

PROSPECTUS



**Common Stock, \$0.001 par value**  
**Up to 7,474,153 Shares**

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This prospectus relates to the offer and sale, from time to time, by the selling stockholders named herein of up to 7,474,153 shares of our common stock, which includes (i) up to 4,070,032 shares of our common stock issuable upon conversion of or otherwise underlying our subordinated convertible debentures and (ii) up to 3,404,121 shares of our common stock issuable upon the exercise of warrants to purchase our common stock. This prospectus also covers any additional shares of common stock that may become issuable upon anti-dilution adjustment pursuant to the terms of these debentures warrants by reason of stock splits, stock dividends, or similar events. The debentures and warrants to purchase common stock were acquired by the selling stockholders in a private placement by us that closed on May 10, 2012.

The selling stockholders may sell all or a portion of the shares from time to time at prices which will be determined by the prevailing market price for the shares. We will not receive any proceeds from the sale of the shares by the selling stockholders. We will, however, to the extent the warrants are exercised for cash, as opposed to being exercised on a cashless basis, receive proceeds from such exercises. To the extent we receive such proceeds, they will be used for working capital and general corporate purposes. Please see "Selling Stockholders" and "Plan of Distribution" for information about the selling stockholders and the manner of offering of the common stock.

Our common stock is listed on the Nasdaq Global Market under the symbol "STXS." On March 28, 2013, the last reported sale price for our common stock on the Nasdaq Global Market was \$2.00 per share.

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**Investing in our common shares involves risks. See ["Risk Factors"](#) beginning on page 4 of this prospectus.**

**NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.**

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**The date of this prospectus is April 8, 2013.**

[Table of Contents](#)

TABLE OF CONTENTS

	<u>Page</u>
<a href="#">PROSPECTUS SUMMARY</a>	1
<a href="#">RISK FACTORS</a>	4
<a href="#">FORWARD-LOOKING STATEMENTS</a>	6
<a href="#">USE OF PROCEEDS</a>	7
<a href="#">SELLING STOCKHOLDERS</a>	7
<a href="#">PLAN OF DISTRIBUTION</a>	11
<a href="#">DESCRIPTION OF CAPITAL STOCK</a>	13
<a href="#">LEGAL MATTERS</a>	15
<a href="#">EXPERTS</a>	15
<a href="#">WHERE YOU CAN FIND ADDITIONAL INFORMATION</a>	15
<a href="#">INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE</a>	15

## PROSPECTUS SUMMARY

*This summary highlights selected information about Stereotaxis and a general description of the shares that may be offered for resale by the selling stockholders. This summary is not complete and does not contain all of the information that may be important to you. For a more complete understanding of us and the shares offered by the selling stockholders, you should carefully read this entire prospectus, including the “Risk Factors” section, any applicable prospectus supplement for these securities and the other documents we refer to and incorporate by reference. In particular, we incorporate important business and financial information into this prospectus by reference. On July 10, 2012, we effected a one-for-ten reverse stock split of our common stock. Unless otherwise indicated, all information set forth herein gives effect to such reverse stock split.*

### The Company

We design, manufacture and market robotic systems and instruments for use primarily by electrophysiologists for the treatment of abnormal heart rhythms known as cardiac arrhythmias. We offer our proprietary *Epoch* Solution, an advanced remote robotic navigation system for use in a hospital’s interventional surgical suite, or “interventional lab”. We believe the *Epoch* Solution revolutionizes the treatment of arrhythmias and coronary artery disease by enabling enhanced safety, efficiency and efficacy for catheter-based, or interventional, procedures. The *Epoch* Solution is comprised of the *Niobe* ES Robotic Magnetic Navigation System (“*Niobe* ES system”), *Odyssey* Information Management Solution (“*Odyssey* Solution”), and the *Vdrive* Robotic Navigation System (“*Vdrive* system”). We believe that our technology represents an important advance in the ongoing trend toward fully digitized, integrated and automated interventional labs and provides substantial, clinically important improvements over manual interventional methods, which often result in long and unpredictable procedure times with suboptimal therapeutic outcomes. We believe that our technology represents an important advance supporting efficient and effective information management and physician collaboration. The core elements of our technology, especially the *Niobe* ES system, are protected by an extensive patent portfolio, as well as substantial know-how and trade secrets.

Our *Niobe* ES system is the latest generation of the *Niobe* Robotic Magnetic Navigation System (“*Niobe* system”), which allows physicians to more effectively navigate proprietary catheters, guidewires and other delivery devices, both our own and those we are co-developing through strategic alliances, through the blood vessels and chambers of the heart to treatment sites in order to effect treatment. This is achieved using computer-controlled, externally applied magnetic fields that precisely and directly govern the motion of the internal, or working, tip of the catheter, guidewire or other interventional devices. We believe that our *Niobe* ES system represents a revolutionary technology in the interventional lab, bringing precise remote digital instrument control and programmability to the interventional lab, and has the potential to become the standard of care for a broad range of complex cardiology procedures.

The *Niobe* system is designed primarily for use by interventional electrophysiologists in the treatment of arrhythmias and approximately 1% of usage is by interventional cardiologists in the treatment of coronary artery disease. To date the significant majority of the Stereotaxis installations worldwide are intended for use in electrophysiology. The *Niobe* system is designed to be installed in both new and replacement interventional labs worldwide. Current and potential purchasers of our *Niobe* system include leading research and academic hospitals as well as community and regional medical centers around the world.

The *Niobe* system has been used in more than 55,000 procedures and is supported by more than 200 peer-reviewed publications in leading medical journals such as *PACE*, *Europace*, the *Journal of the American College of Cardiology* and the *Journal of Interventional Cardiac Electrophysiology*. *Niobe* system revenue represented 26%, 19%, and 40% of revenue for the years ended December 31, 2012, 2011, and 2010, respectively.

Stereotaxis has also developed the *Odyssey* Solution which provides an innovative enterprise solution for integrating, recording and networking interventional lab information within hospitals. The *Odyssey* Solution consists of two lab solutions including *Odyssey* Vision and the *Odyssey* Cinema system. *Odyssey* Vision consolidates all of the lab information from multiple sources, freeing doctors from managing complex interfaces during patient therapy for optimal procedural and clinical efficiency. The *Odyssey* Cinema system is an innovative solution delivering synchronized content targeted to improve care, enhance performance, increase referrals and market services. This tool includes an archiving capability that allows clinicians to store and replay entire procedures or segments of procedures. This information can be accessed from locations throughout the hospital local area network and over the Internet from anywhere with sufficient bandwidth. In order to maximize *Odyssey* Cinema system penetration, in select markets we offer *Odyssey* Interface systems, which connect partner large display solutions to the *Odyssey* Cinema system. The *Odyssey* Solution may be acquired either as part of the *Epoch* Solution or on a stand-alone basis for installation in interventional labs and other locations where clinicians desire improved clinical workflows and related efficiencies. *Odyssey* system revenue represented 14%, 18%, and 18% of revenue for the years ended December 31, 2012, 2011, and 2010, respectively.

