplement together with the documents we incorporate by reference into this prospectus as described under the heading "Incorporation of Certain Documents By Reference" before making an investment decision. This prospectus may not be used to offer and sell securities without a prospectus supplement.

The registration statement that contains this prospectus, including the exhibits to the registration statement and the information incorporated by reference, provides additional information about the securities offered under this prospectus. That registration statement can be read at the SEC web site or at the SEC public reference room as discussed under the heading "Where You Can Find More Information."

You should rely only on the information provided in the registration statement, this prospectus and in any prospectus supplement, including the information incorporated by reference. We have not authorized anyone to provide you with different information. You should not assume that the information in this prospectus or any supplement to this prospectus is accurate at any date other than the date indicated on the cover page of these documents. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

ABOUT OUR COMPANY

BioSante Pharmaceuticals, Inc. is a specialty pharmaceutical company focused on developing products for female sexual health, menopause, contraception, male hypogonadism and oncology. We also are developing our calcium phosphate technology (CaP) for aesthetic medicine (BioLook), as a vaccine adjuvant, including for an H1N1 (swine flu) vaccine, and drug delivery as well as seeking opportunities for our 2A/Furin and other technologies.

Our products, either approved or in development, include:

- LibiGel once daily transdermal testosterone gel in Phase III clinical development under a Special Protocol Assessment (SPA) for the treatment of female sexual dysfunction (FSD).
- Elestrin once daily transdermal estradiol (estrogen) gel approved by the U.S. Food and Drug Administration (FDA) indicated for the treatment of moderate-to-severe vasomotor symptoms (hot flashes) associated with menopause and marketed in the U.S.
- The Pill-Plus (triple component contraceptive) once daily use of various combinations of estrogens, progestogens and androgens in development for the treatment of FSD in women using oral or transdermal contraceptives.

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- · Bio-T-Gel once daily transdermal testosterone gel in development for the treatment of hypogonadism, or testosterone deficiency, in men.
- GVAX cancer vaccines a portfolio of cancer vaccines in clinical development for the treatment of various cancer types.

We believe LibiGel remains the lead pharmaceutical product in the U.S. in active development for the treatment of hypoactive sexual desire disorder (HSDD) in menopausal women, and that it has the potential to be the first product approved by the FDA for this common and unmet medical need. We believe based on agreements with the FDA, including an SPA, that two Phase III safety and efficacy trials and one year of LibiGel exposure in a Phase III cardiovascular and breast cancer safety study with a four-year follow-up post-NDA filing and potentially post-FDA approval are the essential requirements for submission and, if successful, approval by the FDA of a new drug application (NDA) for LibiGel for the treatment of FSD, specifically, HSDD in menopausal women. Currently, three LibiGel Phase III studies are underway and enrolling women: two LibiGel Phase III safety and efficacy clinical trial s and one Phase III cardiovascular and breast cancer safety study. We have three SPAs in place concerning LibiGel. The first SPA agreement covers the

pivotal Phase III safety and efficacy trials of LibiGel in the treatment of FSD for "surgically" menopausal women. The second SPA covers our LibiGel program in the treatment of FSD, specifically HSDD, in "naturally" menopausal women. The third SPA agreement covers the LibiGel stability, or shelf life studies for the intended commercialization of LibiGel product.

Elestrin is our first FDA approved product. Azur Pharma International II Limited (Azur) is marketing Elestrin in the U.S. using its women's health sales force that targets estrogen prescribing physicians in the U.S. comprised mostly of gynecologists. In December 2009, we entered into an amendment to our original licensing agreement with Azur which permanently reduced the royalty percentage due to us related to Azur's sales of Elestrin. We received approximately \$3.16 million in non-refundable payments in exchange for the elimination of all remaining future royalty payments due us under the terms of the original license. We maintain the right to receive up to \$140 million in sales-based milestone payments from Azur if Elestrin reaches certain predefined sales per calendar year.

GVAX cancer vaccines are designed to stimulate the patient's immune system to effectively fight cancer. Multiple Phase II trials of these vaccines are ongoing at minimal cost to us at the Johns Hopkins Sidney Kimmel Comprehensive Cancer Center in various cancer types, including prostate cancer, pancreatic cancer, leukemia and breast cancer. Two of these vaccines have been granted orphan drug designation.

