BOVIE MEDICAL CORP
Form S-3/A
April 28, 2005

As filed with the Securities and Exchange Commission on , 2005

Registration No. 333-120741

SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM S-3/A2

REGISTRATION STATEMENT
Under
THE SECURITIES ACT OF 1933

BOVIE MEDICAL CORPORATION
(Exact name of Registrant as specified in its charter)

Delaware	11-2644611
(State or other jurisdiction of Incorporation or organization)	(I.R.S. Employer Identification No.)

734 Walt Whitman Road
Melville, New York 11747
(631) 421-5452
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

ANDREW MAKRIDES
President, Chief Executive Officer
734 Walt Whitman Road
Melville, New York 11747
(631) 421-5452

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

Copy to:
ALFRED V. GRECO, ESQ.
Sierchio Greco & Greco LLP
720 Fifth Avenue, Suite 1301
New York, New York 10019
(212) 246-3030

KRAMER LEVIN NEFTALIS & FRANKEL LLP
1177 Avenue of the Americas
New York, New York 10036
(212) 715-9100

Approximate date of commencement of proposed sale to the public:
As soon as practicable after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

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 a 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.

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 number of the earlier effective registration statement for the same offering.

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to Registered	Proposed Maximum Offering Price Per Share (1)	Proposed Maximum Aggregate Offering Price (1)	Amount of Registration Fee
Common Stock ($0.001 par value	3,000,000	$ 2.50	$7,500,000	$950.25

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457 (c) and 457 (g) of the Securities Act of 1933, and based on the average of the high and low sales prices of the common stock, as reported on the American Stock Exchange on November 19, 2004.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Commission, acting pursuant to Section 8(a), may determine.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THE SELLING STOCKHOLDERS MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IS NOT SOLICITING OFFERS TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

Subject to Completion, Dated April 28, 2005

PRELIMINARY PROSPECTUS
BOVIE MEDICAL CORPORATION
3,000,000 Shares of Common Stock of Bovie Corporation

In August, 2004, ACMI Corporation ("ACMI"), a major shareholder of Bovie Medical Corporation ("Bovie") privately sold a total of 3,000,000 shares of common stock of Bovie Medical Corporation to a limited number of sophisticated accredited purchasers. This prospectus relates to the public offering and sale, from time to time, of a total of 3,000,000 shares of common stock by the purchasers from ACMI that are listed in this prospectus as selling stockholders.

Our common stock is listed on the American Stock Exchange under the symbol "BVX." The last reported sale price of our common stock on April 21, 2005 was $2.39 per share.

Investing in our common stock involves risks that are described in the "Risk Factors" section of this Prospectus which begins on page 5.

We will not receive any of the proceeds from the sale of our common stock by the selling stockholders. The shares of common stock may be offered by the selling stockholders in negotiated transactions, at either prevailing market prices or negotiated prices. Each selling stockholder in its or his discretion may also offer the shares of common stock from time to time in ordinary brokerage transactions on the American Stock Exchange or otherwise. See our discussion in the Plan of Distribution section of this Prospectus.

The selling stockholder and any brokers executing selling orders on behalf of the selling stockholder may be deemed to be "underwriters" within the meaning of the Securities Act of 1933. Commissions received by a broker executing selling orders may be deemed to be underwriting commissions under the Securities Act.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

Bovie Medical Corporation
734 Walt Whitman Road
Melville, New York 11747
(631) 421-5452

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SUMMARY

This summary highlights certain selected information contained elsewhere in this prospectus. You should read the entire prospectus and the documents incorporated by reference in this prospectus carefully before making an investment decision.

Bovie Medical Corporation ("our Company" or "Bovie") was incorporated in 1982, under the laws of the State of Delaware and has its principal executive offices at 734 Walt Whitman Road, Melville, New York 11747.