## [Table of Contents](#)

Our *Vdrive* system provides navigation and stability for diagnostic and therapeutic devices designed to improve interventional procedures. The *Vdrive* system complements the *Niobe* ES system control of therapeutic catheters for fully remote procedures and enables single-operator workflow and is sold as two options, the *Vdrive* system and the *Vdrive Duo* system. In addition to the *Vdrive* system and the *Vdrive Duo* system, we also manufacture and market various disposable components (*V-Loop*, *V-Sono*, *V-CAS*, and *V-CAS Deflect*) which can be manipulated by these systems. We have received the CE Mark and regulatory licensing that allows us to market certain configurations of the *Vdrive* system and the *Vdrive Duo* system in Europe and Canada. We are in the process of obtaining the necessary clearance for the *V-Loop* and *V-Sono* devices in the United States.

We promote the full *Epoch* Solution in a typical hospital implementation, subject to regulatory approvals or clearances. The full *Epoch* Solution implementation requires a hospital to agree to an upfront capital payment and recurring payments. The upfront capital payment typically includes equipment and installation charges. The recurring payments typically include disposable costs for each procedure, equipment service costs beyond warranty period, and software licenses. In hospitals where the full *Epoch* Solution has not been implemented, equipment upgrade or expansion can be implemented upon purchasing of the necessary upgrade or expansion.

We incurred net losses of approximately \$32.0 million and \$9.2 million for the years ended December 31, 2011 and December 31, 2012, respectively, and expect such losses to continue through at least the year ending December 31, 2013. As of December 31, 2012, we had completed the operating expense declines through headcount reductions and discretionary spending cuts. We expect to incur additional losses into 2013 as we continue the development and commercialization of our products, conduct our research and development activities and advance new products into clinical development from our existing research programs and fund additional sales and marketing initiatives. The Company's independent registered public accounting firm's report issued in our Annual Report on Form 10-K included an explanatory paragraph describing the existence of conditions that raise substantial doubt about the Company's ability to continue as a going concern, including recent losses and working capital deficiency. The financial statements do not include any adjustments relating to the recoverability and classification of assets carrying amounts or the amount of and classification of liabilities that may result should the Company be unable to continue as a going concern.

We were incorporated in Delaware in June 1990 as Stereotaxis, Inc. Our principal executive offices are located at 4320 Forest Park Avenue, Suite 100, St. Louis, Missouri 63108, and our telephone number is (314) 678-6100. Our website address is [www.stereotaxis.com](http://www.stereotaxis.com). Information contained on our website is not incorporated by reference into and does not form any part of this prospectus. As used in this prospectus, references to "Company", "we", "our", "us" and "Stereotaxis" refer to Stereotaxis, Inc. unless the context requires otherwise. *Epoch*<sup>™</sup>, *Niobe*<sup>®</sup>, *Odyssey*<sup>®</sup>, *Odyssey Cinema*<sup>™</sup>, *Vdrive*<sup>™</sup>, *Vdrive Duo*<sup>™</sup>, *V-CAS*<sup>™</sup>, *V-CAS*<sup>™</sup> Deflect, *V-Loop*<sup>™</sup>, *V-Sono*<sup>™</sup>, *QuikCAS*<sup>™</sup> *Cardiodrive*<sup>®</sup>, *Cronus*<sup>®</sup>, *Assert*<sup>®</sup>, *PowerAssert*<sup>™</sup>, *Titan*<sup>®</sup> and *Pegasus*<sup>™</sup> are trademarks of Stereotaxis, Inc. All other trademarks that may appear in this prospectus are the property of their respective owners.

### Selected Financial Data

The following selected consolidated financial data for the years ended December 31, 2012, 2011, 2010, 2009 and 2008 and for the balance sheet data as of December 31, 2012, 2011, 2010, 2009 and 2008 have been derived from, and should be read in conjunction with our financial statements and the accompanying notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Reports on Form 10-K. The selected data in this section is not intended to replace the financial statements. Historical results are not indicative of the results to be expected in the future. On July 10, 2012, we effected a one-for-ten reverse stock split of our common stock. All information set forth in the selected consolidated financial data gives effect to such Reverse Stock Split.

	2012	2011	Year Ended December 31, 2010	2009	2008
<b>Consolidated Statements of Operations Data:</b>					
Revenue	\$ 46,562,434	\$ 41,987,432	\$ 54,051,237	\$ 51,149,555	\$ 40,365,173
Cost of revenue	14,781,055	12,498,081	15,564,687	17,021,633	14,177,790
Gross margin	31,781,379	29,489,351	38,486,550	34,127,922	26,187,383
Operating costs and expenses:					
Research and development	8,405,086	12,886,488	12,244,163	14,260,854	17,422,828
Sales and marketing	20,607,999	31,635,415	30,178,818	28,694,540	28,660,663
General and administrative	13,394,556	16,908,656	15,022,689	15,010,490	21,121,164
Total operating expenses	42,407,641	61,430,559	57,445,670	57,965,884	67,204,655
Operating loss	(10,626,262)	(31,941,208)	(18,959,120)	(23,837,962)	(41,017,272)
Interest and other income (expense), net <sup>(1) (2)</sup>	1,387,835	(89,967)	(964,367)	(3,656,495)	(2,868,702)
Net loss	\$ (9,238,427)	\$ (32,031,175)	\$ (19,923,487)	\$ (27,494,457)	\$ (43,885,974)
					43,885,974
Basic and diluted net loss per common share	\$ (1.33)	\$ (5.84)	\$ (3.94)	\$ (6.34)	\$ (12.00)
Shares used in computing basic and diluted net loss per common share	6,944,928	5,482,627	5,052,200	4,334,432	3,658,509
<b>Consolidated Balance Sheet Data:</b>					
Cash, cash equivalents and short-term investments	\$ 7,777,718	\$ 13,954,919	\$ 35,248,819	\$ 30,546,550	\$ 30,355,657
Working capital	(5,715,760)	(6,596,218)	12,395,426	12,878,277	10,097,082
Total assets	32,165,944	39,931,832	65,761,792	56,120,516	59,440,365
Long-term debt, less current maturities	16,824,736	17,290,531	8,000,000	10,346,655	12,036,723
Accumulated deficit	(384,645,873)	(375,407,446)	(343,376,271)	(323,452,784)	(295,958,327)
Total stockholders' equity	(18,790,226)	(18,828,895)	10,475,246	7,641,343	4,770,681

(1) Other income recorded in 2010 includes \$1.5 million in grants under the Qualifying Therapeutic Discovery Project Program.

(2) Other income recorded in 2012, 2011, 2010, and 2009 includes \$8.2 million, \$3.4 million, \$0.6 million, and \$0.9 million in warrant and other mark-to-market adjustments, respectively.

## Securities Being Offered

On May 10, 2012, we sold approximately \$8.5 million in aggregate principal amount of unsecured, subordinated, convertible debentures (the “Debentures”) to the selling stockholders named herein under a Securities Purchase Agreement (the “Convertible Debt SPA”). The Debentures became convertible into shares of our common stock at a conversion price of \$3.361 per share (or 2,521,571 shares in the aggregate), on July 10, 2012, the date we received certain required stockholder approvals. The purchasers of the Debentures also received six-year warrants to purchase 2,521,571 shares of our common stock at an exercise price of \$3.361 per share (the “Convertible Debt Warrants”). In addition, we have the ability to issue shares of our common stock in lieu of cash interest payments under certain circumstances, and are required to do so under the subordination agreement described below until the senior debt to which that agreement relates is repaid in full.

