As filed with the Securities and Exchange Commission on November 16, 2001

Registration No. 333-

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

INTEGRA LIFESCIENCES HOLDINGS CORPORATION

(Exact Name of Registrant as Specified in its Charter)

Delaware

(State or other jurisdiction of incorporation or organization)

51-0317849

(I.R.S. Employer Identification No.)

311 Enterprise Drive Plainsboro, New Jersey 08536

(609) 275-0500

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

> Integra LifeSciences Holdings Corporation 2001 Equity Incentive Plan (Full title of the plan)

> > Copies to:

JOHN B. HENNEMAN, III Sr. Vice President, Chief Administrative Officer and Secretary Integra LifeSciences Holdings Corporation 311 Enterprise Drive Plainsboro, New Jersey 08536 (609) 275-0500 (Name, address and telephone number, including area code, of agent for service) MICHAEL D. LEVIN, ESQ. Latham & Watkins 233 South Wacker Drive, Suite 5800 Chicago, Illinois 60606 (312) 876-7700

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee
Common Stock (\$0.01 par value)	2,000,000 shares	\$26.54	\$53,080,000	\$14,013.12

(1)

Pursuant to Rule 416(a), this Registration Statement also registers such indeterminate number of additional shares as may become issuable under the Plan in connection with share splits, share dividends or similar transactions.

(2)

Estimated pursuant to Rule 457(h) solely for the purpose of calculating the registration fee, based upon the average of the highest and lowest prices for the Common Stock reported on the Nasdaq National Market System on November 15, 2001.

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Not required to be filed as part of this Registration Statement.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents which have been filed by Integra LifeSciences Holdings Corporation (the "Registrant" or the "Company") with the Securities and Exchange Commission (the "Commission") are incorporated by reference into this Registration Statement:

(a) the Company's Annual Report on Form 10-K/A for the year ended December 31, 2000, filed with the Commission on May 24, 2001;

(b) the Company's Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2001, June 30, 2001, and September 30, 2001 filed with the Commission on May 15, 2001, August 14, 2001, and November 14, 2001, respectively;

(c) the Company's Current Reports on Form 8-K filed with the Commission on January 8, 2001 and May 25, 2001;

(d) the Company's Current Report on Form 8-K filed with the Commission on August 2, 2001 and amended by the Company's Current Report on Form 8-K/A on August 6, 2001;

(e) all other reports filed by the Company pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") since the end of the Company's fiscal year ended December 31, 2000; and

(f) the description of the Company's common stock (the "Common Stock") contained in the Company's Registration Statement on Form S-3/A (Registration No. 333-62176), which became effective on August 7, 2001, including any amendments or reports filed for the purpose of updating such description.

All reports and other documents filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date hereof and prior to the filing of a post-effective amendment which indicates that all securities offered pursuant to this Registration Statement 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 hereof from the date of filing of such documents or reports.

For purposes of this Registration Statement, any document or 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 subsequently filed document or a statement contained therein, or in any other subsequently filed document which also is or is deemed to be incorporated by reference, modifies or supersedes such document or 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 this Registration Statement.

Item 4. Description of Securities.

Not applicable.

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Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Officers and directors of the Company are covered by certain provisions of the Delaware General Corporation Law (the "DGCL") and the Company's charter, bylaws and insurance policies which serve to limit, and, in certain instances, to indemnify them against, certain liabilities which they may incur in such capacities. These various provisions are described below.

ELIMINATION OF LIABILITY IN CERTAIN CIRCUMSTANCES. In June 1986, Delaware enacted legislation which authorizes corporations to limit or eliminate the personal liability of directors of corporations and their stockholders for monetary damages for breach of directors' fiduciary duty of care. This duty of care requires that, when acting on behalf of the corporation, directors must exercise an informed business judgment based on all significant information reasonably available to them. Absent the limitations now authorized by such legislation, directors are accountable to corporations and their stockholders for monetary damages for conduct constituting negligence or gross negligence in the exercise of their duty of care. Although the statute does not change directors' duty of care, it enables corporations to limit available relief to equitable remedies such as injunction or rescission. The charter limits the liability of directors to the Company or its stockholders (in their capacity as directors but not in their capacity as officers) to the fullest extent permitted by such legislation. Specifically, the director's duty of loyalty to the Company or its stockholders; (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; (3) for unlawful payments of dividends or unlawful share repurchases or redemptions as provided in Section 174 of the DGCL; or (4) for any transaction from which the director derived an improper personal benefit.

INDEMNIFICATION AND INSURANCE. As a Delaware corporation, the Company has the power, under specified circumstances generally requiring the director or officer to act in good faith and in a manner he reasonably believes to be in or not opposed to the Company's best interests, to indemnify its directors and officers in connection with actions, suits or proceedings brought against them by a third party or in the name of the Company, by reason of the fact that they were or are such directors or officers, against expenses, judgments, fines and amounts paid in settlement in connection with any such action, suit or proceeding. The bylaws generally provide for mandatory indemnification of the Company's directors and officers to the full extent provided by Delaware corporation law. In

addition, the Company has entered into indemnification agreements with its directors and officers which generally provide for mandatory indemnification under circumstances for which indemnification would otherwise be discretionary under Delaware law.

The Company intends to purchase and maintain insurance on behalf of any person who is or was a director or officer of the Company, or is or was a director or officer of the Company serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the Company would have the power or obligation to indemnify him against such liability under the provisions of the bylaws.

Item 7. Exemption from Registration Claimed.

Not applicable.

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Item 8. Exhibits.