Bovie is actively engaged in the business of manufacturing and marketing medical devices and developing related technologies. Aaron Medical Industries ("Aaron"), a 100% owned subsidiary based in St. Petersburg, Florida is engaged in marketing our Company's medical devices. Previously our largest product line was battery operated cauteries. We have now shifted our focus to the manufacture and marketing of electrosurgical generators and electrosurgical disposables. This new focus on high frequency electrosurgical generators resulted in our Aaron 800 and Aaron 900 high frequency desiccators and Aaron 950, the first high frequency desiccator with cut capacity. We then developed the Aaron 1250 and Aaron 2250 which were designed for today's rapidly expanding surgi-center market. Additionally, our new 200-watt electrosurgical unit and our new 300-watt electrosurgical unit which are marketed under the Bovie name, are presently used in hospitals worldwide. Presently the standard being used in hospitals is the 300-watt electrosurgical generator.

We also manufacture a variety of specialty lighting instruments for use in ophthalmology, general surgery, hip replacement surgery, and for the placement of endotracheal tubes.

We manufacture and market our products both under private label and the Bovie/Aaron label to distributors worldwide. Additionally, we have original equipment manufacturing (OEM) agreements with other medical device manufacturers under which we develop and manufacture products pursuant to the specifications of our OEM customers. These OEM arrangements combined with private label and the Bovie/Aaron label have allowed our Company to gain greater market share for the distribution of its products and an increase in its revenues.

RISK FACTORS

You should carefully consider the following risks and other information included or incorporated by reference in this prospectus before deciding to purchase any shares of common stock in this offering. The risks described in this section and in information included or incorporated by reference in this prospectus could cause our actual results to differ materially from those anticipated.

Risks Relating to Our Business

We may not successfully make or integrate acquisitions or enter into strategic alliances.

As part of our business strategy, we also intend to pursue selected acquisitions of certain businesses or technologies for the opportunity to grow sales in our market. Our medical and electrosurgical devices compete with other medical and electrosurgical devices and we cannot assure you that we will be able to effect strategic alliances, partnerships or acquisitions on commercially reasonable terms or at all. Even if we enter into these transactions, we may experience:

- delays in realizing the benefits we anticipate or we may not realize the benefits we anticipate at all;
- difficulties in integrating any acquired businesses and products into our existing business;
- loss or attrition of key personnel from acquired businesses;
- difficulties or delays in obtaining regulatory approvals;
- unforeseen operating difficulties that require significant financial and managerial resources that would otherwise be available for the development or expansion of our existing operations.

Consummating these transactions could also result in the incurrence of additional debt and related interest expense, as well as unforeseen contingent liabilities, all of which could have a material adverse effect on our business, financial condition and results of operations. We may also issue additional equity in connection with these transactions, which would dilute the percentage ownership of our existing shareholders.

We distribute a significant amount of our products in Europe and to a lesser degree, elsewhere outside of the United States, which subjects us to additional business risks that may cause our profitability to decline.

We presently have international distributors (most of which with domestic offices in the United States) that distribute our products to Europe, Asia, Russia, South America, Canada, Australia and the Middle East. Presently our distribution in Europe substantially exceeds all other countries. We intend to continue to pursue growth opportunities in sales internationally, which could expose us to greater risks associated with international sales and operations, including:

- unexpected changes in foreign regulatory requirements in Europe, Asia and South America can negatively affect our distribution and marketing procedures and thus our profits;
- fluctuations in foreign currency exchange rates can affect us negatively as the dollar increases in value against the Euro, peso or yen.
- political and economic instability in the Middle East and South America may delay or disrupt distribution of our products;
- the adoption of restrictive trade protection measures and import or export licensing requirements in the future in Asia may raise our costs of production there and negatively impact our future sales;
- potentially negative consequences from changes in tax laws in any of the countries in which we have sales may adversely affect our business;

Our international distributors usually have separate offices in the foreign country in which they sell or have individual representatives to distribute their products in the foreign countries. Should adverse economic or political conditions develop in a specific foreign country or geographic area, and adversely affect their sales, then their future orders for our products will likely be reduced.