Our CaP technology is based on the use of extremely small, solid, uniform particles, which we call "nanoparticles." We are pursuing the development of various potential initial applications for our CaP technology. First, CaP technology is being tested in the area of aesthetic medicine. Second, our CaP technology is being tested for its "adjuvant" activity that enhances the ability of a vaccine to stimulate an immune response. The same nanoparticles allow for delivery of the vaccine via alternative routes of administration including non-injectable routes of administration. Third, we are pursuing the creation of oral, buccal, intranasal, inhaled and longer acting delivery of drugs that currently must be given by injection (e.g., insulin).

The following is a list of our CaP products in development:

BioLook — facial line filler in development using proprietary CaP technology in the area of aesthetic medicine, e.g., a facial line filler.

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- BioVant proprietary CaP adjuvant and delivery technology in development for improved vaccines against viral and bacterial infections and autoimmune diseases, among others. BioVant also serves as a delivery system for non-injected delivery of vaccines.
- BioOral a delivery system using CaP technology for oral/buccal/intranasal administration of proteins and other therapies that currently must be injected.
- · BioAir a delivery system using CaP technology for inhalable versions of proteins and other therapies that currently must be injected.

Our company, which was initially formed as a corporation organized under the laws of the Province of Ontario on August 29, 1996, was continued as a corporation under the laws of the State of Wyoming on December 19, 1996 and was reincorporated under the laws of the State of Delaware on June 26, 2001. In October 2009, we acquired Cell Genesys, Inc. through a direct merger.

Our principal executive offices are located at 111 Barclay Boulevard, Lincolnshire, Illinois 60069. Our telephone number is (847) 478-0500 and our Internet web site address is www.biosantepharma.com. We make available on our website free of charge a link to our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports as soon as practicable after we electronically file such material with the Securities and Exchange Commission, or SEC. Except for the documents specifically incorporated by reference into this prospectus, information contained on our website or that can be accessed through our website does not constitute a part of this prospectus. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the risk factors described in Part I, Item 1A, "Risk Factors" in our 2009 Annual Report on Form 10-K and our other reports filed from time to time with the SEC, which are incorporated by reference into this prospectus, as the same may be amended, supplemented or superseded from time to time by our filings under the Exchange Act, as well as any prospectus supplement relating to a specific security. Before making any investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus or in any applicable prospectus supplement. The risks and uncertainties described in the prospectus supplement and the documents we incorporate by reference into this prospectus are not the only ones we face. Additional risks and uncertainties that we are unaware of or that we believe are not material at the time could also materially adversely affect our business, financial condition or results of operations. In any case, the value of our securities could decline, and you could lose all or part of your investment. See also the information contained under the heading "Cautionary Statement Regarding Forward-Looking Statements" immediately below.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and any accompanying prospectus supplement, including the documents that we incorporate by reference, contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts included in or incorporated by reference into this prospectus and any accompanying prospectus supplement that address activities, events or developments that we expect, believe or anticipate will or may occur in the future are forward-looking statements. Our forward-looking statements generally include statements about our plans, objectives, strategies and prospects regarding, among other things, our business, results of operations, liquidity and financial condition. In some cases, we have identified these forward-looking

statements with words like "believe," "may," "could," "might," "possible," "potential," "project," "will," "should," "expect," "intend," "plan," "predict," "anticipate," "estimate," "approximate," "contemplate" or "continue" or the negative of these words or other words and terms of similar meaning.

Forward-looking statements involve risks and uncertainties. These uncertainties include factors that affect all businesses as well as matters specific to us. Some of the factors known to us that could cause our actual results to differ materially from what we have anticipated in our forward-looking statements include: our ability to obtain additional capital when needed or on acceptable terms; subject recruitment and enrollment in our current and future clinical studies, including in particular our Phase III clinical study program for LibiGel; our failure to obtain and maintain required regulatory approvals on a timely basis or at all; the failure of certain of our products to be commercially introduced for several years or at all; the level of market acceptance of our products if and when they are commercialized; uncertainties associated with the impact of published studies regarding the adverse health effects of certain forms of hormone therapy; our dependence upon the maintenance of certain of our licenses with; our dependence upon our licensees for the development, marketing and sale of certain of our products; our ability to compete in a competitive industry; our ability to protect our proprietary technology and to operate our business without infringing the proprietary rights of third parties; our dependence upon key employees; adverse changes in applicable laws or regulations and our failure to comply with applicable laws and regulations; changes in generally accepted accounting principles; or conditions and changes in the biopharmaceutical industry or in general economic or business conditions. We refer you to the section entitled "Risk Factors" included elsewhere in this prospectus and in the accompanying prospectus supplement and under similar sections in the documents we incorporate by reference into this prospectus.

