

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, par value \$0.001 per share, under:				
2015 Stock Incentive Plan, as amended	2,800,000	(2)\$8.76(6)	\$24,528,000	\$2,842.8
Amended and Restated 2006 Employee Stock Purchase Plan, as amended	1,500,000	(3)\$7.44(7)	\$11,160,000	\$1,293.44
Non-Plan Inducement Stock Options	1,394,992	(4)\$8.76(6)	\$12,220,130	\$1,416.31
Non-Plan Inducement Restricted Stock Units	305,445	(5)\$8.76(6)	\$2,675,698	\$310.11
Total	6,000,437		\$50,583,828	\$5,862.66

Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement shall also cover any additional shares of the registrant’s common stock that become issuable under the registrant’s 2015 Stock Incentive Plan, as amended (the “Plan”), the Amended and Restated 2006 Employee Stock Purchase Plan, as amended (the “ESPP”), the Non-Plan Inducement Stock Options and the Non-Plan Inducement Restricted Stock Units, by reason of any stock dividend, stock split, recapitalization or any similar transaction effected without the receipt of consideration that results in an increase in the number of the registrant’s outstanding shares of common stock.

(1) Represents 2,800,000 additional shares of the registrant’s common stock reserved for issuance pursuant to the Plan.

(2) Represents 1,500,000 additional shares of the registrant’s common stock reserved for issuance under the ESPP.

(3) Represents 1,394,992 shares of the Registrant’s common stock issuable pursuant to Non-Plan Inducement Stock Options.

(4) Represents 305,445 shares of the Registrant’s common stock issuable upon settlement of Non-Plan Restricted Stock Units.

(5) Estimated pursuant to Rule 457(c) and Rule 457(h) of the Securities Act, solely for purposes of calculating the registration fee, which is the average of the high and low sales price of the registrant’s common stock as reported on the Nasdaq Global Select Market on November 7, 2016.

(6) Estimated pursuant to Rule 457(c) and Rule 457(h) of the Securities Act, solely for purposes of calculating the registration fee, which is the average of the high and low sales price of the registrant’s common stock as reported on the Nasdaq Global Select Market on November 7, 2016. This amount is multiplied by 85% pursuant to the terms of the ESPP, which provides that the purchase price of a share of common stock is equal to 85% of the fair market value of the common stock on the offering date (i.e. the first business day of the offering period) or the purchase date (i.e., the last business day of the purchase period), whichever is less.

EXPLANATORY NOTE

This Registration Statement on Form S-8 (this “Registration Statement”) is being filed for the purpose of registering an additional (i) 2,800,000 shares of Endologix, Inc. (the “Registrant”) common stock, par value \$0.001 per share (“Common Stock”), reserved for issuance under the Registrant’s 2015 Stock Incentive Plan, as amended (the “Plan”) and (ii) 1,500,000 shares of Common Stock reserved for issuance under the Registrant’s Amended and Restated 2006 Employee Stock Purchase Plan, as amended (the “ESPP”), which are the same class as those securities registered on the Registrant’s prior registration statements on Form S-8 (File Nos. 333-136370, 333-152774, 333-160317, 333-190393 and 333-206208), filed with the Securities and Exchange Commission (the “Commission”) on August 7, 2006, August

5, 2008, June 30, 2009, August 6, 2013, and August 7, 2015, respectively. The contents of the foregoing registration statements on Form S-8 are incorporated herein by reference.

This Registration Statement also relates to 1,394,992 shares of Common Stock of the Registrant issuable under stock options awarded outside of the Plan, and 305,445 shares of Common Stock of the Registrant issuable upon settlement of restricted stock units awarded outside of the Plan (collectively, the “Non-Plan Inducement Grants”). The Non-Plan Inducement Grants were granted on February 3, 2016 to new employees of the Registrant as inducement grants under applicable Nasdaq Listing Rules.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents, which have been filed by Endologix, Inc. (the “Registrant”) with the Commission, are incorporated by reference in this registration statement (excluding any portions of such documents that have been “furnished” but not “filed” for purposes of the Securities Exchange Act of 1934, as amended (the “Exchange Act”): the Registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Commission on February 29, 2016, and the portions of the Registrant’s Definitive Proxy Statement on Schedule 14A, filed with the Commission on May 2, 2016, incorporated by reference into the Registrant’s Annual Report on Form 10-K; the description of the Registrant’s common stock contained in the Registrant’s Registration Statement on Form 8-A, filed with the Commission on June 18, 1996, including any amendment or report filed for the purpose of updating such description; and

all other reports filed by the Registrant pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the Annual Report on Form 10-K referred to above.