International sales aggregated approximately $2.4M in fiscal 2004, of which 50% was from Europe, 14% from Asia and 11% from South America. Our sales in Europe are perceived by us to be least likely affected by the foregoing factors and sales in South America will be most likely affected by the factors set forth above.

Most countries have their own version of our Food and Drug Administration (“FDA”) and we must satisfy their current regulations (and further satisfy any future changes in requirements) in order to sell our products in any particular country. Each individual country has differing standards, some of which are more stringent than our FDA in certain aspects - i.e. Japan. Without such compliance we will be unable to offer our products in that particular country. If a country should tax our group of products (to protect their own manufacturers), such tax will increase our costs of doing business there so as to diminish or effectively destroy our competitiveness. In addition, a number of countries in South America have experienced fiscal crisis in the last few years. In Brazil, over the last several years, the "real" has diminished in value to the extent that the real is currently worth 25% of what it was worth several years ago. The direct result of this has increased the cost of our product four-fold for Brazilians. The same occurred in Argentina where due to its financial crisis, customers there have sharply reduced orders for our products. Historically there are a greater number of changes in governments of Latin American countries. We believe Latin America to be the most politically unstable region in which we do business.

Any of these factors may, individually or as a group, have a material adverse effect on our business and results of operations.

As we expand our existing international operations we may encounter additional risks. For example, as we focus on building our international sales and distribution networks in new geographic regions, we must continue to develop relationships with qualified local distributors and trading companies. If we are not successful in developing these relationships, we may not be able to grow sales in these geographic regions. These or other similar risks could adversely affect our revenue and profitability.

We do a substantial amount of business with certain original equipment manufacturers (“OEM”) which as a group have produced substantial revenues for our Company. One OEM customer, Arthrex, Inc. produced revenues for us in excess of approximately $6,000,000 or approximately 30% of total sales in fiscal 2004. Loss of business from such customer will likely adversely affect our business.

As part of our business and at the request of certain original equipment manufacturers (“OEM Customers”) we develop and supply medical products (“OEM Products”) pursuant to their specifications. Although our OEM Customers usually pay our expenses for development of these products, our agreement with them requires that they own the technology and we may not generally compete with the OEM technology in the particular OEM Customers’ markets. Our OEM Customer agreements generally provide that the OEM Customers are not obligated to purchase any of the OEM Products developed by us, but any and all purchases will be pursuant to the agreed pricing formulation for the term of the agreement. The agreements with our OEM Customers also generally provide, among other things, for product warranties, insurance, termination and confidentiality. In the last two (2) years we have sustained a substantial increase in revenue from OEM Customers as a group. In our fiscal year ending December 31, 2004, OEM sales totaled approximately $8,000,000 or 40% of our total sales. The purchase of OEM Products by Arthrex, Inc., our major OEM Customer, generated approximately $6,000,000 in sales (approximately 30% of our total revenue) in fiscal 2004. Should Arthrex determine to cease or substantially reduce placement of orders for the OEM Products from us, our business will be adversely affected.

If we do not introduce new commercially successful products in a timely manner, our products may become obsolete over time, customers may not buy our products and our revenue and profitability may decline.

Demand for our products may change in ways we may not anticipate because of:

- evolving customer needs;
- the introduction of competitive new products and technologies;
- evolving surgical practices; and
- changing industry standards.

Without the timely introduction of new commercially successful products and improvements, our products may become obsolete over time, in which case our sales and operating results would suffer. The success of our new product offerings will depend on several factors, including our ability to:

- properly identify and anticipate customer needs;
- commercialize new products in a cost-effective and timely manner;
- manufacture and deliver products in sufficient amounts on time;
- obtain regulatory approval for such new products;
- differentiate our product offerings from competitors' offerings;
- achieve positive clinical outcomes;
- satisfy the increased demands by health care payors, providers and patients for lower-cost procedures;
- innovate and develop new materials, product designs and surgical techniques; and
- provide adequate medical and/or end-user education relating to new products and where necessary or appropriate attract key surgeons to advocate these new products.