We wish to caution readers not to place undue reliance on any forward-looking statement that speaks only as of the date made and to recognize that forward-looking statements are predictions of future results, which may not occur as anticipated. Actual results could differ materially from those anticipated in the forward-looking statements and from historical results, due to the risks and uncertainties described above and under the section entitled "Risk Factors" included elsewhere in this prospectus and in the accompanying prospectus supplement and under similar sections in the documents we incorporate by reference into this prospectus, as well as others that we may consider immaterial or do not anticipate at this time. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we do not know whether our expectations will prove co rrect. We assume no obligation to update forward-looking statements to reflect actual results or changes in factors or assumptions affecting such forward-looking statements, except if we otherwise are required by law. We advise you, however, to consult any further disclosures we make on related subjects in our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K we file with or furnish to the Securities and Exchange Commission.

USE OF PROCEEDS

Unless we otherwise indicate in the applicable prospectus supplement, we currently intend to use the net proceeds from the sale of our securities, if such sale occurs, for general corporate purposes, including working capital, to finance our Phase III clinical studies for LibiGel, capital expenditures and the repayment, repurchase or redemption of outstanding indebtedness. We also may use a portion of the proceeds to acquire or invest in complementary businesses or products or to obtain rights to additional product candidates and other technologies. We have no commitments with respect to any such acquisitions or investments. The amounts and timing of our actual expenditures will depend on numerous factors, including the progress in, and costs of, our Phase III clinical studies for LibiGel, the timing of revenues, if any, from any future collaborations or similar transactions and the amount of cash used by our operations. We therefore cannot estimate the amount of proceeds to be used for all of the purposes described above. We may find it necessary or advisable to use the net proceeds for other purposes, and

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we will have broad discretion in the application of the proceeds. Pending the uses described above, we intend to deposit the proceeds temporarily in our noninterest bearing checking account or to invest them temporarily in short-term or marketable securities until we use them for their stated purpose. We also may set forth additional information on the use of net proceeds from the sale of the securities we offer under this prospectus in a prospectus supplement relating to the specific offering.

DESCRIPTION OF COMMON STOCK

The following description of our common stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of our common stock that we may offer under this prospectus. For the complete terms of our common stock, please refer to our certificate of incorporation and bylaws, which are incorporated by reference into the registration statement which includes this prospectus. Copies of our certificate of incorporation and bylaws are on file with the SEC as exhibits to registration statements previously filed by us. See "Where You Can Find More Information." The terms of our common stock also may be affected by Delaware law.

Authorized and Outstanding Capital Stock

We are authorized to issue 200,000,000 shares of common stock, \$0.0001 par value per share, 4,687,684 shares of class C special stock, \$0.0001 par value per share, and 10,000,000 shares of undesignated preferred stock, \$0.0001 par value per share.

As of June 10, 2010, we had 63,668,528 shares of common stock outstanding. As of June 10, 2010, we had an aggregate of 3,574,786 shares of common stock reserved for issuance upon the exercise of outstanding stock options granted under the BioSante Pharmaceuticals, Inc. Amended and Restated 1998 Stock Plan, the BioSante Pharmaceuticals, Inc. 2008 Stock Incentive Plan and certain assumed Cell Genesys stock plans and an additional 493,500 shares of common stock reserved for issuance pursuant to future grants under the BioSante Pharmaceuticals, Inc. 2008 Stock Incentive Plan. As of June 10, 2010, we had an aggregate of 10,789,361 shares of common stock reserved for issuance upon the exercise of outstanding warrants.

As of June 10, 2010, we had 391,286 shares of class C special stock outstanding. Each share of class C special stock entitles its holder to one vote per share. Each share of our class C special stock is exchangeable, at the option of the holder, for one share of common stock, at an exchange price of \$2.50 per share, subject to adjustment upon certain capitalization events. Holders of our class C special stock are not entitled to receive dividends. Holders of our class C special stock are not entitled to participate in the distribution of our assets upon any liquidation, dissolution or winding-up of our company. The holders of our class C special stock have no cumulative voting, preemptive, subscription, redemption or sinking fund rights.

As of the date of this prospectus, we do not have any shares of preferred stock outstanding.