The Debentures bear interest at 8% per year and mature on May 10, 2014. The Company is required to make interest payments in shares of common stock, subject to having an effective registration statement with respect to such shares. The Convertible Debt Warrants became exercisable on the six month and first day anniversary following their issuance, and will remain exercisable until six years after their initial exercise date.

Subject to certain conditions, the Company may require each holder to convert up to 50% of the Debentures if the Common Stock closes above \$15.00, or 100% of the Debentures if the Common Stock closes above \$20.00 (in each case, as further adjusted for stock splits, recapitalizations and similar events) during a 20 consecutive trading day period and the resale registration statement described below has been declared effective by the SEC and is available for the issuance of the Common Stock upon conversion of the Debentures. In the event of any forced conversion by the Company, the minimum amount that the Company can force the holders to convert is \$2.5 million of Debentures in the aggregate.

In connection with the Convertible Debt SPA, the purchasers of the Debentures entered into a subordination agreement with Silicon Valley Bank pursuant to which payments under the Debentures are subordinated in right of payment to all obligations of the Company to Silicon Valley Bank, subject to certain exceptions.

This prospectus is part of a post-effective amendment to a registration statement being filed pursuant to a registration rights agreement entered into with the purchasers of the Convertible Debt SPA (the “Convertible Debt Registration Rights Agreement”), under which we agreed to register the resale of 135% of the common stock underlying the Debentures and Convertible Debt Warrants, which includes interest shares as described above.

The foregoing description is qualified in its entirety by the terms of the Convertible Debt SPA, Debentures, Convertible Debt Registration Rights Agreement, Subordination Agreement, and Convertible Debt Warrants, the forms of which are incorporated herein by reference.

## Other recent transactions

### *Extension of Silicon Valley Bank Loan and Sanderling/Alafi Credit Support*

On March 29, 2013, we and one of our wholly-owned subsidiaries (the “Subsidiary”) entered into a Fifth Loan Modification Agreement (Domestic), amending the Second Amended and Restated Loan and Security Agreement (Domestic), dated November 11, 2011 (the “Amended Loan Agreement”), with Silicon Valley Bank to extend the maturity of the current working capital line of credit from March 31, 2013 to June 30, 2013. Under the revised facility we are required to maintain, as of the last day of each fiscal quarter, a tangible net worth of (\$25 million) as calculated in accordance with a formula set forth in the Loan Agreement. Previously, we had been required to maintain a tangible net worth of (\$20 million) as of the last day of each fiscal quarter.

Also in connection with the closing and funding of the above transactions, we and the Subsidiary entered into an Export-Import Bank Fourth Loan Modification Agreement with Silicon Valley Bank (the “Ex-Im Modification Agreement”) to extend the maturity date of the revolving line of credit under that certain Amended and Restated Export-Import Bank Loan and Security Agreement dated November 30, 2011 from March 31, 2013 to June 30, 2013.

Also in connection with the closing and funding of the above transactions and with the Silicon Valley Bank extension described above, we entered into a further amendment to the Note and Warrant Purchase Agreement dated February 21, 2008, as amended (the “Note and Warrant Purchase Agreement”), with Alafi Capital Company and affiliates of Sanderling Venture Partners (collectively, the “Lenders”) to further extend the Lenders’ obligation to provide \$3 million in either direct loans to us or loan guarantees to our primary bank lender through June 30, 2013. The guarantees would terminate earlier if we consummate a third party, non-bank financing of \$8 million prior to June 30, 2013. We granted to the Lenders warrants (the “2013 Extension Warrants”) to purchase an aggregate of approximately 113,636 shares of common stock in exchange for their extension. The 2013 Extension Warrants have an exercise price of \$1.98 per share.

## [Table of Contents](#)

Sanderling is an affiliate of Fred A. Middleton who is a member of our board of directors. Chris Alafi is affiliated with Alafi Capital Company; Mr. Alafi served on our board through our last annual meeting in August 2012. This facility may also be used by us to guarantee our loan commitments with Silicon Valley Bank, our primary bank lender, through the same extended term.

### **RISK FACTORS**

*Investing in our securities involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the risks described in, or incorporated by reference in, this prospectus, including the risks described below and under the caption "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2012, and in any other reports that we file with the SEC, along with the other information included or incorporated by reference in this prospectus, in evaluating an investment in our common stock. The information included or incorporated by reference in this prospectus may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. For a description of these reports and documents, and information about where you can find them, see the sections entitled "Where You Can Find Additional Information" and "Incorporation of Certain Documents by Reference" in this prospectus.*

*The risks and uncertainties described in this prospectus and the documents incorporated by reference in this prospectus are not the only ones facing us. Additional risks and uncertainties that we do not presently know about or that we currently believe are not material may also adversely affect our business. If any of the risks and uncertainties described in this prospectus or the documents incorporated by reference herein actually occur, our business, financial condition and results of operations could be adversely affected in a material way. As a result, the trading price of our common stock and/or the value of any other securities we may issue may decline, and you might lose part or all of your investment.*

**We have recently received a notice from Nasdaq advising that we do not meet the continued listing standards of the Nasdaq Global Market. If we are unable to maintain a listing on a national securities exchange, it could negatively impact the price and liquidity of our common stock and our ability to access the capital markets, and could cause us to be in default under various loan documents.**

Our common stock is currently listed on the Nasdaq Global Market. In order to maintain that listing, we must satisfy minimum financial and other requirements. On January 20, 2012, we received notice from the Nasdaq Listing Qualifications Department that our common stock had not met the \$1.00 per share minimum bid price requirement for 30 consecutive business days and that, if we were unable to demonstrate compliance with this requirement during the applicable grace periods, our common stock would be subject to delisting after that time. Because the closing bid price of our common stock on the Nasdaq Global Market had been below \$1.00 each trading day since December 6, 2011, through July 10, 2012, we implemented the Reverse Stock Split of one-for-ten on July 10 following shareholder approval of that action in order to put our stock in compliance with the minimum bid price requirement. On July 25, 2012, we received notice that we regained compliance with the minimum bid price requirement. In addition, on June 25, 2012, Nasdaq notified us that we did not comply with the rule regarding market value of publicly held shares. On January 9, 2013, we received notification from Nasdaq that we had regained compliance with the minimum market value of publicly held shares requirement.

On March 20, 2013, we received a notification from the Nasdaq Listing Qualifications Department that we are not in compliance with the \$50.0 million in total assets and total revenues requirement for our most recently completed fiscal year or for two of the last three most recently completed fiscal years as required by Nasdaq Listing Rule 5450(b)(3)(A). In addition, the Nasdaq letter stated that we do not comply with an alternative requirement of Listing Rule 5450(b) for continued listing on the Nasdaq Global Market because our stockholders' equity is less than \$10.0 million and the market value of our listed securities is less than \$50.0 million. In the notice, Nasdaq stated that we may provide a plan to regain compliance with the continued listing requirements of the Nasdaq Global Market by May 6, 2013. If Nasdaq accepts the plan, it can grant an extension of up to 180 calendar days from the date of the letter (that is, through September 16, 2013) to evidence compliance. We intend to submit a compliance plan with Nasdaq on or before May 6, 2013.

