PROSPECTUS



Common Stock, \$0.001 par value

Up to 5,048,912 Shares

This prospectus relates to the offer and sale, from time to time, by the selling stockholders named herein of shares of our common stock that were issued upon conversion of a portion of our subordinated convertible debentures and the exercise of warrants to purchase our common stock issued in connection therewith in August 2013. The debentures and warrants to purchase common stock were acquired originally by the selling stockholders in a private placement by us that closed on May 10, 2012. We initially registered up to 7,474,153 shares of our common stock, which number included (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. All of the subordinated notes were subsequently converted or exchanged and terminated, and all of the original warrants were exercised for cash, in August 2013. We have reduced the number of shares from 7,474,153 to 5,048,912 because certain of the original selling stockholders have indicated that they no longer own shares of our common stock.

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 Capital Market under the symbol "STXS." On May 5, 2014, the last reported sale price for our common stock on the Nasdaq Capital Market was \$3.99 per share.

Investing in our common shares involves risks. See "Risk Factors" beginning on page 3 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.

The date of this prospectus is May 6, 2014.

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PROSPECTUS SUMMARY

This summary highlights selected information about Stereotaxis and a general description of the securities 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 securities 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 expertise 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 66,000 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 23%, 26%, and 19% of revenue for the years ended December 31, 2013, 2012, and 2011, 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. 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 10%, 14%, and 18% of revenue for the years ended December 31, 2013, 2012, and 2011, respectively.

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 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.

As of December 31, 2013, we had cash and cash equivalents of \$13.8 million and working capital of \$4.4 million. We incurred operating losses of \$8.8 million, \$10.6 million, and \$31.9 million in 2013, 2012 and 2011, respectively. As a result, our auditors have expressed substantial doubt about our ability to continue as a going concern. Our auditors included an explanatory paragraph regarding our ability to continue as a going concern in their auditors' report on our 2011 and 2012 financial statements as well.

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. 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. Niobe®, EpochTM, Odyssey®, Odyssey CinemaTM, VdriveTM, Vdrive DuoTM, V-LoopTM, V-SonoTM, V-CASTM, and V-CAS DeflectTM are trademarks of Stereotaxis, Inc. All other trademarks that may appear in this prospectus are the property of their respective owners.

Not all products have and/or require regulatory clearance in all of the markets we serve. Please refer to "Regulatory Approval" in Item 1 of our Annual Report on Form 10-K for the year ended December 31, 2013 for a description of our regulatory clearance, licensing, and/or approvals we currently have or are pursuing.

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 several investors, including all 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 had the ability to issue shares of our common stock in lieu of cash interest payments under certain circumstances, and were 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 had an interest rate of 8% per year and were set to mature on May 10, 2014. The Company was required to, and did, make interest payments in shares of common stock prior to the termination of the Debentures in August 2013. The Convertible Debt Warrants became exercisable on the six month and first day anniversary following their issuance.

In August 2013, \$8,090,000 of the Debentures remained outstanding. The holders of the Debentures (i) converted \$7,990,000 aggregate principal amount of such Debentures into 2,377,269 shares of our common stock at a conversion price of \$3.361 per share and (ii) cash exercised all of the outstanding Convertible Debt Warrants for an aggregate of 2,521,571 shares of our common stock at an exercise price of \$3.361 per share, for an aggregate of \$8.475 million of gross proceeds to us. In addition, pursuant to an Amendment and Exchange Agreement dated August 7, 2013 (the "Exchange Agreement"), the holders also exchanged the remaining \$100,000 principal amount of our Debentures for an aggregate of 333,182 shares of our common stock and new warrants to purchase an aggregate of 2,521,571 shares of our common stock, having an exercise price of \$3.361 per share (the "Exchange Warrants"), and certain other terms of the Convertible Debt SPA were amended.

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") to register shares of our common stock that were issued upon conversion of the Debentures and exercise of the Convertible Debt Warrants.