For all matters submitted to a vote of stockholders, each holder of common stock is entitled to one vote for each share registered in the holder's name on our books. Our common stock does not have cumulative voting rights. The holders of a plurality of the shares of our common stock and class C special stock entitled to vote in any election of directors, voting together as a single class, can elect all of the directors standing for election, if they so choose.

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Dividends

Subject to limitations under Delaware law and preferences that may be applicable to any then outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared by our board of directors out of legally available funds.

Liquidation

Upon our liquidation, dissolution or winding up, the holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities of our company, subject to the prior rights of any preferred stock then outstanding.

Fully Paid and Nonassessable

All shares of our outstanding common stock are fully paid and nonassessable and any additional shares of common stock that we issue will be fully paid and nonassessable.

Other Rights and Restrictions

Holders of our common stock do not have preemptive or subscription rights, and they have no right to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of common stockholders are subject to the rights of the stockholders of any series of preferred stock which we may designate in the future. Our certificate of incorporation and bylaws do not restrict the ability of a holder of common stock to transfer the holder's shares of common stock.

Listing

Our common stock is listed on the Nasdaq Global Market under the symbol "BPAX."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Investor Services, LLC.

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DESCRIPTION OF PREFERRED STOCK

The following description of our preferred stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of our preferred stock that we may offer under this prospectus. For the complete terms of our preferred stock, please refer to our certificate of incorporation and bylaws, which are incorporated by reference into the registration statement which includes this prospectus. Copies of our certificate of incorporation and bylaws are on file with the SEC as exhibits to registration statements previously filed by us. See "Where You Can Find More Information." The terms of our preferred stock also may be affected by Delaware law. If we offer a specific class or series of preferred stock under this prospectus, we will describe the terms of the preferred stock in the prospectus supplement for r such offering and will file a copy of the certificate establishing the terms of the preferred stock with the SEC.

Authorized and Outstanding Shares

We currently have authorized 10,000,000 shares of preferred stock, \$0.0001 par value per share. As of the date of this prospectus, we did not have any shares of preferred stock outstanding.

Designations, Powers, Preferences, Rights, Qualifications, Limitations and Restrictions

Prior to issuance of shares of each series of our undesignated preferred stock, our board of directors is required by the Delaware General Corporate Law, or DGCL, and our certificate of incorporation to adopt resolutions and file a Certificate of Designations with the Secretary of State of the State of Delaware, fixing for each such series the designations, powers, preferences, rights, qualifications, limitations and restrictions of the shares of such series.

Our board of directors could authorize the issuance of shares of preferred stock with terms and conditions more favorable than our common stock or class C special stock and with rights that could adversely affect the voting power or other rights of holders of our common stock or class C special stock. In addition, our board of directors could authorize the issuance of shares of preferred stock with terms and conditions which could have the effect of discouraging a takeover or other transaction which holders of some, or a majority, of such shares might believe to be in their best interests or in which holders of some, or a majority, of such shares might receive a premium for their shares over the then-market price of such shares.

Subject to limitations prescribed by the DGCL, our certificate of incorporation and our bylaws, our board of directors is authorized to fix the number of shares constituting each series of preferred stock and the designations, powers, preferences, rights, qualifications, limitations and restrictions of the shares of such series, including such provisions as may be desired concerning voting, redemption, dividends, dissolution or the distribution of assets, conversion or

exchange, and such other subjects or matters as may be fixed by resolution of the board of directors. Each series of preferred stock that we offer under this prospectus will, when issued, be fully paid and nonassessable and will not have, or be subject to, any preemptive or similar rights.

The applicable prospectus supplement(s) will describe the following terms of the series of preferred stock in respect of which this prospectus is being delivered:

- the title and stated value of the preferred stock;
- the number of shares of the preferred stock offered, the liquidation preference per share and the purchase price of the preferred stock;

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- the dividend rate(s), period(s) and/or payment date(s) or the method(s) of calculation for dividends;
- whether dividends shall be cumulative or non-cumulative and, if cumulative, the date from which dividends on the preferred stock shall accumulate;
- the procedures for any auction and remarketing, if any, for the preferred stock;
- the provisions for a sinking fund, if any, for the preferred stock;
- the provisions for redemption, if applicable, of the preferred stock;
- any listing of the preferred stock on any securities exchange or market;
- the terms and conditions, if applicable, upon which the preferred stock will be convertible into common stock, including the conversion price (or its manner of calculation) and conversion period;
- voting rights, if any, of the preferred stock;
- a discussion of any material and/or special U.S. federal income tax considerations applicable to the preferred stock;
- · whether interests in the preferred stock will be represented by depositary shares;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs;
- any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs; and
- any other specific terms, preferences, rights, limitations or restrictions on the preferred stock.