All documents that the Registrant subsequently files under Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents (excluding any portions of such documents that have been “furnished” but not “filed” for purposes of the Exchange Act).

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

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of Delaware empowers a corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation or another enterprise if serving at the request of the corporation. Depending on the character of the proceeding, a corporation may indemnify against expenses (including attorney’s fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding if the person indemnified acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. In the case of an action by or in the right of the corporation, no indemnification may be made in respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine that despite the adjudication of liability, but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses that the court shall deem proper. Section 145 further provides that to the extent a present or former director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to above, or in defense of any

claim, issue or matter therein, he or she shall be indemnified against expenses (including attorney's fees) actually and reasonably incurred by him or her in connection therewith.

The Registrant's restated certificate of incorporation, as amended, limits, to the maximum extent permitted by Delaware law, the personal liability of directors for monetary damages for breach of their fiduciary duties as a director. The Registrant's amended and restated bylaws provide that the Registrant shall indemnify its officers and directors and may indemnify its employees and other agents to the fullest extent permitted by Delaware law.

The Registrant's directors and officers are covered by insurance policies indemnifying against certain liabilities, including certain liabilities arising under the Securities Act, which might be incurred by them in such capacities and against which they cannot be indemnified by the Registrant. The Registrant has entered into indemnification agreements with all of its executive officers and directors which provide indemnification under certain circumstances for acts and omissions in the course of their employment with the Registrant.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

The exhibits listed on the Exhibit Index immediately preceding such exhibits are filed as part of this Registration Statement, and the contents of the Exhibit Index are incorporated herein by reference.

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement (notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement); and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934), that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling

person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

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-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Irvine, State of California, on the 10th day of November, 2016.

ENDOLOGIX, INC.

By: /s/ John McDermott

John McDermott

Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each individual whose signature appears below constitutes and appoints John McDermott and Vaseem Mahboob, and each of them, his or her true and lawful attorneys-in-fact and agents with full power of substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement on Form S-8, and to file the same, with all exhibits thereto and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done with respect to this registration statement, including post-effective amendments, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or her substitute or substitutes, may lawfully do or cause to be done or by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the date indicated.

Signature	Title	Date
/s/ John McDermott John McDermott	Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	November 10, 2016
/s/ Vaseem Mahboob Vaseem Mahboob	Chief Financial Officer (Principal Financial and Accounting Officer)	November 10, 2016
/s/ Thomas F. Zenty, III Thomas F. Zenty, III	Director	November 10, 2016
/s/ Daniel Lemaitre Daniel Lemaitre	Director	November 10, 2016
/s/ Guido Neels Guido Neels	Director	November 10, 2016
/s/ Gregory D. Waller Gregory Waller	Director	November 10, 2016
/s/ Thomas C. Wilder, III Thomas C. Wilder, III	Director	November 10, 2016

/s/ Leslie V. Norwalk
Leslie V. Norwalk Director

November 10, 2016

/s/ Christopher G. Chavez
Christopher G. Chavez Director

November 10, 2016

EXHIBIT INDEX

Exhibit Number	Exhibit
4.1	Amended and Restated Certificate of Incorporation, as amended (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q, File No. 000-28440, filed on August 5, 2016).
4.2	Amended and Restated Bylaws, as amended (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, File No. 000-28440, filed on December 14, 2010).
4.3	Specimen Certificate of Common Stock (incorporated by reference to Exhibit 4.1 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1, No. 333-04560, filed on June 10, 1996).
4.3.1	Updated Specimen Certificate of Common Stock effective as of May 22, 2014 (incorporated by reference to Exhibit 4.1.1 to the Registrant's Annual Report on Form 10-K, File No. 000-28440, filed on March 2, 2015).
5.1 +	Opinion of Stradling Yocca Carlson & Rauth, a Professional Corporation.
23.1 +	Consent of KPMG LLP, Independent Registered Public Accounting Firm.
23.2 +	Consent of Stradling Yocca Carlson & Rauth, a Professional Corporation (contained in Exhibit 5.1).
24.1 +	Power of Attorney (included on the signature page to this registration statement).
99.1	2015 Stock Incentive Plan, as amended (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, File No. 000-28440, filed on June 7, 2016).
99.2	Amended and Restated 2006 Employee Stock Purchase Plan, as amended (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, File No. 000-28440, filed on June 7, 2016).
99.3+	Form of Non-Plan Inducement Stock Option Agreement.
99.4+	Form of Non-Plan Inducement Restricted Stock Unit Agreement

+ Filed herewith