There is no assurance that Nasdaq will approve our compliance plan and we are not currently eligible to transfer our listing to the Nasdaq Capital Market since we do not satisfy all applicable requirements for continued listing on that market at this time. Even if we are granted additional time to regain compliance with the Nasdaq Global Market listing standards, there can be no assurance that we will be able to evidence compliance by September 16, 2013. If the Nasdaq Staff does not accept our compliance plan, or if they accept our compliance plan and we are not able to achieve compliance by the established deadline, then the Nasdaq Staff would issue a delisting letter. We would at that point be afforded the right to a hearing before an independent Nasdaq Listing

## [Table of Contents](#)

Qualifications Panel (the “Panel”). If we requested a hearing, the delisting action would be stayed until the conclusion of the hearing process and the expiration of any extension granted by the Panel. At that hearing, we could seek a further extension on the Nasdaq Global Market or a transfer to the Nasdaq Capital Market, pending our achievement of compliance with the applicable requirements for continued listing. If our common stock is delisted from the Nasdaq Stock Market, we anticipate that our common stock will be immediately eligible for quotation on the OTCQB Market. Any delisting could adversely affect the market liquidity of our common stock, adversely affect our ability to obtain financing for the continuation of our operations and harm our business. Moreover, if we are not listed on an “eligible market,” under the terms of our convertible debt, we would be in default under the terms of our debenture, and because of cross-default provisions, we would be in default under our other principal debt obligations. In addition, receipt of a deficiency notice from Nasdaq with respect to our ongoing compliance with the Nasdaq Global Market continued listing standards could also result in other negative implications, including the potential loss of confidence by suppliers, customers and employees, the loss of institutional investor interest and fewer business development opportunities. Any of such developments as a result of the foregoing could impair the value of your investment.

### **We may not be able to comply with debt covenants and may have to repay outstanding indebtedness.**

We have financed our operations through equity and convertible debt transactions, a financing of our catheter royalty stream under the Healthcare Royalty Partners facility entered into in November 2011, as well as bank and other borrowings. We recently extended our revolving line of credit, which matures on June 30, 2013, and our Debentures mature on May 10, 2014. In addition, our current convertible debt and other borrowing agreements contain various covenants, including financial covenants under our Silicon Valley Bank line. The covenants in these various agreements are similar, but are not identical in all respects. If we violate our covenants, we could be required to repay the indebtedness as to which that default relates. In addition, as a result of various cross-default provisions in these agreements, a violation of the covenants under one or more of such agreements could trigger our obligation to repay all of our existing indebtedness. We could be unable to make these payments, which could lead to insolvency. Even if we are able to make these payments, it will lead to the lack of availability for additional borrowings under our bank loan agreement due to our borrowing capacity. There can be no assurance that we will be able to maintain compliance with these covenants or that we could replace this source of liquidity if these covenants were to be violated and our loans and other borrowed amounts were forced to be repaid.

### **We are no longer eligible to use Form S-3, which could impair our capital raising activities.**

As of the date of this prospectus, we are not eligible to use Form S-3 as a result of our payment default in 2012 under our facility with Silicon Valley Bank. As a result, we cannot use Form S-3 to register resales of our securities for 12 months following our default, which occurred on April 30, 2012. In addition, we are limited in our ability to file new shelf registration statements on SEC Form S-3 and/or to fully use the remaining capacity on our existing registration statements on SEC Form S-3. Moreover, our public float is below \$75 million and may remain below \$75 million for the foreseeable future. As a result, we may not be eligible to use Form S-3 for primary offerings even though we otherwise would regain the ability to use the form for resale registration statements 12 months following our payment default. We have relied significantly on shelf registration statements on SEC Form S-3 for most of our financings in recent years, and accordingly any such limitations may harm our ability to raise the capital we need. Under these circumstances, until we are again eligible to use Form S-3, we will be required to use a registration statement on Form S-1 to register securities with the SEC or issue such securities in a private placement, which could increase the cost of raising capital.

### **Our principal stockholders continue to own a large percentage of our voting stock, and they have the ability to substantially influence matters requiring stockholder approval.**

Our executive officers, directors and individuals or entities affiliated with them beneficially own or control a substantial percentage of the outstanding shares of our common stock. Moreover, following approval of the Stockholder Approval Matters, certain of our directors and their affiliated funds have the ability to obtain a substantial portion of our common stock. Accordingly, these executive officers, directors and their affiliates, acting as a group, will have substantial influence over the outcome of corporate actions requiring stockholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of our assets or any other significant corporate transaction. These stockholders may also delay or prevent a change of control, even if such a change of control would benefit our other stockholders. This significant concentration of stock ownership may adversely affect the trading price of our common stock due to investors’ perception that conflicts of interest may exist or arise.

**Future issuances of our securities could dilute current stockholders' ownership.**

Up to 4,070,032 shares of our common stock are issuable upon conversion of, or otherwise underlying, the Debentures and up to 3,404,121 shares of our common stock issuable upon exercise of the Convertible Debt Warrants held by the selling stockholders identified in this prospectus, which represents 135% of the common stock underlying such Debentures and Convertible Debt Warrants. In addition, in 2012 we filed registration statements relating to the resale of up to 650,618 and 1,518,109 shares of stock, respectively, issuable on exercise of the certain warrants issued in connection with a PIPE transaction entered into in May 2012, as well as an additional 517,422 shares issuable in connection with amendments two through six of the Note and Warrant Purchase Agreement issued to Alafi Capital Company and the Sanderling Venture Partners' affiliates. The exercise price of most of these securities (including all of the Debentures, the Convertible Debt Warrants and all of the PIPE Warrants) is \$3.361. In July 2012, we increased the authorized number of shares of our common stock from 100,000,000 to 300,000,000. In addition, we recently issued warrants to purchase an additional 113,636 shares of our common stock Alafi Capital Company and the Sanderling Venture Partners' affiliates in connection with the further extension of their guarantees of our revolving credit facility in March 2013. A significant number of shares of our common stock are subject to stock options and stock appreciation rights, and we may request the ability to issue additional such securities to our employees. We may also decide to raise additional funds through public or private debt or equity financing to fund our operations. While we cannot predict the effect, if any, that future sales of debt, our common stock, other equity securities or securities convertible into our common stock or other equity securities or the availability of any of the foregoing for future sale, will have on the market price of our common stock, it is likely that sales of substantial amounts of our common stock (including shares issued upon the exercise of stock options, stock appreciation rights or the conversion of any convertible securities outstanding now or in the future), or the perception that such sales could occur, will adversely affect prevailing market prices for our common stock.

**FORWARD-LOOKING STATEMENTS**

The prospectus contains "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements relate to, among other things:

- our business strategy;
- our value proposition;
- our ability to fund operations;
- our ability to convert backlog to revenue;
- the ability of physicians to perform certain medical procedures with our products safely, effectively and efficiently;
- the adoption of our products by hospitals and physicians;
- the market opportunity for our products, including expected demand for our products;
- the timing and prospects for regulatory approval of our additional disposable interventional devices;
- the success of our business partnerships and strategic alliances;
- our estimates regarding our capital requirements;
- our plans for hiring additional personnel; and
- any of our other plans, objectives, expectations and intentions contained or incorporated into this prospectus that are not historical facts.