Transfer Agent and Registrar

The transfer agent and registrar for our preferred stock will be set forth in the applicable prospectus supplement.

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DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, including a form of warrant certificate, that describes the terms of the series of warrants we are offering, and any supplemental agreements, before the issuance of the related series of warrants. The following summaries of material terms and provisions of the warrant agreements and warrant certificate are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus and the complete warrant agreements and war rant certificates that contain the terms of the warrants.

Outstanding Warrants

As of June 10, 2010, the following warrants were outstanding:

 Warrants to purchase an aggregate of 853,292 shares of our common stock at an exercise price of \$2.75 per share issued to various institutional and accredited investors in connection with our private placement completed on July 21, 2006;

- Warrants to purchase an aggregate of 763,750 shares of our common stock at an exercise price of \$8.00 per share issued to various institutional and accredited investors in connection with our private placement completed on June 13, 2007;
- A warrant to purchase up to 300,000 shares of our common stock at an exercise price of \$4.00 per share issued to Kingsbridge Capital Limited on December 15, 2008 in connection with our committed equity financing facility;
- Warrants to purchase an aggregate of 395,246 shares of our common stock at an exercise price of \$39.27 per share, originally issued by Cell Genesys, Inc. to various institutional investors in connection with Cell Genesys's registered direct offering completed on April 11, 2007, which warrants were assumed by us and converted into warrants to purchase shares of our common stock in connection with our merger with Cell Genesys on October 14, 2009;
- Warrants to purchase an aggregate of 2,640,000 shares of our common stock at an exercise price of \$2.50 per share issued to various institutional investors and our placement agent in connection with our registered direct offering completed on August 13, 2009;
- Warrants to purchase an aggregate of 5,202,313 shares of our common stock at an exercise price of \$2.08 per share issued to various institutional investors in connection with our registered direct offering completed on March 8, 2010;

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- Warrants to purchase an aggregate of 208,093 shares of our common stock at an exercise price of \$2.16 per share issued to our placement agent in connection with our registered direct offering completed on March 8, 2010; and
- Warrants to purchase an aggregate of 426,667 shares of our common stock at exercise prices ranging from \$2.00 per share to \$8.00 per share issued to investor and public relations vendors in 2007, 2008 and 2009.

General

We may issue warrants for the purchase of common stock or preferred stock in one or more series. We may issue warrants independently or together with common stock or preferred stock, and the warrants may be attached to or separate from these securities.

We will evidence each series of warrants by warrant certificates that we will issue under a separate agreement. We may enter into a warrant agreement with a warrant agent. If we elect to do so, the warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any registered holders of warrants or beneficial owners of warrants. We will indicate the name and address and other information regarding the warrant agent in the applicable prospectus supplement relating to a particular series of warrants if we elect to use a warrant agent.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- · if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;

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- · if applicable, material U.S. federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants;
- the identify of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;

- the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;
- the anti-dilution provisions of the warrants, if any;
- · any redemption or call provisions; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to 5:00 p.m., New York City time, on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Enforceability of Rights by Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant,

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including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

DESCRIPTION OF UNITS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the units that we may offer under this prospectus and any related unit agreements and unit certificates. While the terms summarized below will apply generally to any units that we may offer, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any units offered under that prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, any form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of such unit agreements and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we may offer under this prospectus and the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

We may issue, in one or more series, units comprised of shares of our common stock or preferred stock and warrants to purchase common stock or preferred stock or any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

We may evidence units by unit certificates that we issue under a separate agreement. We may issue the units under a unit agreement between us and one or more unit agents. If we elect to enter into a unit agreement with a unit agent, the unit agent will act solely as our agent in connection with the units and will not assume any obligation or relationship of agency or trust for or with any registered holders of units or beneficial owners of units. We will indicate the name and address and other information regarding the unit agent in the applicable prospectus supplement relating to a particular series of units if we elect to use a unit agent.