Moreover, improvements or innovations generally will require a substantial investment in research and development before we can determine the commercial viability of these innovations and we may not have the financial resources necessary to fund these changes or improvements. In addition, even if we are able to successfully develop enhancements or new generations of our products, these enhancements or new generations of products may not produce revenue in excess of the costs of development and they may be quickly rendered obsolete by changing customer preferences or the introduction by our competitors of products containing new technologies or features.

We rely on certain suppliers and manufacturers for raw materials and other products and are vulnerable to fluctuations in the availability and price of such products and services.

We purchase certain raw materials and other products from third-party suppliers and vendors, sometimes from limited sources. For example, we purchase some of our raw materials and other products from a sole source. Our suppliers and vendors may not provide the raw materials or other products needed by us in the quantities requested, in a timely manner, or at a price we are willing to pay. In the event any of our third-party suppliers or vendors were to become unable or unwilling to continue to provide important raw materials and third-party products in the required volumes and quality levels or in a timely manner, we would be required to identify and obtain acceptable replacement supply sources. We may not be able to obtain alternative suppliers and vendors on a timely basis, which could result in lost

sales because of our inability to manufacture products containing such raw materials or deliver products we sell from certain suppliers.

In addition, we also rely on certain manufacturers for some of our products. For example, we have historically outsourced raw materials and semi-finished goods to third parties and partly to sole sources. If we were unable to renew our third-party manufacturing agreements, or if the suppliers were to cease supplying any of these products for us for any reason, we may not be able to find alternative manufacturers on terms favorable to us, in a timely manner, or at all. If any of these events should occur, our business, financial condition and results of operations could be materially adversely affected.

We face intense competition, and our failure to compete effectively could have a material adverse effect on our profitability and results of operations.

We face intense competition in the markets for our electrosurgical and other medical products and these markets are subject to rapid and significant technological change. We have numerous competitors in the United States and abroad, including, among others, large companies such as Valley Lab Corp., ConMed and Xomed. Many of our competitors have substantially more resources and a greater marketing capacity and scope than we do. We may not be able to sustain our current levels of profitability and growth as competitive pressures, including pricing pressure from competitors, increase. In addition, if we are unable to develop and produce or market our products to effectively compete against our competitors, our operating results will materially suffer.

If we are unable to protect our proprietary and intellectual property rights, our business and prospects may be harmed.

Our ability to compete effectively is dependent upon our ability to protect and preserve the proprietary aspects of the designs, processes, technologies and materials owned by, used by or licensed to us. We have a number of U.S. patents and corresponding foreign patents that are expected to expire by their own terms at various dates and have additional patent applications pending that may not result in issued patents. Our failure to secure these patents and future patents and trademarks may limit our ability to protect the intellectual property rights that these applications were intended to cover. Although we attempt to protect our proprietary property, technologies and processes both in the United States and in foreign countries through a combination of patent law, trade secrets and non-disclosure agreements, these may be insufficient. Competitors may be able to design around our patents to compete effectively with our products. We also may not be able to prevent third parties from using our technology without our authorization, breaching any non-disclosure agreements with us, or independently developing technology that is similar to ours. The use of our technology or similar technology by others could reduce or eliminate any competitive advantage we have developed, cause us to lose sales or otherwise harm our business. If it became necessary for us to resort to litigation to protect these rights, any proceedings could be costly and we may not prevail. Further, we may not be able to obtain patents or other protections on our future innovations. In addition, because of the differences in foreign patent and other laws concerning proprietary rights, our products may not receive the same degree of protection in foreign countries as they would in the United States. We cannot assure you that:

- pending patent applications will result in issued patents;
- patents issued to or licensed by us will not be challenged by third parties; or
- our patents will be found to be valid or sufficiently broad to protect our technology or provide us with a competitive advantage.