These statements relate to future events or future financial performance, and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by such forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may", "will", "should", "could", "expects", "plans", "intends", "anticipates", "believes", "estimates", "predicts", "potential", or "continue", or the negative of such terms or other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements. These statements are only predictions.

Factors that may cause our actual results to differ materially from our forward-looking statements include, among others, changes in general economic and business conditions and the risks and other factors set forth in "Item 1A—Risk Factors" and elsewhere in our Annual Report on Form 10-K for the year ended December 31, 2012.

Our actual results may be materially different from what we expect. We undertake no duty to update these forward-looking statements after the date of this prospectus, even though our situation may change in the future. We qualify all of our forward-looking statements by these cautionary statements.



## USE OF PROCEEDS

We will not receive any proceeds from the selling stockholders' sales of our common stock. We could receive up to a maximum of approximately \$8,475,000 in proceeds from the cash exercise of all the Convertible Debt Warrants held by the selling stockholders and covered by this prospectus, which proceeds would be used for working capital and general corporate purposes. As of the date hereof, none of the Convertible Debt Warrants have been exercised.

## SELLING STOCKHOLDERS

The shares of common stock being offered by the selling stockholders are those issuable to the selling stockholders upon conversion of the Debentures and exercise of the Convertible Debt Warrants. For additional information regarding the issuance of the Debentures and the Convertible Debt Warrants, see "Prospectus Summary – Securities Being Offered" above. We are registering the shares of common stock in order to permit the selling stockholders to offer the shares for resale from time to time. Except for the ownership of the Debentures and the Convertible Debt Warrants issued pursuant to the Securities Purchase Agreement, the selling stockholders have not had any material relationship with us within the past three years.

The table below lists the selling stockholders and other information regarding the beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder) of the shares of common stock held by each of the selling stockholders. The second column lists the number of shares of common stock known to us to be beneficially owned by the selling stockholders, based on their respective ownership of shares of common stock, Debentures and Convertible Debt Warrants, as of the most recent date practicable for each selling stockholder, assuming conversion of the Debentures and exercise of the Convertible Debt Warrants held by each such selling stockholder on that date but taking account of any limitations on conversion and exercise set forth therein. We had 8,063,239 shares outstanding as of February 28, 2013.

The third column lists the shares of common stock being offered by this prospectus by the selling stockholders and does not take in account any limitations on (i) conversion of the Debentures set forth therein or (ii) exercise of the Convertible Debt Warrants set forth therein.

In accordance with the terms of a registration rights agreement with the holders of the Debentures and the Convertible Debt Warrants, this prospectus generally covers the resale of 135% of the sum of (i) the maximum number of shares of common stock issuable upon conversion of the Debentures, (ii) the maximum number of other shares of common stock issuable pursuant to the Debentures and (iii) the maximum number of shares of common stock issuable upon exercise of the Convertible Debt Warrants, in each case, determined as if the outstanding Debentures and Convertible Debt Warrants were converted or exercised (as the case may be) in full (without regard to any limitations on conversion or exercise contained therein) as of June 10, 2012, the trading day immediately preceding the date this registration statement was initially filed with the SEC. Because the conversion price of the Debentures and the exercise price of the Convertible Debt Warrants may be adjusted, the number of shares that will actually be issued may be more or less than the number of shares being offered by this prospectus. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

Under the terms of the Debentures and the Convertible Debt Warrants, a selling stockholder may not convert the Debentures or exercise the Convertible Debt Warrants to the extent (but only to the extent) such selling stockholder or any of its affiliates would beneficially own a number of shares of our common stock which would exceed various percentages for each investor, but in no case above 9.99%. The number of shares in the second column reflects these limitations. The selling stockholders may sell all, some or none of their shares in this offering. See "Plan of Distribution."

## Table of Contents

Selling Stockholder	Number of Shares Beneficially Owned Prior to the Offering (1)	Maximum Number of Shares Offered by This Prospectus	Shares Beneficially Owned Subsequent to the Offering (1)	
			Shares	Percent
DAFNA LifeScience Ltd(2)	420,363(3)	1,058,287	28,502	*
DAFNA LifeScience Market Neutral Ltd(4)	421,295(5)	749,620	19,795	*
DAFNA LifeScience Select Ltd(6)	419,522(7)	1,278,764	38,040	*
Prescott Group Aggressive Small Cap Master Fund, G.P.(8)	858,966(9)	1,763,812	283,343	2.99
Tenor Opportunity Master Fund Ltd.(10)	334,722(11)	496,072	—	*
Aria Opportunity Fund, Ltd (12)	111,574(13)	165,357	—	*
Iroquois Master Fund Ltd (14)	419,326(15)	639,382	79,240	*
Kingsbrook Opportunities Master Fund LP(16)	297,530(17)	440,953	—	*
Hudson Bay Master Fund Ltd (18)	595,061(19)	881,906	—	*
Total Number of Shares Offered		7,474,153		

\* Less than 1%

- (1) Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities.
- (2) DAFNA LifeScience, Ltd is a Cayman Islands exempted company. DAFNA Capital Management, LLC is the investment adviser of DAFNA LifeScience. DAFNA Capital Management, in its capacity as investment adviser to DAFNA LifeScience, may be deemed to be the beneficial owner of the shares owned by DAFNA LifeScience, as in its capacity as investment adviser, it has the power to dispose, direct the disposition of, and vote the shares owned by DAFNA LifeScience. Nathan Fischel and Fariba Ghodsian are part-owners of DAFNA Capital Management and managing members. As controlling persons of DAFNA Capital Management, they may be deemed to beneficially own the shares of our common stock owned by DAFNA LifeScience.
- (3) Reflects 59,502 shares of our common stock held by DAFNA LifeScience, Ltd together with the beneficial ownership of DAFNA LifeScience Ltd from our common stock issuable upon conversion of the Debenture and exercise of the Convertible Debt Warrant held by DAFNA LifeScience Ltd as of the date of this prospectus after giving effect to a “blocker provision” in such Debenture and Convertible Debt Warrant under which the holder thereof does not have the right to convert such Debenture or exercise such Convertible Debt Warrant, respectively, to the extent (but only to the extent) that such conversion or exercise would result in beneficial ownership by the holder thereof, or any of its affiliates, of more than 4.99% of our common stock then outstanding. Without regard to any such limitations on conversion or exercise imposed on DAFNA LifeScience Ltd by “blockers”, such Debenture and Convertible Debt Warrant held by DAFNA LifeScience Ltd would be convertible or exercisable, as applicable, into (i) 357,037 shares of common stock issuable upon conversion of such Debenture and (ii) 357,037 shares of common stock issuable upon exercise of such Convertible Debt Warrant.
- (4) DAFNA LifeScience Market Neutral, Ltd is a Cayman Islands exempted company. DAFNA Capital Management, LLC is the investment adviser of DAFNA LifeScience Market Neutral. DAFNA Capital Management, in its capacity as investment adviser to DAFNA LifeScience Market Neutral, may be deemed to be the beneficial owner of the shares owned by DAFNA LifeScience Market Neutral, as in its capacity as investment adviser, it has the power to dispose, direct the disposition of, and vote the shares owned by DAFNA LifeScience Market Neutral. Nathan Fischel and Fariba Ghodsian are part-owners of DAFNA Capital Management and managing members. As controlling persons of DAFNA Capital Management, they may be deemed to beneficially own the shares of our common stock owned by DAFNA LifeScience Market Neutral.

