

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

INTUITIVE SURGICAL, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State of Incorporation)

77-0416458
(I.R.S. Employer Identification No.)

**1266 Kifer Road
Sunnyvale, California 94086**
(Address of Principal Executive Offices including Zip Code)

**INTUITIVE SURGICAL, INC.
2010 INCENTIVE AWARD PLAN**

(Full Title of the Plan)

Gary S. Guthart
President and Chief Executive Officer
Intuitive Surgical, Inc.
1266 Kifer Road
Sunnyvale, California 94086
(408) 523-2100

Copy to:
Alan C. Mendelson, Esq.
Latham & Watkins LLP
140 Scott Drive
Menlo Park, California 94025
(650) 328-4600

(Name, Address, Including Zip Code, and Telephone Number,
Including Area Code for Agent for Service)

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 (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title 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	1,250,000	\$354.44 (2)	\$443,050,000 (2)	\$31,589.47

- (1) This Registration Statement shall also cover any additional shares of Common Stock which become issuable under the Intuitive Surgical, Inc. 2010 Incentive Award Plan by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration, which results in an increase in the number of outstanding shares of the Registrant's Common Stock.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) for the 1,250,000 shares registered hereunder (based on the average of the high (\$358.88) and low (\$350.00) prices for the Registrant's Common Stock reported by NASDAQ Global Select Market on May 13, 2010).

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information called for in Part I of Form S-8 is not being filed with or included in this Form S-8 (by incorporation by reference or otherwise) in accordance with the rules and regulations of the Securities and Exchange Commission (the "Commission").

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents, which were filed with the Commission, are incorporated herein by reference:

- (a) The Registrant's Annual Report on Form 10-K for the year ended December 31, 2009 filed January 29, 2010;
- (b) The Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010 filed April 20, 2010;
- (c) The Registrant's Current Report on Form 8-K filed April 23, 2010.

(b) The description of the Registrant's Common Stock contained in the Registration Statement on Form 8-A (File No. 000-30713) filed May 26, 2000 under Section 12(g) of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this Registration Statement, and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part of this Registration Statement from the date of the filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in this Registration Statement, or in any other subsequently filed document which also is or is deemed to be incorporated by reference in this Registration Statement, 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.

The Registrant's Amended and Restated Certificate of Incorporation provides that the liability of directors for monetary damages shall be eliminated to the full extent under applicable law. Under current Delaware law, liability of a director may not be limited (i) for any breach of the director's duty of loyalty to the Registrant or its stockholders, (ii) for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (iii) in respect of certain unlawful dividend payments or stock redemptions or repurchases and (iv)

for any transaction from which the director derives an improper personal benefit. The effect of the provision of the Registrant's Amended and Restated Certificate of Incorporation is to eliminate the rights of Intuitive Surgical, Inc. and its stockholders (through stockholders' derivative suits on behalf of the Registrant) to recover monetary damages against a director for breach of the fiduciary duty of care as a director (including breaches resulting from negligent or grossly negligent behavior) except in the situations described in clauses (i) through (iv) above. This provision does not limit or eliminate the rights of the Registrant or any stockholder to seek nonmonetary relief such as an injunction or rescission in the event of a breach of a director's duty of care. In addition, the Registrant's Amended and Restated Bylaws provide that the corporation shall indemnify its directors and executive officers to the fullest extent not prohibited by the Delaware General Corporation Law or any other applicable law.

In addition, the Registrant has entered into agreements with certain directors and officers of the Registrant pursuant to which the Registrant has agreed to indemnify such persons against expenses (including attorneys' fees), witness fees, damages, judgments, fines and amounts paid in settlement and any other amounts that such directors and officers become legally obligated to pay because of claims made against them in connection with any threatened, pending or completed action, suit or proceeding, whether civil, criminal, arbitrational, administrative or investigative (including any action by or in the right of the corporation) to which the indemnified person is, was or at any time becomes a party, or is threatened to be made a party, by reason of the fact that such indemnified person is, was or at any time becomes a director, officer, employee or other agent of the Registrant, or is or was serving or at any time serves at the request of the Registrant as a director, officer, employee or other agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise. The agreements also provide that such indemnified persons will be entitled to an advance of expenses to meet the obligations indemnified against as set forth above.

Item 7. Exemption from Registration Claimed.

Not Applicable.

Item 8. Exhibits.

See Index to Exhibits.

Item 9. Undertakings.

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 this 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 (i) and (ii) do not apply if the Registration Statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or 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.

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 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.

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 Securities and Exchange Commission such indemnification is against public policy as expressed in the Act 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 Act and will be governed by the final adjudication of such issue.

/s/ ALAN J. LEVY

Alan J. Levy, Ph.D.

Director

May 14, 2010

/s/ FLOYD D. LOOP

Floyd D. Loop, M.D.

Director

May 14, 2010

/s/ MARK J. RUBASH

Mark J. Rubash

Director

May 14, 2010

/s/ GEORGE J. STALK

George J. Stalk

Director

May 14, 2010

INDEX TO EXHIBITS

**Exhibit
Number**

4.1*	Intuitive Surgical, Inc. 2010 Incentive Award Plan
5.1	Opinion of Latham & Watkins LLP
23.1	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
23.2	Consent of Independent Registered Public Accounting Firm
24.1	Power of Attorney (included on signature page of this registration statement)

* Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 333-30713) filed with the Securities and Exchange Commission on April 23, 2010.

LATHAM & WATKINS LLP

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 Menlo Park, California 94025
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 www.lw.com

May 14, 2010

Intuitive Surgical, Inc.
 1266 Kifer Road
 Sunnyvale, CA 94086

FIRM / AFFILIATE OFFICES

Abu Dhabi	Moscow
Barcelona	Munich
Beijing	New Jersey
Brussels	New York
Chicago	Orange County
Doha	Paris
Dubai	Riyadh
Frankfurt	Rome
Hamburg	San Diego
Hong Kong	San Francisco
Houston	Shanghai
London	Silicon Valley
Los Angeles	Singapore
Madrid	Tokyo
Milan	Washington, D.C.

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as special counsel to Intuitive Surgical, Inc., a Delaware corporation (the "Company"), in connection with the registration of 1,250,000 shares of common stock, par value \$0.001 per share (the "Shares"), issuable under the Company's 2010 Incentive Award Plan (the "Plan"), under the Securities Act of 1933, as amended (the "Act"), pursuant to a Registration Statement on Form S-8 filed with the Securities and Exchange Commission (the "Commission") on May 14, 2010 (the "Registration Statement"). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or related Prospectus, other than as expressly stated herein with respect to the issue of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters.

We are opining herein only as to the General Corporation Law of the State of Delaware, and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when certificates representing the Shares in the form of the specimen certificate examined by us have been manually signed by an authorized officer of the transfer agent and registrar therefor, when duly awarded and issued upon satisfaction of rights to purchase such Shares in accordance with the terms of the Plan and related award agreement, and assuming the Company completes all actions and proceedings required on its part to be taken prior to the issuance and delivery of the Shares pursuant to the terms of the Plan, including without limitation, collection of required payment for the Shares, the issuance and sale of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby 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 thereunder.

Very truly yours,

/s/ Latham & Watkins LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2010 Incentive Award Plan of Intuitive Surgical, Inc. of our reports dated January 29, 2010, with respect to the consolidated financial statements and schedule of Intuitive Surgical, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2009, and the effectiveness of internal control over financial reporting of Intuitive Surgical, Inc. filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Palo Alto, California
May 12, 2010