We may be subject to intellectual property litigation and infringement claims, which could cause us to incur significant expenses or prevent us from selling our products.

There is a substantial amount of litigation over patent and other intellectual property rights in the medical industry and in the surgical generator products and related markets particularly. The fact that we have patents issued to us for our products does not mean that we will always be able to successfully defend our patents and proprietary rights against challenges or claims of infringement by our competitors. A successful claim of patent or other intellectual property infringement or misappropriation against us could adversely affect our growth and profitability, in some cases materially. We cannot assure you that our products do not and will not infringe issued patents or other intellectual property rights of third parties. From time to time, in the ordinary course of business, we receive notices from third parties alleging infringement or misappropriation of the patent, trademark and other intellectual property rights of third parties by us or our consumers in connection with the use of our products. We may be unaware of intellectual property rights of others that may cover some of our technology. If someone claims that our products infringe their intellectual property rights, whether or not such claims are meritorious, any resulting litigation could be costly and time consuming and would divert the attention of management and personnel from other business issues. The complexity of the technology involved and the uncertainty of intellectual property litigation increase these risks. Claims of intellectual property infringement also might require us to enter into costly royalty or license agreements (if available on acceptable terms or at all). We also may be subject to significant damages or an injunction preventing us from manufacturing, selling or using some or some aspect of our products. We may also need to redesign some of our products or processes to avoid future infringement liability. Any of these adverse consequences could have a material adverse effect on our business and profitability.

We could experience losses due to product liability claims or product recalls or corrections.

We have in the past been, and continue to be, subject to product liability claims. As part of our risk management policy, we have obtained third-party product liability insurance coverage. Product liability claims against us may exceed the coverage limits of our insurance policies or cause us to record a self-insured loss. A product liability claim in excess of applicable insurance could have a material adverse effect on our business, financial condition and results of operations. Even if any product liability loss is covered by an insurance policy, these policies have substantial retentions or deductibles that provide that we will not receive insurance proceeds until the losses incurred exceed the amount of those retentions or deductibles. To the extent that any losses are below these retentions or deductibles, we will be responsible for paying these losses. The payment of retentions or deductibles for a significant amount of claims could have a material adverse effect on our business, financial condition and results of operations.

In addition, we are subject to medical device reporting regulations that require us to report to the FDA or similar governmental authorities in other countries if our products cause or contribute to a death or serious injury or malfunction in a way that would be reasonably likely to contribute to death or serious injury if the malfunction were to recur. The FDA and similar governmental authorities in other countries have the authority to require the recall of our products in the event of material deficiencies or defects in design or manufacturing. A government mandated or voluntary recall by us could occur as a result of manufacturing errors or design defects, including defects in labeling. We have undertaken voluntary recalls of our products in the past.

Any product liability claim or recall would divert managerial and financial resources and could harm our reputation with customers. We cannot assure you that we will not have product liability claims or recalls in the future or that such claims or recalls would not have a material adverse effect on our business.

Our industry is highly regulated by the U.S. Food and Drug Administration and other state and federal agencies which have substantial authority to establish criteria which must be complied with in order to continue in operation

Our products and operations are subject to extensive regulation in the United States by the FDA and various other federal and state regulatory agencies, including with respect to regulatory approval of our products and health care fraud and abuse, such as anti-kickback and physician self-referral laws and regulations. Additionally, in many foreign countries in which we market our products, we are subject to similar regulations. Compliance with these regulations is expensive and time-consuming. If we fail to comply, we may be subject to fines, injunctions and penalties that could harm our business. Product sales, introductions or modifications may be delayed or canceled as a result of U. S. or foreign regulatory processes, which could cause our sales to decline. Failure to obtain regulatory clearance or approvals of new products we develop, any limitations imposed by regulatory agencies on new product use or the costs of obtaining regulatory clearance or approvals could have a material adverse effect on our business, financial condition and results of operations. In addition, if we, our subcontractors or third-party manufacturers or suppliers of products that we distribute fail to comply with applicable manufacturing regulations, our business could be harmed.