## Table of Contents

- (5) Reflects 41,755 shares of our common stock held by DAFNA LifeScience Market Neutral, Ltd together with the beneficial ownership of DAFNA LifeScience Market Neutral Ltd from our common stock issuable upon conversion of the Debenture and exercise of the Convertible Debt Warrant held by DAFNA LifeScience Market Neutral Ltd as of the date of this prospectus after giving effect to a “blocker provision” in such Debenture and Convertible Debt Warrant under which the holder thereof does not have the right to convert such Debenture or exercise such Convertible Debt Warrant, respectively, to the extent (but only to the extent) that such conversion or exercise would result in beneficial ownership by the holder thereof, or any of its affiliates, of more than 4.99% of our common stock then outstanding. Without regard to any such limitations on conversion or exercise imposed on DAFNA LifeScience Market Neutral Ltd by “blockers”, such Debenture and Convertible Debt Warrant held by DAFNA LifeScience Market Neutral Ltd would be convertible or exercisable, as applicable, into (i) 252,901 shares of common stock issuable upon conversion of such Debenture and (ii) 252,901 shares of common stock issuable upon exercise of such Convertible Debt Warrant.
- (6) DAFNA LifeScience Select, Ltd is a Cayman Islands exempted company. DAFNA Capital Management, LLC is the investment adviser of DAFNA LifeScience Select. DAFNA Capital Management, in its capacity as investment adviser to DAFNA LifeScience Select, may be deemed to be the beneficial owner of the shares owned by DAFNA LifeScience Select, as in its capacity as investment adviser, it has the power to dispose, direct the disposition of, and vote the shares owned by DAFNA LifeScience Select. Nathan Fischel and Fariba Ghodsian are part-owners of DAFNA Capital Management and managing members. As controlling persons of DAFNA Capital Management, they may be deemed to beneficially own the shares of our common stock owned by DAFNA LifeScience Select.
- (7) Reflects 75,499 shares of our common stock held by DAFNA LifeScience Select Ltd together with the beneficial ownership of DAFNA LifeScience Select Ltd from our common stock issuable upon conversion of the Debenture and exercise of the Convertible Debt Warrant held by DAFNA LifeScience Select Ltd as of the date of this prospectus after giving effect to a “blocker provision” in such Debenture and Convertible Debt Warrant under which the holder thereof does not have the right to convert such Debenture or exercise such Convertible Debt Warrant, respectively, to the extent (but only to the extent) that such conversion or exercise would result in beneficial ownership by the holder thereof, or any of its affiliates, of more than 4.99% of our common stock then outstanding. Without regard to any such limitations on conversion or exercise imposed on DAFNA LifeScience Select Ltd by “blockers”, such Debenture and Convertible Debt Warrant held by DAFNA LifeScience Select Ltd would be convertible or exercisable, as applicable, into (i) 431,419 shares of common stock issuable upon conversion of such Debenture and (ii) 431,419 shares of common stock issuable upon exercise of such Convertible Debt Warrant.
- (8) Prescott Group Aggressive Small Cap, L.P. (“Prescott Small Cap”) and Prescott Group Aggressive Small Cap II, L.P. (“Prescott Small Cap II” and, together with Prescott Small Cap, the “Small Cap Funds”) are the general partners of Prescott Group Aggressive Small Cap Master Fund, G.P. (“Prescott Master Fund”). Prescott Group Capital Management, L.L.C. (“Prescott Capital”) is the general partner of the Small Cap Funds and Mr. Phil Frohlich is the principal of Prescott Capital, and as a result Mr. Frohlich and Prescott Capital may direct the vote and disposition of these securities on behalf of the Small Cap Funds. The Small Cap Funds, Prescott Capital and Mr. Frohlich each disclaim beneficial ownership over these securities.
- (9) Reflects 323,949 shares of our common stock held by Prescott Master Fund together with the beneficial ownership of Prescott Master Fund from our common stock issuable upon conversion of the Debenture exercise of the Convertible Debt Warrant held by Prescott Master Fund as of the date of this prospectus after giving effect to a “blocker provision” in such Debenture and Convertible Debt Warrant under which the holder thereof does not have the right to convert such Debenture or exercise such Convertible Debt Warrant, respectively, to the extent (but only to the extent) that such conversion or exercise would result in beneficial ownership by the holder thereof, or any of its affiliates, of more than 9.99% of our common stock then outstanding. Without regard to any such limitations on conversion or exercise imposed on Prescott Master Fund by “blockers”, such Debenture and Convertible Debt Warrant held by Prescott Master Fund would be convertible or exercisable, as applicable, into (i) 595,061 shares of common stock issuable upon conversion of such Debenture and (ii) 595,061 shares of common stock issuable upon exercise of such Convertible Debt Warrant.