We will describe in the applicable prospectus supplement the terms of the series of units being offered, including:

 the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;

- any provisions of the governing unit agreement that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

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The other provisions regarding our common stock, preferred stock and warrants as described in this section will apply to each unit to the extent such unit consists of shares of our common stock and preferred stock and warrants to purchase our common stock.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

ANTI-TAKEOVER EFFECTS OF PROVISIONS OF OUR CERTIFICATE OF INCORPORATION, OUR BYLAWS AND DELAWARE LAW

Some provisions of our certificate of incorporation and bylaws and Delaware law contain provisions that could make the following transactions more difficult: acquisition of us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are designed to discourage coercive takeover practices and inadequate takeover bids. These provisions also are designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Authorized But Unissued Capital Stock

We have shares of common stock, class C special stock and undesignated preferred stock available for future issuance without stockholder approval, subject to any limitations imposed by the listing standards of the Nasdaq Global Market. We may use these additional shares for a variety of corporate purposes, including for future public offerings to raise additional capital or to facilitate corporate acquisitions or for payment as a dividend on our capital stock. The existence of unissued and unreserved capital stock may enable our board of directors to issue shares to persons friendly to current management that could render more difficult or discourage a third-party attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of our management. In addition, the ability to authorize undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Stockholder Meetings

Our bylaws provide that a special meeting of stockholders may be called only by our chairman of the board, president and chief executive officer, or by our board of directors.

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Requirements for Advance Notification of Stockholder Nominations and Proposals

Our bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

No Cumulative Voting Rights

Our certificate of incorporation and bylaws do not provide for cumulative voting rights. The holders of a plurality of the shares of our common stock and class C special stock entitled to vote in any election of directors, voting together as a single class, can elect all of the directors standing for election, if they so choose.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law. This law prohibits a publicly-held Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which

employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

 on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines "business combination" to include:

- · any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of our assets involving the interested stockholder;
- in general, any transaction that results in the issuance or transfer by us of any of our stock to the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

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In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or otherwise controlled by the entity or person.

PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus in one or more of the following ways from time to time:

- to or through underwriters or dealers; or
- · directly to purchasers, including our affiliates, or to a single purchaser.
- through one or more agents;
- through a block trade in which the broker or dealer engaged to handle the block will attempt to sell the securities as agent, but may position and
 resell a portion of the block as principal to facilitate the transaction; or
- through a combination of any of these methods of sale.

In addition, we may issue the securities being offered by this prospectus as a dividend or distribution.

We may effect the distribution of the securities from time to time in one or more transactions at a fixed price or prices, which may be changed from time to time, at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices.

We will set forth in a prospectus supplement the terms of the offering of our securities, including:

- the type and amount of securities we are offering;
- the purchase price of our securities being offered and the net proceeds we will receive from the sale;
- the method of distribution of the securities we are offering;
- the name or names of any agents, underwriters or dealers;
- · any over-allotment options under which underwriters may purchase additional securities from us;
- any underwriting discounts and commissions or agency fees and commissions and other items constituting underwriters' or agents' compensation;
- · any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchanges on which such securities may be listed.

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Sale Through Underwriters or Dealers

If we use an underwriter or underwriters in the sale of securities offered by this prospectus, the underwriters will acquire the securities for their own account, including through underwriting, purchase, security lending or repurchase agreements with us. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions. Underwriters may sell the securities in order to facilitate transactions in any of our other securities (described in this prospectus or otherwise), including other public or private transactions and short sales. Underwriters may offer securities to the

public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise indicated in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any public offering price and any discounts or concessions allowed or reallowed or paid to dealers.

If we use an underwriter or underwriters in the sale of securities, we will execute an underwriting agreement with the underwriter or underwriters at the time we reach an agreement for sale. We will set forth in the applicable prospectus supplement the names of the specific managing underwriter or underwriters, as well as any other underwriters, and the terms of the transactions, including compensation of the underwriters and dealers. This compensation may be in the form of discounts, concessions or commissions.

In compliance with the guidelines of the Financial Industry Regulatory Authority, or FINRA, the aggregate maximum discount, commission, agency fees, or other items constituting underwriting compensation to be received by any FINRA member or independent broker-dealer will not exceed 8% of any offering pursuant to this prospectus and any applicable prospectus supplement; however, we anticipate that the maximum commission or discount to be received in any particular offering of securities will be significantly less than this amount.

