

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

**FORM S-3  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**STEREOTAXIS, INC.**

**Delaware**  
*(State or other jurisdiction of  
incorporation or organization)*

**94-3120386**  
*(I.R.S. Employer  
Identification No.)*

**4320 Forest Park Avenue, Suite 100  
St. Louis, Missouri 63108  
(314) 678-6100**

*Copies of all correspondence to:*

**Bevil J. Hogg**  
**Chief Executive Officer**  
**4320 Forest Park Avenue**  
**Suite 100**  
**St. Louis, Missouri 63108**  
**(314) 678-6100**  
*(Name, address, including zip code, and  
telephone number, including area code, of agent for service)*

**James L. Nouss, Jr., Esq.**  
**Robert J. Endicott, Esq.**  
**Bryan Cave LLP**  
**One Metropolitan Square**  
**211 North Broadway, Suite 3600**  
**St. Louis, Missouri 63102-2750**  
**(314) 259-2000**  
**(314) 259-2020 (fax)**

**Approximate date of commencement of proposed sale to public:** From time to time after this registration statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  333-137007

If this Form is a post effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer       Accelerated filer       Non-accelerated filer       Smaller reporting company   
(Do not check if a smaller reporting company)

**CALCULATION OF REGISTRATION FEE**

Title of Each Class Of Securities To Be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Unit(1)	Proposed Maximum Aggregate Offering Price(2)	Amount Of Registration Fee(2)
Common Stock, par value \$0.001 per share	\$10,970,100	—	\$10,970,100	\$432

Warrants (3)

Units (4)

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- (1) The Registrant previously registered the securities at an aggregate initial offering price not to exceed \$75,000,000 on the Registration Statement Form S-3 (File No. 333-137007), which was declared effective on September 7, 2006. Such Registration Statement also constituted Post-Effective Amendment No. 1 to the Registration Statement on Form S-3 (File No. 333-129629). In accordance with Rule 462(b) promulgated under the Securities Act of 1933, as amended, and certain interpretations by the U.S. Securities and Exchange Commission, an additional amount of securities (\$10,970,100) having a proposed maximum aggregate offering price of no more than 20% of the remaining amount (\$54,850,500) of the offering price of the securities eligible to be sold under the above referenced Registration Statements is hereby registered.
  - (2) Calculated pursuant to Rule 457(o) of the Securities Act.
  - (3) The warrants may be combined with common stock, preferred stock or debt securities registered under this registration statement and sold as units.
  - (4) Each Unit consists of any combination of two or more securities registered hereby.

**This registration statement shall become effective upon filing with the U.S. Securities and Exchange Commission in accordance with Rule 462(b) under the Securities Act.**

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## EXPLANATORY NOTE

We are filing this Registration Statement on Form S-3 with the U.S. Securities and Exchange Commission pursuant to Rule 462(b) and General Instruction IV of Form S-3, both as promulgated under the Securities Act of 1933, as amended. This Registration Statement on Form S-3 relates to the public offering of securities contemplated by the Registration Statement on Form S-3 (File No. 333-137007), originally filed by us on August 30, 2006, which Registration Statement also constituted Post-Effective Amendment No. 1 to the Registration Statement on Form S-3 (File No. 333-129629). This Registration Statement on Form S-3 is being filed for the sole purpose of increasing the maximum aggregate offering price of the securities registered for sale by the Company. We are registering an additional amount of securities equal to 20% of the remaining \$54,850,500 of securities eligible to be sold under Registration Statements Nos. 333-137007 and 333-129629, or \$10,970,100 of additional securities, for a total maximum in the aggregate of \$65,820,600.

The Commission declared the Registration Statement on Form S-3 (File No. 333- 137007) effective on September 7, 2006. The contents of such registration statement are incorporated by reference into this registration statement pursuant to Rule 462(b) under the Securities Act.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of St. Louis, State of Missouri, on December 29, 2008.

STEREOTAXIS, INC.

By: /s/ Bevil J. Hogg  
Bevil J. Hogg  
Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities indicated on December 29, 2008.