## Table of Contents

- (10) Tenor Capital Management Company, L.P., the investment manager of Tenor Opportunity Master Fund Ltd., has voting and investment power over these securities. Tenor Management GP, LLC is the general partner of Tenor Capital Management Company, L.P. and Robin R. Shah is the managing member of Tenor Management GP, LLC. Robin R. Shah, Tenor Management GP, LLC and Tenor Capital Management Company, L.P. each disclaim beneficial ownership over these securities.
- (11) Reflects the beneficial ownership of Tenor Opportunity Master Fund Ltd. from our common stock issuable upon conversion of the Debenture and exercise of the Convertible Debt Warrant held by Tenor Opportunity Master Fund Ltd. as of the date of this prospectus. Each of the Debenture and the Convertible Debt Warrant includes a “blocker provision” under which the holder thereof does not have the right to convert such Debenture or exercise such Convertible Debt Warrant, respectively, to the extent (but only to the extent) that such conversion would result in beneficial ownership by the holder thereof, or any of its affiliates, of more than 4.99% of our common stock then outstanding.
- (12) Tenor Capital Management Company, L.P., the investment manager of Aria Opportunity Fund, Ltd., has voting and investment power over these securities. Tenor Management GP, LLC is the general partner of Tenor Capital Management Company, L.P. and Robin R. Shah is the managing member of Tenor Management GP, LLC. Robin R. Shah, Tenor Management GP, LLC and Tenor Capital Management Company, L.P. each disclaim beneficial ownership over these securities.
- (13) Reflects the beneficial ownership of Aria Opportunity Fund, Ltd. from our common stock issuable upon conversion of the Debenture and exercise of the Convertible Debt Warrant held by Aria Opportunity Fund, Ltd. as of the date of this prospectus. Each of the Debenture and the Convertible Debt Warrant includes a “blocker provision” under which the holder thereof does not have the right to convert such Debenture or exercise such Convertible Debt Warrant, respectively, to the extent (but only to the extent) that such conversion would result in beneficial ownership by the holder thereof, or any of its affiliates, of more than 4.99% of our common stock then outstanding.
- (14) Iroquois Capital Management L.L.C. (“Iroquois Capital”) is the investment manager of Iroquois Master Fund, Ltd (“IMF”). Consequently, Iroquois Capital has voting control and investment discretion over securities held by IMF. As managing members of Iroquois Capital, Joshua Silverman and Richard Abbe make voting and investment decisions on behalf of Iroquois Capital in its capacity as investment manager to IMF. As a result of the foregoing, Mr. Silverman and Mr. Abbe may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the securities held by IMF. Notwithstanding the foregoing, Mr. Silverman and Mr. Abbe disclaim such beneficial ownership.
- (15) Reflects 79,240 shares of our common stock held by IMF together with the beneficial ownership of IMF from our common stock issuable upon conversion of the Debenture and exercise of the Convertible Debt Warrant held by IMF as of the date of this prospectus after giving effect to a “blocker provision” in such Debenture and Convertible Debt Warrant under which the holder thereof does not have the right to convert such Debenture or exercise such Convertible Debt Warrant, respectively, to the extent (but only to the extent) that such conversion or exercise would result in beneficial ownership by the holder thereof, or any of its affiliates, of more than 4.99% of our common stock then outstanding. Without regard to any such limitations on conversion or exercise imposed on IMF by “blockers”, such Debenture and Convertible Debt Warrant held by IMF would be convertible or exercisable, as applicable, into (i) 215,710 shares of common stock issuable upon conversion of such Debenture and (ii) 215,710 shares of common stock issuable upon exercise of such Convertible Debt Warrant.
- (16) Kingsbrook Partners LP (“Kingsbrook Partners”) is the investment manager of Kingsbrook Opportunities Master Fund LP (“Kingsbrook Opportunities”) and consequently has voting control and investment discretion over securities held by Kingsbrook Opportunities. Kingsbrook Opportunities GP LLC (“Opportunities GP”) is the general partner of Kingsbrook Opportunities and may be considered the beneficial owner of any securities deemed to be beneficially owned by Kingsbrook Opportunities. KB GP LLC (“GP LLC”) is the general partner of Kingsbrook Partners and may be considered the beneficial owner of any securities deemed to be beneficially owned by Kingsbrook Partners. Ari J. Storch, Adam J. Chill and Scott M. Wallace are the sole managing members of Opportunities GP and GP LLC and as a result may be considered beneficial owners of any securities deemed beneficially owned by Opportunities GP and GP LLC. Each of Kingsbrook Partners, Opportunities GP, GP LLC and Messrs. Storch, Chill and Wallace disclaim beneficial ownership of these securities.

## Table of Contents

- (17) Reflects the beneficial ownership of Kingsbrook Opportunities from our common stock issuable upon conversion of the Debenture and Convertible Debt Warrant held by Kingsbrook Opportunities as of the date of this prospectus. Each of the Debenture and the Convertible Debt Warrant includes a “blocker provision” under which the holder thereof does not have the right to convert such Debenture or exercise such Convertible Debt Warrant, respectively, to the extent (but only to the extent) that such conversion would result in beneficial ownership by the holder thereof, or any of its affiliates, of more than 4.99% of our common stock then outstanding.
- (18) Hudson Bay Capital Management LP, the investment manager of Hudson Bay Master Fund Ltd., has voting and investment power over these securities. Sander Gerber is the managing member of Hudson Bay Capital GP LLC, which is the general partner of Hudson Bay Capital Management LP. Sander Gerber disclaims beneficial ownership of such securities.
- (19) Reflects the beneficial ownership of Hudson Bay Master Fund Ltd. from our common stock issuable upon conversion of the Debenture and exercise of the Convertible Debt Warrant held by Hudson Bay Master Fund Ltd. as of the date of this prospectus after giving effect to a “blocker provision” in such Debenture and Convertible Debt Warrant under which the holder thereof does not have the right to convert such Debenture or exercise such Convertible Debt Warrant, respectively, to the extent (but only to the extent) that such conversion or exercise would result in beneficial ownership by the holder thereof, or any of its affiliates, of more than 4.99% of our common stock then outstanding. Without regard to any such limitations on conversion or exercise imposed on Hudson Bay Master Fund Ltd. by “blockers”, such Debenture and Convertible Debt Warrant held by Hudson Bay Master Fund Ltd. would be convertible or exercisable, as applicable, into (i) 297,530 shares of common stock issuable upon conversion of such Debenture and (ii) 297,530 shares of common stock issuable upon exercise of such Convertible Debt Warrant.

### **PLAN OF DISTRIBUTION**

We are registering the shares of common stock underlying the Debentures and issuable upon exercise of the warrants to permit the resale of these shares of common stock by the holders of the Debentures and Convertible Debt Warrants from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling stockholders may sell all or a portion of the shares of common stock held by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent’s commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, pursuant to one or more of the following methods:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales made after the date the Registration Statement is declared effective by the SEC;

## Table of Contents

- broker-dealers may agree with a selling securityholder to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares of common stock under Rule 144 promulgated under the Securities Act of 1933, as amended, if available, rather than under this prospectus. In addition, the selling stockholders may transfer the shares of common stock by other means not described in this prospectus. If the selling stockholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling stockholders may also sell shares of common stock short and deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

The selling stockholders may pledge or grant a security interest in some or all of the Debentures, Convertible Debt Warrants or shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

To the extent required by the Securities Act and the rules and regulations thereunder, the selling stockholders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be “underwriters” within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of common stock is made, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling stockholders and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The selling stockholders and any other person participating in such distribution will be subject to applicable provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling stockholders and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We have paid (and will pay) all expenses of the registration of the shares of common stock pursuant to the Registration Rights Agreement relating to the Convertible Debentures and Convertible Debt Warrants, estimated to be approximately \$46,000 in total, including, without limitation, Securities and Exchange Commission filing fees and expenses of compliance with state securities or “blue sky” laws; provided, however, a selling stockholder will pay all underwriting discounts and selling commissions, if any. We will indemnify the selling stockholders against liabilities, including some liabilities under the Securities Act in accordance with the registration rights agreements or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act that may arise from any written information furnished to us by the selling stockholder specifically for use in this prospectus, in accordance with the related registration rights agreements or we may be entitled to contribution.

## [Table of Contents](#)

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

### DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, we are authorized to issue up to 310 million shares of capital stock, par value \$.001 per share, divided into two classes designated, respectively, "common stock" and "preferred stock." Of such shares authorized, 300 million shares are designated as common stock, and 10 million shares are designated as preferred stock.

The following is a summary of the material terms of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws. Since the terms of our certificate of incorporation and bylaws, and Delaware law, are more detailed than the general information provided below, you should only rely on the actual provisions of those documents and Delaware law. If you would like to read those documents, they are on file with the SEC, as described under the heading "Where You Can Find Additional Information" below.