In addition, changes in existing regulatory requirements or adoption of new requirements could hurt our business, financial condition and results of operations.

If we fail to attract, hire and retain qualified and key personnel we may not be able to design, develop, market or sell our products or successfully manage our business.

Our ability to attract new customers, retain existing customers and pursue our strategic objectives depends on the continued services of our current management, sales, product development and technical personnel and our ability to identify, attract, train and retain similar personnel. Competition for qualified and talented engineers and top management personnel is intense and we may not be able to recruit and retain the personnel we need. The loss of anyone of our management personnel, or our inability to identify, attract, retain and integrate additional qualified management personnel, could make it difficult for us to manage our business successfully and pursue our strategic objectives.

Similarly, competition for skilled sales, product development and technical personnel is intense and we may not be able to recruit and retain the personnel we need. The loss of services of a number of key sales, product development and technical personnel, or our inability to hire new personnel with the requisite skills, could restrict our ability to develop new products or enhance existing products in a timely manner, sell products to our customers or manage our business effectively.

We may not be able to hire or retain qualified personnel if we are unable to offer competitive salaries and benefits. If our stock does not perform well, we may have to increase our salaries and benefits, which would increase our expenses and may reduce our profitability.

Due to the nature of our products and their use by professionals, we are from time to time subject to litigation from persons who sustain injury during medical procedures in hospitals, physician's offices or in clinics and defending such litigations is expensive, disruptive, time consuming and could adversely affect our business.

The nature of our business is to develop, manufacture and sell medical devices to be used by professionals for medical or surgical procedures in hospitals and clinics. In instances, due to neglect or otherwise, a patient may be harmed during a procedure. This often results in litigation against the hospital or clinic at which the procedure took place, the professional performing the procedure and sometimes, the manufacturer of the device used during the procedure, which allegedly may have contributed to the injury.

Although we carry liability insurance that we deem to be sufficient to protect our Company in these instances, the experience of litigating these matters requires our attention and participation to the extent necessary as a party to the litigation. This can be disruptive, expensive and time consuming to an extent that it may adversely affect our business.

We may engage in acquisitions that could dilute stockholders' interests, divert management attention or cause integration problems.

As part of our business strategy, we have in the past acquired, and may in the future acquire, businesses or intellectual property that we feel could complement our business, enhance our technical capabilities or increase our intellectual property portfolio. If we consummate acquisitions through an exchange of our securities, our stockholders could suffer significant dilution. Acquisitions could also create risks for us, including:

- unanticipated costs associated with the acquisitions;
- use of substantial portions of our available cash to consummate the acquisitions;
- diversion of management's attention from other business concerns;
- difficulties in assimilation of acquired personnel or operations; and
- potential intellectual property infringement claims related to newly acquired product lines.

Any acquisitions, even if successfully completed, might not generate significant additional revenue or provide any benefit to our business.

We have in the past experienced significant changes in our business and our failure to manage the complexities associated with the changing economic circumstances and technology requirements could harm our business.

Any future periods of rapid change may place significant strains on our managerial, financial, engineering and other resources. Further economic weakness, in combination with our complex technologies, may demand an unusually high level of managerial effectiveness in anticipating, planning, coordinating and meeting our operational needs as well as the needs of our affiliates. Management's inability to meet such demands could adversely affect our business operations.

Our relationship with certain original equipment manufacturer customers may interfere with our ability to enter into development and licensing relationships with our customers' competitors.

Our OEM Manufacturers generally require that we not compete with them or develop or supply competing OEM Products to competitors of our OEM customers. Accordingly, we may be legally obliged to turn away business and/or a future licensing relationship with a potential customer due to existing contractual obligations to our OEM customers. Meeting such obligations to our existing customers could have an adverse effect on our revenues and profits.

We may elect to raise additional capital in the future which may result in substantial dilution to our stockholders.

