Registration No. 333-

As filed with the Securities and Exchange Commission on October 28, 2004

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

ANGIODYNAMICS, INC. (Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 11-3146460 (I.R.S. Employer Identification No.)

603 Queensbury Avenue Queensbury, New York 12804 (Address of Principal Executive Offices) (Zip Code)

AngioDynamics, Inc. 1997 Stock Option Plan AngioDynamics, Inc. 2004 Stock and Incentive Award Plan AngioDynamics, Inc. Employee Stock Purchase Plan (Full title of the plan)

> Eamonn P. Hobbs AngioDynamics, Inc. 603 Queensbury Avenue Queensbury, New York 12804 (Name and address of agent for services)

(518) 798-1215 (Telephone number, including area code, of agent for service)

> Copy to: Scott M. Tayne, Esq. Davies Ward Phillips & Vineberg LLP 625 Madison Avenue, 12th Floor New York, New York 10022

Calculation of Registration Fee

Title of Securities to be Registered(1)	Amount to be Registered	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock	1,489,795 Shares(2)(5)	\$ 5.21(6)	\$ 7,761,832	\$ 983.43
par value,	216,773 Shares(3)(5)	\$13.14(7)	\$ 2,848,397	\$ 360.89
\$.01 per share	991,106 Shares(4)(5)	\$9.375(8)	\$ 9,291,619	\$ 1,177.25
Total	2,697,674 Shares		\$19,901,848	\$ 2,521.57

(1) Includes preferred stock purchase rights which, until events specified in the registrant's rights agreement occur, will not be exercisable or evidenced separately from the common stock. Value attributed to such rights, if any, is reflected in the market price of the common stock.

(2) Consists of shares of common stock underlying outstanding options granted under the AngioDynamics, Inc. 1997 Stock Option Plan (the "1997 Plan").

- (3) Consists of shares of common stock underlying outstanding options granted under the AngioDynamics, Inc. 2004 Stock and Incentive Award Plan (the "2004 Plan").
- (4) Consists of 7,879 shares of common stock underlying options available for grant under the 1997 Plan, 783,227 shares of common stock available for issuance under the 2004 Plan, and 200,000 shares issuable under the AngioDynamics, Inc. Employee Stock Purchase Plan (the "Purchase Plan").
- (5) In accordance with Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), there are also registered hereby such indeterminate number of shares of common stock as may become issuable by reason of the operation of the anti-dilution provisions of the 1997 Plan, the 2004 Plan and the Purchase Plan.
- (6) Pursuant to Rule 457(h) under the Securities Act, the proposed maximum offering price per share was calculated based on a weighted average option exercise price of \$5.21 per share.
- (7) Pursuant to Rule 457(h) under the Securities Act, the proposed maximum offering price per share was calculated based on a weighted average option exercise price of \$13.14 per share.
- (8) Pursuant to Rules 457(c) and (h) under the Securities Act, the proposed maximum offering price per share was determined based upon the average of the high and low prices of the registrant's common stock as reported by The Nasdaq Stock Market on October 22, 2004.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

ITEM 3. INCORPORATION OF DOCUMENTS BY REFERENCE

The following documents filed with the Securities and Exchange Commission (the "Commission") by AngioDynamics, Inc. (the "Company" or the "Registrant") are incorporated herein by reference and made a part hereof:

- (a) The Company's Annual Report on Form 10-K for the fiscal year ended May 29, 2004.
- (b) All other reports filed by the Company pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 subsequent to May 29, 2004.
- (c) The description of the Company's common stock, par value \$0.01 per share, contained in the Registration Statement on Form 8-A filed with the Commission on May 13, 2004, including any amendments or reports filed for the purpose of updating such description.
- (d) The description of the Company's preferred stock purchase rights contained in the Registration Statement on Form 8-A filed with the Commission on October 27, 2004, including any amendments or reports filed for the purpose of updating such description.

All documents subsequently filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act") prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities covered by this Registration Statement have been sold or which deregisters all of the securities then remaining unsold, will be deemed to be incorporated by reference in this Registration Statement and to be a part of this document from the date of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference in this document will be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in this document or in any other subsequently filed documents that also is or is deemed to be incorporated by reference in this document modifies or supersedes such statement. Any such statement so modified or superseded will 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 102 of the Delaware General Corporation Law, or DGCL, as amended, allows a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock purchase or redemption in violation of the DGCL, or obtained an improper personal benefit.

Section 145 of the DGCL provides, among other things, that a corporation may 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 (other than an action by or in the right of the corporation), by reason of the fact that the person is or was a director, officer, agent or employee of the corporation, or is or was serving at the corporation's request as a director, officer, agent or employee of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding, if such person 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. The power to indemnify applies to actions brought by or in the right of a corporation as well, but only to the extent of defense expenses, including attorneys' fees, actually and reasonably incurred and not to any satisfaction of judgment or settlement of the claim itself, and with the further limitation that in such actions no indemnification shall be made in the event of any adjudication of liability to the corporation, unless and only to the extent that the court believes that in light of all the circumstances indemnification should apply. Furthermore, under the DGCL, if a present or former officer or director is successful on the merits or otherwise in the defense of any action, suit or proceeding, referred to above, or in the defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

The Company's amended and restated certificate of incorporation ("COI") provides for the elimination of the personal liability of its directors to the Company and its stockholders for monetary damages for breach of their fiduciary duties as directors, subject to the exceptions set forth in DGCL Section 102. The Company's COI and bylaws provide that the Company will indemnify its directors and officers to the fullest extent permitted by the DGCL. The Company's COI and bylaws also authorize it to indemnify its employees and other agents to the fullest extent permitted by the DGCL.