No FINRA member may participate in any offering of securities made under this prospectus if such member has a conflict of interest under FINRA Rule 2720, including if 5% or more of the net proceeds, not including underwriting compensation, of any offering of securities made under this prospectus will be received by a FINRA member participating in the offering or affiliates or associated persons of such FINRA members, unless a qualified independent underwriter has participated in the offering or the offering otherwise complies with FINRA Rule 2720.

We may grant to the underwriters options to purchase additional securities to cover over-allotments, if any, at the public offering price with additional underwriting discounts or commissions. If we grant any over-allotment option, the terms of any over-allotment option will be set forth in the prospectus supplement relating to those securities.

Sale Through Dealers

If we use dealers in the sale of the securities offered by this prospectus, we or an underwriter will sell the securities to them as principals. The dealers may then resell those securities to the public at varying prices to be determined by the dealers at the time of resale. The applicable prospectus supplement will set forth the names of the dealers and the terms of the transactions.

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Direct Sales

We may directly solicit offers to purchase the securities offered by this prospectus. In this case, no underwriters or agents would be involved. We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. The terms of any such sales will be described in the prospectus supplement.

Sales Through Agents

Securities also may be offered and sold through agents designated from time to time. The prospectus supplement will name any agent involved in the offer or sale of the securities and will describe any commissions payable to the agent. Unless otherwise indicated in the applicable prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment. Any agent may be deemed to be an underwriter within the meaning of the Securities Act with respect to any sale of those securities.

Delayed Delivery Contracts

If the applicable prospectus supplement indicates, we may authorize agents, underwriters or dealers to solicit offers from institutions to purchase securities at the public offering price under delayed delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. Institutions with which contracts of this type may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions, but in all cases those institutions must be approved by us. The obligations of any purchaser under any contract of this type will be subject to the condition that the purchase of the securities shall not at the time of delivery be prohibited under the laws of the jurisdiction to which the purchaser is subject. The applicable prospectus supplement will describe the commission payable f or solicitation of those contracts.

Market Making, Stabilization and Other Transactions

Our common stock is listed on the Nasdaq Global Market. Any common stock sold pursuant to a prospectus supplement will be eligible for listing and trading on the Nasdaq Global Market, subject to official notice of issuance. Unless the applicable prospectus supplement states otherwise, each other class or series of securities issued will be a new issue and will have no established trading market. We may elect to list any other class or series of securities on an exchange, but we are not currently obligated to do so. Any underwriters that we use in the sale of offered securities may make a market in such securities, but may discontinue such market making at any time without notice. Therefore, we cannot assure you that the securities will have a liquid trading market.

Any underwriter may also engage in stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934, as amended. Stabilizing transactions involve bids to purchase the underlying security in the open market for the purpose of pegging, fixing or maintaining the price of the securities. Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover syndicate short positions.

Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. Such transactions, if commenced, may be discontinued at any time. We make no representation or prediction as to the direction or magnitude of any effect that the transactions described above, if implemented, may have on the price of our securities.

Derivative Transactions and Hedging

We, the underwriters or other agents may engage in derivative transactions involving the securities. These derivatives may consist of short sale transactions and other hedging activities. The underwriters or agents may acquire a long or short position in the securities, hold or resell securities acquired and purchase options or futures on the securities and other derivative instruments with returns linked to or related to changes in the price of the securities. In order to facilitate these derivative transactions, we may enter into security lending or repurchase agreements with the underwriters or agents. The underwriters or agents may effect the derivative transactions through sales of the securities to the public, including short sales, or by lending the securities in order to facilitate short sale transactions by others. The underwriters or agents may also use the securities purchased or bor rowed from us or others (or, in the case of derivatives, securities received from us in settlement of those derivatives) to directly or indirectly settle sales of the securities or close out any related open borrowings of the securities.

Electronic Auctions

We also may make sales through the Internet or through other electronic means. Since we may from time to time elect to offer securities directly to the public, with or without the involvement of agents, underwriters or dealers, utilizing the Internet or other forms of electronic bidding or ordering systems for the pricing and allocation of such securities, you will want to pay particular attention to the description of that system we will provide in a prospectus supplement.

Such electronic system may allow bidders to directly participate, through electronic access to an auction site, by submitting conditional offers to buy that are subject to acceptance by us, and which may directly affect the price or other terms and conditions at which such securities are sold. These bidding or ordering systems may present to each bidder, on a so-called "real-time" basis, relevant information to assist in making a bid, such as the clearing spread at which the offering would be sold, based on the bids submitted, and whether a bidder's individual bids would be accepted, prorated or rejected. Of course, many pricing methods can and may also be used.