On July 10, 2012, we filed a Certificate of Amendment to our Amended and Restated Certificate of Incorporation to implement a one-for-ten reverse split of our common stock. As a result of the Reverse stock split, each ten shares of the Company's issued and outstanding common stock were automatically combined and converted into one issued and outstanding share of common stock. The Reverse stock split affected all issued and outstanding shares of the Company's common stock, as well as common stock underlying stock options, stock appreciation rights, restricted stock units, warrants and convertible debentures outstanding immediately prior to the effectiveness of the Reverse stock split. In addition, the Amendment increased the number of authorized shares of the Company's common stock from 100 million to 300 million. The Reverse stock split did not alter the par value of common stock, which remained at \$.001 per share, or modify any voting rights or other terms of our common stock. Unless otherwise indicated, all information set forth herein gives effect to such Reverse stock split.

As of February 28, 2013, there were approximately 8.1 million shares of common stock outstanding that were held of record by approximately 332 stockholders, although we believe that there is a significantly larger number of beneficial owners of our common stock. The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the shares voting are able to elect all of the directors. Subject to preferences that may be granted to any then outstanding preferred stock, holders of common stock are entitled to receive ratably only those dividends as may be declared by the board of directors out of funds legally available therefor, as well as any distributions to the stockholders. In the event of our liquidation, dissolution or winding up, holders of common stock are entitled to share ratably in all of our assets remaining after we pay our liabilities and distribute the liquidation preference of any then outstanding preferred stock. Holders of common stock have no preemptive or other subscription or conversion rights. There are no redemption or sinking fund provisions applicable to the common stock.

#### Anti-Takeover Provisions of Delaware Law and Charter Provisions

*Interested Stockholder Transactions.* We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any "business combination" with any "interested stockholder" for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that 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 began, 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 after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

## [Table of Contents](#)

Section 203 defines “business combination” to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of assets with a value of 10% or more of either the total assets or all outstanding stock of the corporation;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

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

In addition, some provisions of our amended and restated certificate of incorporation and amended and restated bylaws may be deemed to have an anti-takeover effect and may delay or prevent a tender offer or takeover attempt that a stockholder might consider in its best interest, including those attempts that might result in a premium over the market price for the shares held by stockholders.

*Cumulative Voting.* Our amended and restated certificate of incorporation expressly denies stockholders the right to cumulative voting in the election of directors.

*Classified Board of Directors.* Our board of directors is divided into three classes of directors serving staggered three-year terms. As a result, approximately one-third of the board of directors is elected each year, which has the effect of requiring at least two annual stockholder meetings, instead of one, to replace a majority of the members of the board. These provisions, when coupled with the provision of our amended and restated certificate of incorporation authorizing only the board of directors to fill vacant directorships or increase the size of the board of directors, may deter a stockholder from removing incumbent directors and simultaneously gaining control of the board of directors by filling the vacancies created by such removal with its own nominees. The certificate of incorporation also provides that directors may be removed by stockholders only for cause. Since the board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management.

*Stockholder Action; Special Meeting of Stockholders.* Our amended and restated certificate of incorporation and bylaws do not permit stockholders to act by written consent. They provide that special meetings of our stockholders may be called only by the chairman of our board of directors, our chief executive officer or a majority of our directors. Further, our amended and restated certificate of incorporation provides that the stockholders may amend bylaws adopted by the board of directors or specified provisions of the certificate of incorporation by the affirmative vote of at least 66 2/3% of our capital stock.

*Advance Notice Requirements for Stockholder Proposals and Directors Nominations.* Our amended and restated bylaws provide that stockholders seeking to bring business before an annual meeting of stockholders, or to nominate candidates for election as directors at an annual meeting of stockholders, must provide timely notice in writing. To be timely, a stockholder’s notice must be delivered to or mailed and received at our principal executive offices not more than 120 days or less than 90 days prior to the anniversary date of the immediately preceding annual meeting of stockholders. However, in the event that the annual meeting is called for a date that is not within 30 days before or after such anniversary date, notice by the stockholder in order to be timely must be received not later than the close of business on the 10th day following the date on which notice of the date of the annual meeting was mailed to stockholders or made public, whichever first occurs. Our amended and restated bylaws also specify requirements as to the form and content of a stockholder’s notice. These provisions may preclude stockholders from bringing matters before an annual meeting of stockholders or from nominating directors at an annual meeting of stockholders.

*Authorized But Unissued Shares.* Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of Stereotaxis by means of a proxy contest, tender offer, merger or otherwise.



## [Table of Contents](#)

*Amendments; Supermajority Vote Requirements.* The Delaware General Corporation Law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless either a corporation's certificate of incorporation or bylaws require a greater percentage. Our amended and restated certificate of incorporation will impose supermajority vote requirements of 66 2/3% of the voting power of our capital stock in connection with the amendment of certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws, including those provisions relating to the classified board of directors, action by written consent and the ability of stockholders to call special meetings.

### **Nasdaq Global Market Listing**

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

### **Transfer Agent And Registrar**

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc. Its address is 1717 Arch St., Suite 130, Philadelphia, PA 10103, and its telephone number is (215) 553-5400.

## **LEGAL MATTERS**

The validity of the securities offered hereby has been passed upon for us by Bryan Cave LLP, St. Louis, Missouri. James L. Nouss, Jr., a partner of our legal counsel Bryan Cave LLP, beneficially owns 1,172 shares of our common stock.

## **EXPERTS**

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements and schedule included in our Annual Report on Form 10-K for the year ended December 31, 2012, as set forth in their report (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements), which is incorporated by reference in the registration statement. Our financial statements and schedule as of December 31, 2012 are incorporated herein by reference in reliance on Ernst & Young LLP's report, given on the authority of such firm as experts in accounting and auditing.

## **WHERE YOU CAN FIND ADDITIONAL INFORMATION**

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. The SEC's website contains reports, proxy and information statements and other information regarding issuers, such as us, that file electronically with the SEC. You may also read and copy any document we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of its Public Reference Room.

We have filed with the SEC a registration statement under the Securities Act of 1933 that registers the distribution of these securities. The registration statement, including the attached exhibits and schedules, contains additional relevant information about us and the securities. This prospectus does not contain all of the information set forth in the registration statement. You can get a copy of the registration statement, at prescribed rates, from the SEC at the address listed above. The registration statement and the documents referred to below under "Incorporation of Certain Documents by Reference" are also available on our Internet website, <http://www.stereotaxis.com>, under "Investors—All SEC Filings." We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

## **INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE**

The SEC allows us to "incorporate by reference" information into this prospectus, which means we can disclose important information to you by referring you to other documents that we filed separately with the SEC. You should consider the incorporated information as if we reproduced it in this prospectus.

We incorporate by reference into this prospectus the following documents (SEC File No. 000-50884), which contain important information about us and our business and financial results:

## Table of Contents

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2012; and
- our Current Reports on Form 8-K filed January 14, 2013, February 7, 2013, March 5, 2013 (regarding Item 5.02), March 25, 2013 and April 1, 2013.

For purposes of the registration statement of which this prospectus is a part, any statement contained in a document incorporated or deemed to be incorporated herein by reference shall be deemed to be modified or superseded to the extent that a statement contained herein modifies or supersedes such statement in such document. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of the registration statement of which this prospectus is a part.

You may get copies of any of the document incorporated by reference (excluding exhibits, unless the exhibits are specifically incorporated) at no charge to you by writing or calling the investor relations department at Stereotaxis, Inc. 4320 Forest Park Avenue, Suite 100, St. Louis, Missouri 63108, telephone (314) 678-6100.