Should any unanticipated circumstances arise which significantly increase our cash or capital requirements we may elect to raise additional capital to have a supply of cash for such events or future periods. Our plans to raise additional capital may include possible debt or equity financing. We have taken measures to control our costs and will continue to monitor these efforts. We cannot be certain that additional financing will be available to us on favorable terms when required, or at all. Changes in equity markets over the past two years have adversely affected the ability of companies to raise equity financing and have adversely affected the markets for financing for companies such as ours. Additional financing may require us to issue additional shares of our common or preferred stock such that our existing stockholders may experience substantial dilution.

Our quarterly revenues and operating results are varied, and if our future results are below the expectations of public market analysts or investors, the price of our common stock is likely to decline.

Our revenues and operating results are likely to vary significantly from quarter to quarter due to a number of factors, many of which are outside of our control and any of which could cause the price of our common stock to decline.

These factors include:

· the establishment or loss of licensing relationships; the timing of payments under fixed and/or up-front license agreement

· the timing of our expenses including costs may be related to litigation, acquisitions of technologies or businesses;

· the timing of introductions of new products and product enhancements by us, our licensees or their competitors;

· our ability to develop and improve our technologies;

· our ability to attract, integrate and retain qualified personnel; and

· seasonality in the demand for our licensees' products.

By their holdings, our major stockholders have a degree of control over us, which may lead to conflicts with other stockholders over corporate governance matters and could also affect our stock price.

We have had in the past and may have in the future stockholders who retain greater than 20% of our outstanding stock. Acting together, these stockholders would be able to exercise significant influence over matters that our stockholders vote upon, including the election of directors and mergers or other business combinations, which could have the effect of delaying or preventing a third party from acquiring control over or merging with us. Further, if any individuals in this group elect to sell a significant portion or all of their holdings of our common stock, the trading price of our common stock could experience volatility.

Our manufacturing facilities are located in St. Petersburg, Florida and could be affected due to multiple risks from fire, hurricanes and the like.

Florida has sustained four (4) major hurricanes during the past year, the last of which occasioned damage to the roof of one of our buildings. We sustained flooding and loss of furniture and equipment. The damage was not disruptive to operations and although we carry casualty insurance and business interruption insurance, future possible disruptions of operations due to hurricanes or fire could affect our ability to meet our commitments to our customers and impair important business relationships, the loss of which could adversely affect our operations and profitability.

You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. The selling stockholder is not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

Bovie is a registered trademark of Bovie Medical Corporation. This prospectus contains product names, trade names and trademarks of Bovie and other organizations.

The terms "Bovie," "we," "us," "our," and the "company," as used in this prospectus, refer to Bovie Medical Corporation and its consolidated subsidiaries.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes forward-looking statements within the meaning of Section 27 A of the Securities Act of 1933, as amended, and Section 2IE of the Securities Exchange Act of 1934, as amended. The forward-looking statements involve risks and uncertainties. Forward-looking statements are identified by words such as "anticipates", "believes", "expects", "intends", "may", "will" and other similar expressions. However, these words are not the only way we identify forward looking statements. In addition, any statements, which refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements as a result of a number of factors, including those listed under "Risk Factors" and elsewhere in this prospectus and those described in our other reports filed with the SEC. We caution you not to place undue reliance on these forward-looking statements, which speak only as of the date of this report, and we undertake no obligation to update these forward -looking statements after the filing of this report. You are urged to review carefully and consider our various disclosures in this report and in our other reports filed with the SEC that attempt to advise you of the risks and factors that may affect our business.

THE OFFERING

COMMON STOCK OFFERED BY THE SELLING STOCKHOLDERS	3,000,000 Shares
USE OF PROCEEDS	We will not receive any of the proceeds from the sale of common stock by the selling stockholders.
OUTSTANDING SHARES AFTER OFFERING	Since the shares being offered by the selling stockholders are already outstanding, our outstanding shares of common stock after the offering will not change as a result of the offering by selling stockholders.
AMERICAN STOCK EXCHANGE SYMBOL	BVX
RISK FACTORS	See “Risk Factors” beginning on page 1 and other information in this prospectus for a discussion of factors you should consider carefully before investing in shares of our common stock.