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

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 and uncertainties described under "Risk Factors" in our most recent Annual Report on Form 10-K filed for the period ended December 31, 2013 and any updates in our subsequently filed Quarterly Reports on Form 10-Q, together with all other information appearing in or incorporated by reference into this prospectus and any applicable prospectus supplement, in light of your particular investment objectives and financial circumstances. These risks could materially and adversely affect our business, results of operations and financial condition and could result in a partial or complete loss of your investment.

FORWARD-LOOKING STATEMENTS

The prospectus contains "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1985. 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, 2013.

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 received approximately \$8.475 million of gross proceeds from the cash exercise of all Convertible Debt Warrants exercised by the selling stockholders in August 2013 and covered by this prospectus, which proceeds were used for working capital and general corporate purposes.

SELLING STOCKHOLDERS

The shares of common stock being offered by the selling stockholders are those that were issued to the selling stockholders upon conversion of the Debentures and upon exercise of the Convertible Debt Warrants. For additional information regarding the shares issued upon conversion of the Debentures and upon exercise of 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 in May 2012, and the issuance of shares and Exchange Warrants in connection the Exchange 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, as of the most recent date practicable for each selling stockholder, assuming exercise of the Exchange 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 19,407,255 shares outstanding as of March 31, 2014.

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 exercise of the Exchange 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 interest 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 the 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."

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 Capital Management LLC(2)	1,738,498(3)	3,086,671	1,041,357	5.1
Prescott Group Aggressive Small Cap Master Fund,				
G.P.(4)	— (5)	N/A	_	
Tenor Opportunity Master Fund Ltd.(6)	— (7)	N/A	_	*
Aria Opportunity Fund, Ltd(8)	— (9)	N/A	_	*
Iroquois Master Fund Ltd(10)	744,235(11)	639,382	281,846	1.4
Kingsbrook Opportunities Master Fund LP(12)	303,648(13)	440,953	109,702	*
Hudson Bay Master Fund Ltd(14)	859,692(15)	881,906	221,919	1.1
Total Number of Shares Offered		5,048,912		

- * 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
- (2) Based on an amendment to Schedule 13G filed on February 14, 2014 by DAFNA Capital Management, LLC, in its capacity as investment adviser to DAFNA LifeScience Ltd., DAFNA LifeScience Market Neutral Ltd., and DAFNA LifeScience Select Ltd. (collectively, the "Funds"), each of which entities is a Cayman Islands exempted company. In such capacity, DAFNA Capital Management, LLC may be deemed to be the beneficial owner of the shares of our common stock owned by the Funds, as in its capacity as investment adviser it has the power to dispose, direct the disposition of, and vote our shares owned by the Funds. 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. Pursuant to Rule 13d-4, Drs. Fischel and Ghodsian disclaim beneficial ownership of the securities owned by the Funds.
- (3) This amount excludes an aggregate of 1,041,357 shares of common stock issuable upon conversion of various exchange warrants held by the Funds, after giving effect to a "blocker provision" in such exchange warrants under which the holder thereof does not have the right to exercise such exchange warrants to the extent (but only to the extent) that such 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.
- (4) 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.
- (5) On August 29, 2013, Prescott Capital and the Small Cap Funds filed an amendment on Schedule 13G reflecting that they no longer beneficially owned any shares of our common stock.
- (6) Tenor Capital Management Company, L.P., the investment manager of Aria Opportunity Fund, Ltd., had previously reported that it held voting and investment power over the securities issued in the convertible debt and related financings. 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.
- (7) On February 14, 2014, Tenor Capital Management Company, L.P. filed an amendment on Schedule 13G reflecting that it held no beneficial ownership (voting or dispositive power) over any of our shares of common stock.
- (8) Tenor Capital Management Company, L.P., the investment manager of Aria Opportunity Fund, Ltd., had previously reported that it held voting and investment power over the securities issued in the convertible debt and related financings. 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.

