Registration No.

As filed with the Securities and Exchange Commission on November 3, 2009

UNITED STATES 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 (518) 798-1215

(Address and telephone number of principal executive offices)

12804 (Zip Code)

AngioDynamics, Inc. 2004 Stock and Incentive Award Plan (Full titles of plans)

Copies to:

D. Joseph Gersuk Executive Vice President, Chief Financial Officer AngioDynamics, Inc. 603 Queensbury Ave. Queensbury, New York 12804 (518) 798-1215 (Name, address, including zip code, and telephone number, including area code, of 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 definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o Non-accelerated filer o

Accelerated filer x Smaller reporting company o

CALCULATION OF REGISTRATION FEE

| Title of each class 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, par value \$0.01 | 750,000 (3) | \$15.13 | \$11,347,500 | \$633.19 |

(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall be deemed to cover an indeterminate number of additional shares that may become issuable as a result of stock splits, stock dividends or similar transactions pursuant to the antidilution provisions of the AngioDynamics, Inc. 2004 Stock and Incentive Award Plan (the "2004 Plan").

(2) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(c) under the Securities Act, based upon the average of the high and low prices reported on the Nasdaq Global Select Market on November 2, 2009.

(3) Consists of shares of common stock available for issuance under the 2004 Plan.

EXPLANATORY NOTE

On October 28, 2004, we registered 1,000,000 shares of our common stock par value \$0.01 per share issuable under our AngioDynamics, Inc. 2004 Stock and Incentive Award Plan (the "2004 Plan") and 200,000 shares of our common stock issuable under the AngioDynamics, Inc. Employee Stock Purchase Plan (the "Purchase Plan"), pursuant to a Registration Statement on Form S-8 (File No. 333-120057). On November 6, 2006, we filed a Registration Statement on Form S-8 (File No. 333-138456) to register an additional 1,000,000 shares of our common stock under the 2004 Plan. On August 14, 2009 we filed a Registration Statement on Form S-8 (File No. 333-161355) to register an additional 1,000,000 shares of our common stock under the 2004 Plan and an additional 200,000 shares of our common stock under the Purchase Plan. This Registration Statement on Form S-8 is being filed pursuant to General Instruction E to Form S-8 to register an additional 750,000 shares of common stock issuable under the 2004 Plan.

INCORPORATION OF DOCUMENTS BY REFERENCE.

Pursuant to General Instruction E to Form S-8, the contents of our Registration Statement on Form S-8 (File No. 333-120057) filed with the Securities and Exchange Commission on October 28, 2004, the contents of our Registration Statement on Form S-8 (File No. 333-138456) filed with the Securities and Exchange Commission on November 6, 2006, and the contents of our Registration Statement on Form S-8 (File No. 333-161355) filed with the Securities and Exchange Commission on August 14, 2009, including, with respect to each registration statement, each of the documents filed by us with the Securities and Exchange Commission and incorporated or deemed to be incorporated by reference therein and including each of the documents filed as Exhibits to such registration statement, are incorporated herein by reference.

ITEM 8. EXHIBITS.

PART II

| <u>Exhibit Number</u> | Exhibit Description |
|-----------------------|--|
| 5.1 | Opinion of Stephen A. Trowbridge as to the legality of shares being registered. |
| 23.1 | Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm. |
| 23.2 | Consent of Stephen A. Trowbridge (included in Exhibit 5.1). |
| 24.1 | Power of Attorney (included in the signature page and incorporated herein by reference). |

(Signatures on following page)

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, AngioDynamics, Inc. 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 October 30, 2009.

