

AtheroNova Inc.
Form S-1MEF
October 28, 2014

As filed with the Securities and Exchange Commission on October 28, 2014

Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form S-1

**REGISTRATION STATEMENT
UNDER**

THE SECURITIES ACT OF 1933

ATHERONOVA INC.

(Exact name of registrant as specified in its charter)

Delaware	2834	20-1915083
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(IRS Employer Identification No.)

2301 Dupont Drive, Suite 525

Irvine, CA 92612

(949) 476-1100

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

Mark Selawski

Chief Financial Officer

AtheroNova Inc.

2301 Dupont Drive, Suite 525

Irvine, CA 92612

(949) 476-1100

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Michael L. Lawhead, Esq.	Louis A. Wharton, Esq.	Mitchell S. Nussbaum, Esq.
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660 Newport Center Drive, Suite 1600	15260 Ventura Boulevard, 20th Floor	Loeb & Loeb LLP
Newport Beach, California 92660	Sherman Oaks, CA 91403	345 Park Avenue
(949) 725-4000	(818) 444-4500	New York, New York 10154
		(212) 407-4000

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. 333-194645

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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 Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price (1)	Amount of Registration Fee
Common Stock, \$0.0001 par value per share	\$3,450,000	\$400.89
Common Stock Purchase Warrants	--	--
Shares of Common Stock, \$0.0001 par value per share, underlying Common Stock Purchase Warrants	\$5,405,000	\$628.06
Underwriters' Common Stock Purchase Warrants	--	--
Shares of Common Stock, \$0.0001 par value per share underlying Underwriters' Common Stock Purchase Warrants	\$216,200	\$25.12
Total	\$9,071,200 (2)	\$1,054.07

(1) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

(2) \$8,957,063 of securities were registered under Commission File No. 333-194645, for which a filing fee of \$1,040.81 was paid.

This Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) of the Securities Act of 1933.

EXPLANATORY NOTE

This Registration Statement is being filed with the Securities and Exchange Commission (the “Commission”) pursuant to Rule 462(b) under the Securities Act of 1933, as amended.

This Registration Statement relates to the registration statement on Form S-1 (File Number 333-194645) (the “Prior Registration Statement”) declared effective on October 27, 2014 by the Commission, and is being filed for the purpose of registering additional shares and warrants in amounts that do not exceed 20% of the Maximum Aggregate Offering Amount for each such class contained in the Prior Registration Statement. The Registrant hereby incorporates by reference into this Registration Statement on Form S-1 in its entirety the Prior Registration Statement, including each of the documents filed by the Registrant with the Commission and incorporated or deemed to be incorporated by reference therein and all exhibits thereto. The required opinions and consents are listed on the Exhibit Index attached to and filed with this Registration Statement.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 16. Exhibits and Financial Statement Schedules.

All exhibits filed or incorporated by reference in the registrant's Registration Statement on Form S-1, as amended (File No. 333-194645), are incorporated by reference into, and shall be deemed to be part of, this Registration Statement, except for the following, which are filed herewith:

Exhibit Number	Description of the Document
5.1	Opinion of Legal Counsel
23.1	Consent of Independent Registered Public Accounting Firm
23.3	Consent of Legal Counsel (included in Exhibit 5.1)

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant 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 October 28, 2014.

ATHERONOVA INC.
(Registrant)

By: /s/ Mark Selawski
Mark Selawski
Chief Financial Officer & Secretary

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

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<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ Thomas W. Gardner Thomas W. Gardner	Chairman, Chief Executive Officer and President (Principal Executive Officer)	October 28, 2014
/s/ Mark Selawski Mark Selawski	Chief Financial Officer and Secretary (Principal Accounting Officer)	October 28, 2014
* Boris Ratiner, M.D.	Director	October 28, 2014
* Chaim Davis	Director	October 28, 2014
* Gary Freeman	Director	October 28, 2014
* Alexander Polinsky	Director	October 28, 2014
* Paul DiPerna	Director	October 28, 2014
* Johan (Thijs) Spoor	Director	October 28, 2014
* Fred Knoll	Director	October 28, 2014

* By: /s/ Mark Selawski

Mark Selawski, Attorney-in-fact