- (9) On February 14, 2014, Tenor Capital Management Company, L.P. filed an amendment on Schedule 13G reflecting that it held no beneficial ownership (voting or dispositive power) over any of our shares of common stock.
- (10) 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.
- (11) Reflects 79,241 shares of our common stock issuable pursuant to warrants held by IMF not issued in connection with the Debentures, together with shares of our common stock issued to IMF as interest shares prior to August 2013, upon conversion and exchange of the Debentures held by IMF in August 2013, upon exercise of the Convertible Debt Warrants held by IMF in August 2013 and upon subsequent cashless exercise of a portion of the Exchange Warrants issued to IMF in August 2013, as well as an additional 107,855 shares of our common stock that may be issued upon exercise of Exchange Warrants still held by IMF. IMF may have disposed of certain of these shares prior to the date of this prospectus.
- (12) 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.
- (13) Reflects the beneficial ownership of Kingsbrook Opportunities of shares of our common stock issued as interest shares prior to August 2013, upon conversion or exchange of the Debenture, and upon exercise of the Convertible Debt Warrant, held by Kingsbrook Opportunities in August 2013, and upon subsequent cashless exercise of the Exchange Warrant issued to Kingsbrook Opportunities in August 2013. Kingsbrook Opportunities may have disposed of certain of these shares prior to the date of this prospectus.
- (14) 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.
- (15) Reflects the beneficial ownership of Hudson Bay Master Fund Ltd. of shares of our common stock issued as interest shares prior to August 2013, upon conversion or exchange of the Debenture, and upon exercise of the Convertible Debt Warrant, held by held by Hudson Bay Master Fund Ltd. In August 2013, and upon subsequent cashless exercise of the Exchange Warrant issued to Hudson Bay Master Fund Ltd., in August 2013 as well as one additional share of our common stock that may be issued upon the exercise of the Exchange Warrant still held by Hudson Bay Master Fund Ltd. Hudson Bay Master Fund Ltd. may have disposed of certain of these shares prior to the date of this prospectus.

PLAN OF DISTRIBUTION

We are registering the shares of common stock issued upon conversion of the Debentures and upon exercise of the Convertible Debt 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;
- 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 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 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 stockholder specifically for use in this prospectus, in accordance with the related registration rights agreements or we may be entitled to contribution.

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 310,000,000 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 amended and restated certificate of incorporation and amended and restated 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 our amended and restated certificate of incorporation or amended and restated bylaws, they are on file with the SEC, as described under the heading "Where You Can Find Additional Information" below.

Common Stock

As of March 31, 2014, there were 19,407,255 shares of common stock outstanding that were held of record by approximately 292 stockholders. 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.

Preferred Stock

Our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of Stereotaxis. We have no present plan to issue any shares of preferred 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.

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 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 antitakeover 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.

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 Capital Market Listing

Our common stock is listed on the Nasdaq Capital 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, 2013, as set forth in their reports thereon (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 financial statements), which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority 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, except for any information directly superseded by information subsequently filed with the SEC and incorporated in this prospectus.

We incorporate by reference into this prospectus the following documents (SEC File No. 001-36159), which contain important information about us and our business and financial results:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 (including certain portions thereof that are incorporated by reference to our Definitive Proxy Statement on Schedule 14A, filed on April 28, 2014);
- our Annual Report on Form 10-K/A (Amendment No. 1) for the year ended December 31, 2013, filed on May 2, 2014;
- our Current Reports on Form 8-K filed February 14, 2014, February 25, 2014 (regarding Items 8.01 and 9.01), March 31, 2014 and April 10, 2014 (except, in any such case, the portions furnished and not filed pursuant to Item 2.02, Item 7.01 or otherwise); and
- · the description of our common stock contained in our Registration Statement on Form 8-A filed August 2, 2004.

We incorporate by reference any additional documents that we may file with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 (other than the portions of those made pursuant to Item 2.02 or Item 7.01 of Form 8-K or other information "furnished" to the SEC) between the date we filed the registration statement to which this prospectus supplement relates, and before the termination of the offering of the securities. These documents may include periodic reports, like Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as Proxy Statements. Any material that we subsequently file with the SEC will automatically update and replace the information previously filed with the SEC.

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 or in any other subsequently filed document which also is or is deemed to be incorporated herein by reference 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.