ANGIODYNAMICS, INC.

| Bv: | /s/ Jan Keltiens |
|-----|------------------|
| | /S/ Jan Kennens |

Name: Jan Keltjens

Title: Chief Executive Officer and President

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below authorizes Jan Keltjens and D. Joseph Gersuk, and each or any of them, as his attorney in fact and agent, with full power of substitution and resubstitution, to execute, in his name and on his behalf, in any and all capacities, this Registration Statement on Form S-8 and any amendments thereto (and any additional registration statement related thereto permitted by Rule 462(b) promulgated under the Securities Act of 1933 (and all further amendments including post-effective amendments thereto)) necessary or advisable to enable AngioDynamics, Inc. (the "Registrant") to comply with the Securities Act, and any rules, regulations and requirements of the Securities and Exchange Commission, in respect thereof, in connection with the registration of the securities which are the subject of such Registration Statement, which amendments may make such changes in such Registration Statement as such attorney may deem appropriate, and with full power and authority to perform and do any and all acts and things whatsoever which any such attorney or substitute may deem necessary or advisable to be performed or done in connection with any or all of the above-described matters, as fully as each of the undersigned could do if personally present and acting, hereby ratifying and approving all acts of any such attorney or substitute.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

| Signature | <u>Title</u> | Date |
|----------------------------|---|------------------|
| /s/ Vincent A. Bucci | Chairman of the Board, Director | October 30, 2009 |
| Vincent A. Bucci | | |
| /s/ Jan Keltjens | President, Director and Chief Executive Officer (Principal | October 30, 2009 |
| Jan Keltjens | Executive Officer) | |
| /s/ D. Joseph Gersuk | Executive Vice President – Chief Financial Officer, Treasurer (Principal Financial and Chief Accounting Officer) | October 30, 2009 |
| D. Joseph Gersuk | | |
| /s/ Howard W. Donnelly | Director | October 30, 2009 |
| Howard W. Donnelly | | |
| /s/ Paul S. Echenberg | Director | October 30, 2009 |
| Paul S. Echenberg | | |
| /s/ Jeffrey G. Gold | Director | October 30, 2009 |
| Jeffrey G. Gold | | |
| /s/ Wesley E. Johnson, Jr. | Director | October 30, 2009 |
| Wesley E. Johnson, Jr. | | |
| /s/ Steve LaPorte | Director | October 30, 2009 |
| Steve LaPorte | | |
| /s/ Dennis S. Meteny | Director | October 30, 2009 |
| Dennis S. Meteny | | |
| /s/ Charles T. Orsatti | Director | October 30, 2009 |

Charles T. Orsatti

EXHIBIT INDEX

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| | |



October 30, 2009

AngioDynamics, Inc. 603 Queensbury Avenue Queensbury, NY 12804

Ladies and Gentlemen:

I am General Counsel of AngioDynamics, Inc., a Delaware corporation (the "Company"), and have acted as counsel to the Company in connection with its Registration Statement on Form S-8 (the "Registration Statement") filed pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration of 750,000 shares (the "Shares") of the Company's common stock, par value \$0.01 per share (the "Common Stock"), which may be issued pursuant to AngioDynamics, Inc. 2004 Stock and Incentive Aware Plan (the "2004 Plan").

For purposes of the opinion expressed in this letter, I have examined copies of the Registration Statement, the 2004 Plan, the Certificate of Incorporation and Bylaws of the Company, records of the corporate proceedings of the Company and such other documents and records of the Company as I have deemed necessary or appropriate as a basis for such opinion. In making my examination, I have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to me as originals and the conformity to the originals of all documents submitted to me as photostatic or conformed copies.

Based on the foregoing, and having regard to such legal considerations as I have deemed relevant, I am of the opinion that the Shares have been duly authorized and, upon the issuance thereof and payment therefor in accordance with the terms of the 2004 Plan, will be legally issued, fully paid and nonassessable.

I express no opinion as to any matter which may be, or which purports to be, governed by the laws of any jurisdiction other than the General Corporation Law of the State of Delaware and the federal laws of the United States of America, in each case as in effect on the date of this letter.

I hereby consent to the inclusion of this letter as an exhibit to the Registration Statement and to the use of my name wherever appearing in the Registration Statement and any amendment thereto. In giving such consent, I do not thereby concede that I am within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations promulgated thereunder.

Very truly yours,

/s/ Stephen A. Trowbridge Stephen A. Trowbridge

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated August 14, 2009 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting of AngioDynamics, Inc., which appears in AngioDynamics' Annual Report on Form 10-K for the year ended May 31, 2009.

/s/ PricewaterhouseCoopers LLP

Albany, New York October 30, 2009