- 4 Form of 2001 Equity Incentive Plan (incorporated by reference to Appendix A to Company's Proxy Statement pursuant to Section 14(a) of the Exchanged Act, filed with the Commission on April 20, 2001)
- 5 Opinion of Latham & Watkins
- 23.1 Consent of PricewaterhouseCoopers LLP
- 23.2 Consent of Latham & Watkins (included in its opinion filed as Exhibit 5 hereto)
- 24.1 Powers of Attorney (see signature page to this Registration Statement)

Item 9. Undertakings

1.

Undertakings Required by Regulation S-K Item 512(a)

The undersigned Registrant hereby undertakes as follows:

(1)

To file, during any period in which offers or sales are being made pursuant to this Registration Statement, 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 ("the Securities Act");

(ii)

To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent posteffective amendment thereof) which, individually or in aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in the volume of the 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 change in volume and price represents no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the registration statement; and

(iii)

To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

provided, however, that paragraphs (1)(i) and (1)(ii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the Registrant pursuant to Section 13 and 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

(2)

That, for the purpose of determining any liability under the Securities Act, 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, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act that is incorporated by reference in this 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.

3.

Undertakings Required by Regulation S-K Item 512(h).

Insofar as indemnification for liabilities arising under the Securities Act 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 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 and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act, the Company 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 Plainsboro, state of New Jersey, on this 16th day of November, 2001.

INTEGRA LIFESCIENCES HOLDINGS CORPORATION

By: /s/ STUART M. ESSIG

Stuart M. Essig President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Stuart M. Essig and John B. Henneman, III and each of them singly, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement and to file the same, with all exhibits thereto, and other 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 or necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes, may lawfully do or cause to be done 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 dates indicated:

ignature	Title	Date	
/s/ STUART M. ESSIG	President, Chief Executive Officer and Director	November 14, 2001	
Stuart M. Essig	(Principal Executive Officer)		
/s/ GEORGE W. MCKINNEY, III	Executive Vice President, Operating Officer and Director	November 14, 2001	
George W. McKinney, III	Operating Officer and Director		
/s/ DAVID B. HOLTZ	Senior Vice President, Finance and Treasurer (Principal Financial and	November 14, 2001	
David B. Holtz	Acounting Officer)		
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/s/ RICHARD E. CARUSO	Chairman of the Board	November 14, 2001	
Richard E. Caruso			
/s/ KEITH BRADLEY	Director	November 14, 2001	
Keith Bradley			

/s/ NEAL MOSZKOWSKI		Director	November 14, 2001				
Neal Moszkowski							
/s/ JAMES M. SULLIVAN		Director	November 14, 2001				
	James M. Sullivan						
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EXHIBIT INDEX							
Exhibit No.	Description						
4	4 Form of 2001 Equity Incentive Plan (incorporated by reference to Appendix A to Company's Proxy Statement pursuant to Section 14(a) of the Exchange Act, filed with the Commission on April 20, 2001)						
5	Opinion of Latham & Watkins						
23.1	23.1 Consent of PricewaterhouseCoopers LLP						
23.2	Consent of Latham & Watkins (included in its opinion filed as Exhibit 5 hereto)						
24.1	Powers of Attorney (see signature page to this Registration S	itatement)					
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LATHAM & WATKINS Sears Tower, Suite 5800 Chicago, Illinois 60606 Telephone: (312) 876-7700 Fax: (312) 993-9767

November 16, 2001

Integra LifeSciences Holdings Corporation 311 Enterprise Drive Plainsboro, NJ 08536

Re: Registration Statement on Form S-8 with respect to 2,000,000 shares of Common Stock, par value \$.01 per share

Ladies and Gentlemen:

In connection with the registration of 2,000,000 shares of common stock of the Company, par value \$.01 per share (the "Shares"), under the Securities Act of 1933, as amended (the "Act"), by Integra LifeSciences Holdings Corporation, a Delaware corporation (the "Company"), issuable under the Company's 2001 Equity Incentive Plan (the "Plan") by the Company on Form S-8 filed with the Securities and Exchange Commission (the "Commission") on November 16, 2001, you have requested our opinion with respect to the matters set forth below.

In our capacity as your counsel in connection with such registration, we are familiar with the proceedings taken by the Company in connection with the authorization, issuance and sale of the Shares. In addition, we have made such legal and factual examinations and inquiries, including an examination of originals or copies certified or otherwise identified to our satisfaction of such documents, corporate records and instruments, as we have deemed necessary or appropriate for purposes of this opinion.

In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity to authentic original documents of all documents submitted to us as copies.

We are opining herein as to the effect on the subject transaction only of the General Corporation Law of the State of Delaware, and we express no opinion with respect to the applicability thereto, or the effect thereon, of the laws of any other jurisdiction or, in the case of Delaware, any other laws, or as to any matters of municipal law or the laws of any agencies within any state.

Subject to the foregoing, it is our opinion that the Shares have been duly authorized, and, upon issuance and delivery of the Shares in the manner contemplated by the Plan, 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 Shares will be validly issued, fully paid and nonassessable.

EXHIBIT 5

We consent to your filing this opinion as an exhibit to the Registration Statement.

Very truly yours,

/s/ Latham & Watkins

EXHIBIT 23.1

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our reports dated February 23, 2001, except for Note 18, as to which the date is March 16, 2001, and Note 2, as to which the date is May 14, 2001 relating to the consolidated financial statements and financial statement schedules, which appear in the Integra LifeSciences Holdings Corporation's Annual Report on Form 10-K/A for the year ended December 31, 2000.

/s/ PricewaterhouseCoopers LLP

Florham Park, New Jersey November 16, 2001

QuickLinks

PART I INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT SIGNATURES POWER OF ATTORNEY EXHIBIT INDEX LATHAM & WATKINS Sears Tower, Suite 5800 Chicago, Illinois 60606 Telephone: (312) 876-7700 Fax: (312) 993-9767 CONSENT OF INDEPENDENT ACCOUNTANTS