<u>Signature</u>	<u>Title(s)</u>	<u>Date</u>
<u>/s/ *</u> Fred A. Middleton	Chairman of the Board of Directors	December 29, 2008
<u>/s/ Bevil J. Hogg</u> Bevil J. Hogg	Chief Executive Officer and Director (Principal Executive Officer)	December 29, 2008
<u>/s/ Michael P. Kaminski</u> Michael P. Kaminski	President, Chief Operating Officer and Director	December 29, 2008
<u>/s/ James M. Stolze</u> James M. Stolze	Vice President and Chief Financial Officer (Principal Accounting Officer and Principal Financial Officer)	December 29, 2008
<u>/s/ *</u> Christopher Alafi	Director	December 29, 2008
<u>/s/ *</u> David W. Benfer	Director	December 29, 2008
<u>/s/ *</u> Ralph G. Dacey, Jr.	Director	December 29, 2008
<u>/s/ *</u> William M. Kelley	Director	December 29, 2008
<u>/s/ *</u> Abhijeet J. Lele	Director	December 29, 2008
<u>/s/ *</u> Robert J. Messey	Director	December 29, 2008
<u>/s/ *</u> William C. Mills III	Director	December 29, 2008
<u>/s/ Eric N. Prystowsky</u> Eric N. Prystowsky	Director	December 29, 2008
*By: <u>/s/ James M. Stolze</u> James M. Stolze (Attorney-in-fact for each person indicated)		

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**EXHIBIT INDEX**

<u>Exhibit Number</u>	<u>Document Description</u>
5.1	Opinion of Bryan Cave LLP*
23.1	Consent of Ernst & Young LLP*
23.2	Consent of Bryan Cave LLP (included in Exhibit 5.1)*
24.1	Power of Attorney (filed as Exhibit 24.1 to the Registration Statement on Form S-3 filed by Stereotaxis, Inc. on August 31, 2006, Registration No. 333-137007), incorporated herein by reference

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\* Filed herewith.



December 29, 2008

Board of Directors  
Stereotaxis, Inc.  
4041 Forest Park Avenue  
St. Louis, Missouri 63108

Ladies and Gentlemen:

We have acted as special counsel to Stereotaxis, Inc., a Delaware corporation (the "Company"), in connection with the Company's filing of a Registration Statement on Form S-3 (the "Registration Statement") with the Securities and Exchange Commission pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Act") relating to an aggregate of \$10,970,100 of (i) shares (the "Shares") of common stock, par value \$.001 per share (the "Common Stock") of the Company (ii) warrants to purchase Common Stock (the "Warrants") and (iii) units of Shares and Warrants (the "Units", and together with the Shares and the Warrants, the "Securities"). All capitalized terms which are defined in the Registration Statement shall have the same meanings when used herein, unless otherwise specified.

In rendering this opinion, we have examined originals or copies, certified or otherwise identified to our satisfaction, of:

- (i) the Registration Statement;
- (ii) the Amended and Restated Certificate of Incorporation of the Company; and
- (iii) the Amended and Restated Bylaws of the Company.

We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such corporate records, agreements and instruments of the Company, statements and certificates of public officials and officers of the Company, and such other documents, records and instruments, and we have made such legal and factual inquiries as we have deemed necessary or appropriate as a basis for us to render the opinions hereinafter expressed. In our examination of the foregoing, we have assumed the genuineness of all signatures, the legal competence and capacity of natural persons, the authenticity of documents submitted to us as originals and the conformity with authentic original documents of all documents submitted to us as copies. When relevant facts were not independently established, we have relied without independent investigation as to matters of fact upon statements of governmental officials and upon representations made in or pursuant to the certificates and statements of appropriate representatives of the Company.

**Bryan Cave LLP**  
One Metropolitan Square  
211 North Broadway  
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St. Louis, MO 63102-2750  
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Fax (314) 259-2020  
[www.bryancave.com](http://www.bryancave.com)

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Shanghai  
St. Louis  
Washington, DC

*And Bryan Cave,  
A Multinational Partnership,  
London*

Based upon the foregoing, we are of the opinion that the Securities, up to an aggregate offering price of \$10,970,100 when issued against payment therefor, will be validly issued, fully paid and non-assessable.

The opinions set forth herein are limited to the laws of the State of Delaware and applicable federal laws.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement. In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Bryan Cave LLP

**Consent of Independent Registered Public Accounting Firm**

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3, No. 333-XXXXX) and related Prospectus Supplement of Stereotaxis, Inc. for the registration of \$10,970,100 of common stock and to the incorporation by reference therein of our reports dated March 13, 2008 (except Note 19, as to which the date is December 26, 2008), with respect to the financial statements of Stereotaxis, Inc. for the year ended December 31, 2007 included in its Form 10-K/A; and the financial statement schedule and effectiveness of internal control over financial reporting of Stereotaxis, Inc., included in its Annual Report on Form 10-K, for the year ended December 31, 2007, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

St. Louis, Missouri  
December 26, 2008