Upon completion of such an electronic auction process, securities will be allocated based on prices bid, terms of bid or other factors. The final offering price at which securities would be sold and the allocation of securities among bidders would be based in whole or in part on the results of the Internet or other electronic bidding process or auction.

General Information

Agents, underwriters, and dealers may be entitled, under agreements entered into with us, to indemnification by us against specified liabilities, including liabilities under the Securities Act, or to contribution by us to payments they may be required to make in respect to such liabilities. The applicable prospectus supplement will describe the terms and conditions of indemnification or contribution. Some of our agents, underwriters, and dealers, or their affiliates, may be customers of, engage in transactions with or perform services for us, in the ordinary course of business. We will describe in the prospectus supplement the nature of any such relationship and the name of the parties involved. Any lockup arrangements will be set forth in the applicable prospectus supplement.

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LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Oppenheimer Wolff & Donnelly LLP.

EXPERTS

The financial statements incorporated in this Prospectus by reference from the Company's Annual Report on Form 10-K have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are a public company and file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room. Our SEC filings are also available to the public at the SEC's web site at http://www.sec.gov.

Our common stock is listed on the Nasdaq Global Market. Reports and other information concerning BioSante may also be inspected at the offices of the Nasdaq OMX Group, Inc., 9600 Blackwell Road, Rockville, MD 20850 or on the Nasdaq OMX Group, Inc. website at http://www.nasdaq.com.

We also file annual audited and interim unaudited financial statements, proxy statements and other information with the Ontario, Alberta and British Columbia Securities Commissions. Copies of these documents that are filed through the System for Electronic Document Analysis and Retrieval "SEDAR" of the Canadian Securities Administrators are available at its web site http://www.sedar.com.

In addition, we maintain a web site that contains information regarding our company, including copies of reports, proxy statements and other information we file with the SEC. The address of our web site is www.biosantepharma.com. Except for the documents specifically incorporated by reference

into this prospectus, information contained on our website or that can be accessed through our website does not constitute a part of this prospectus. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

We have filed a registration statement on Form S-3 with the SEC for the common stock offered by the selling stockholder under this prospectus. This prospectus does not include all of the information contained in the registration statement. You should refer to the registration statement and its exhibits for additional information that is not contained in this prospectus. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreement or other document. You may:

- · inspect a copy of this prospectus, including the exhibits and schedules, without charge at the public reference room;
- · obtain a copy from the SEC upon payment of the fees prescribed by the SEC; or

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obtain a copy from the SEC website.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus the information contained in the documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the SEC will update and supersede this information. We are incorporating by reference the following documents into this prospectus:

- our annual report on Form 10-K for the year ended December 31, 2009 (including information specifically incorporated by reference into our Form 10-K from our definitive proxy statement for our 2010 annual meeting of stockholders);
- our quarterly report on Form 10-Q for the quarter ended March 31, 2010;
- our current report on Form 8-K as filed with the SEC on March 5, 2010 and May 3, 2010 (as amended on June 7, 2010); and
- the description of our common stock contained in our registration statement on Form 8-A and any amendments or reports filed for the purpose of updating such description.

We also are incorporating by reference any future filings we make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934 after the date of this prospectus and prior to the termination of the offering of the securities to which this prospectus relates. In addition, we also are incorporating by reference any future filings we make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934 after the date of the initial registration statement of which this prospectus is a part and prior to effectiveness of such registration statement. In no event, however, will any of the information that we "furnish" to the SEC in any current report on Form 8-K or any other report or filing be incorporated by reference into, or otherwise included in, this prospectus.

You may access our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statement, and amendments, if any, to those documents filed or furnished pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act with the SEC free of charge at the SEC's website or our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Except for the documents specifically incorporated by reference into this prospectus, information contained on our website or that can be accessed through our website does not constitute a part of this prospectus. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

You may request of copy of these filings, at no cost, by writing to Phillip B. Donenberg, Chief Financial Officer, Treasurer and Secretary, BioSante Pharmaceuticals, Inc., 111 Barclay Boulevard, Lincolnshire, Illinois 60069, by telephone at (847) 478-0500 ext. 101 or by email at pdonenberg@biosantepharma.com.

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\$75,000,000

Common Stock Preferred Stock Warrants Units PROSPECTUS

June 10, 2010