The Company maintains a directors and officers liability insurance and company reimbursement policy. The policy insures directors and officers, subject to various exclusions, against unindemnified losses arising from certain wrongful acts in their capacities and reimburses the Company for such losses for which the Company has lawfully indemnified the directors and officers. The policy contains various exclusions, none of which relate to the offering hereunder.

II-2

ITEM 7. EXEMPTION FROM REGISTRATION CLAIMED

Not applicable

ITEM 8. EXHIBITS

Exhibit Number	Exhibit
5.1	Opinion of Davies Ward Phillips & Vineberg LLP
23.1	Consent of Grant Thornton LLP
23.2	Consent of Davies Ward Phillips & Vineberg LLP (included as part of Exhibit 5.1)
24.1	Power of Attorney (set forth on the signature page of the Registration Statement)

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;
- 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; 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 1(i) and 1(ii) do not apply if 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 Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.
- 2. That, for the purpose of determining any liability under the Securities Act, each such posteffective 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.

II-3

- 3. To remove from registration by means of a post-effective amendment any of the securities being registered hereby which remain unsold at the termination of the offering.
- (b) The undersigned Registrant hereby undertakes that, for the purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) 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 hereof.
- (c) 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.

II-4

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 Queensbury, State of New York, on the 28th day of October, 2004.

AngioDynamics, Inc.

By: /s/ Eamonn P. Hobbs

Eamonn P. Hobbs President and Chief Executive Officer KNOW ALL PERSONS BY THESE PRESENTS, that each individual whose signature appears below constitutes and appoints Eamonn P. Hobbs and Joseph G. Gerardi, and each or any of them, his true and lawful attorney-in-fact and agent, 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 and 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 or substitute, 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 below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Eamonn P. Hobbs	President, Chief Executive Officer and — Director (Principal Executive Officer)	October 28, 2004
Eamonn P. Hobbs		
/s/ Joseph G. Gerardi	Vice President and Chief Financial – Officer (Principal Financial and	October 28, 2004
Joseph G. Gerardi	Accounting Officer)	
/s/ Paul S. Echenberg	Chairman of the Board, Director	October 28, 2004
Paul S. Echenberg		
/s/ Howard S. Stern	Director	October 28, 2004
Howard S. Stern		
/s/ Jeffrey Gold	Director	October 28, 2004
Jeffrey Gold	_	
/s/ David P. Meyers	Director	October 28, 2004
David P. Meyers	_	
/s/ Howard W. Donnelly	Director	October 28, 2004
Howard W. Donnelly		
/s/ Dennis S. Meteny	Director	October 28, 2004
Dennis S. Meteny		
/s/ Robert E. Flaherty	Director	October 28, 2004
Robert E. Flaherty	_	
/s/ Gregory D. Casciaro	Director	October 28, 2004
Gregory D. Casciaro	_	

II-5

EXHIBIT INDEX

Exhibit Number	Exhibit
5.1	Opinion of Davies Ward Phillips & Vineberg LLP
23.1	Consent of Grant Thornton LLP
23.2	Consent of Davies Ward Phillips & Vineberg LLP (included as part of Exhibit 5.1)

EXHIBIT 5.1

DAVIES WARD PHILLIPS & VINEBERG LLP

12th Floor 625 Madison Avenue New York NY USA 10022 Tel 212 308 8866 Fax 212 308 0132 www.dwpv.com

File No. 061057-204034

October 28, 2004

AngioDynamics, Inc. 603 Queensbury Avenue Queensbury, NY 12804

Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel for AngioDynamics, Inc., a Delaware corporation (the "Company"), in connection with the Company's registration statement on Form S-8 filed by the Company with the Securities and Exchange Commission (the "Commission") on October 28, 2004 (the "Registration Statement").

The Registration Statement covers the registration of an aggregate of 2,697,674 shares of common stock, \$0.01 par value per share, of the Company (the "Shares") that are issuable by the Company pursuant to its 1997 Stock Option Plan, 2004 Stock and Incentive Award Plan, and Employee Stock Purchase Plan (collectively, the "Plans").

We have examined the Registration Statement and have also examined and relied as to factual matters upon originals or copies of such documents, records, certificates, and other instruments as we have deemed necessary or appropriate as a basis for the opinions hereinafter expressed. In our examination, we have assumed the genuineness of all signatures, the authenticity and completeness of all documents, records, certificates and instruments submitted to us as originals, and the conformity with originals of all documents, records, and instruments submitted to us as copies.

This opinion is limited solely to the Delaware General Corporation Law, as applied by courts located in Delaware, the applicable provisions of the Delaware Constitution, and the reported judicial decisions interpreting those laws, and we do not express any opinion herein concerning any other law.

Based upon and subject to the foregoing, we are of the opinion that the Shares, when issued and delivered by the Company pursuant to the Plans and paid for in full in accordance with the terms of the Plans, will be validly issued, fully paid, and non-assessable.

DAVIES WARD PHILLIPS & VINEBERG LLP

Page 2

We hereby consent to the filing of this opinion as an exhibit 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 Securities Act of 1933, as amended, or the rules and regulations of the Commission thereunder.

Yours very truly,

/s/ Davies Ward Phillips & Vineberg LLP

SMT/rl



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated July 13, 2004, except for Note R, as to which the date is August 17, 2004, accompanying the consolidated financial statements and schedule included in the Annual Report on Form 10-K of AngioDynamics, Inc. for the fifty-two weeks ended May 29, 2004 which is incorporated by reference in this Registration Statement. We consent to the incorporation by reference in the Registration Statement of the aforementioned report.

/s/ GRANT THORNTON LLP

Melville, New York October 26, 2004