RECENT DEVELOPMENTS

Background to Recent Developments

In 1998, Maxxim Medical Corporation ("Maxxim") a then publicly owned corporation, acquired 3,000,000 shares of our common stock from us pursuant to a certain agreement in exchange for assets and equipment, the ownership of the trade name "Bovie" and other future business to be conducted between our corporations. As part of the agreement, Maxxim was granted rights to demand that we register the shares with the SEC. Maxxim later became a privately owned corporation, changed its name to Medical Wind Down Holdings I, Inc. ("Holdings") and with certain affiliated debtors, filed a petition under Chapter 11 of Title 11 of the United States Code with the U.S. Bankruptcy Court for the District of Delaware.

At the time of filing of the petition under Chapter 11, a dispute existed between Holdings and ACMI Corporation, a non-affiliate of our Company and Maxxim. ACMI allegedly purchased the Bovie common stock from Maxxim in February 2000. However, during the ensuing years, Maxxim retained possession of the shares and continued to claim ownership and the dispute continued. In May, 2004, as part of a Settlement and Amended Plan of Reorganization which was adopted by the U.S. Bankruptcy Court, ACMI Corporation was officially declared to be the legitimate owner, free and clear of the 3,000,000 shares of Bovie common stock, together with the demand registration rights for the shares.

Recent Developments

In September 2004, ACMI Corporation privately sold the 3,000,000 shares to a limited number of sophisticated accredited investors who are identified in this prospectus as "selling stockholders." As part of the sale, ACMI Corporation assigned the demand registration rights to the selling stockholders and ACMI agreed to pay future registration expenses up to a maximum of $60,000 and if such expenses exceed that amount, such additional expenses of registration of the shares will be borne by the selling stockholders, pro-rata. Shortly after completion of the sale by ACMI Corporation, the selling stockholders exercised their registration rights and demanded that we file the registration statement with the SEC covering the 3,000,000 shares of common stock and this prospectus constitutes an important part of the registration statement. See "Selling Stockholders" and "Plan of Distribution" for more information regarding the selling stockholders and the sale of shares pursuant to this prospectus.

USE OF PROCEEDS

We will not receive any proceeds from the sale by the selling stockholders of the common stock offered by this prospectus. The selling stockholder will receive all of the net proceeds (net of any sales commissions). Our expenses are being paid by ACMI and, if necessary, the selling stockholders, pro-rata.

DIVIDEND POLICY

We have never paid cash dividends on our common stock. We currently intend to retain earnings for use in our business and do not anticipate paying any cash dividend on our common stock in the foreseeable future. Any future declaration and payment of dividends on our common stock will be subject to the discretion of our board of directors, will be subject to applicable law and will depend on our results of operations, earnings, financial condition, contractual limitations, cash requirements, future prospects and other factors deemed relevant by our Board of Directors.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 40,000,000 shares of common stock, $0.001 par value per share, and 10,000,000 shares of preferred stock, $0.001 par value per share.

The following is a summary of the material terms of our common stock and preferred stock. Please see our certificate of incorporation for more detailed information.

Common Stock

The holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. Holders of a majority of the shares of common stock entitled to vote in any election of directors may elect all of the directors standing for election. Subject to preferences applicable to any outstanding preferred stock,, holders of common stock are entitled to receive ratably any dividends declared by the Board of Directors out of funds which are legally available for distribution to stockholders. See “Dividend Policy.” In the event of a liquidation, dissolution or winding up of Bovie, holders of common stock are entitled to share ratably in the assets remaining after payment of liabilities and the liquidation preferences of any outstanding preferred stock. Holders of our common stock have no preemptive, conversion or redemption rights.

Registration Rights

Under our agreement with the selling stockholders, we agreed to file with the Commission a shelf registration statement covering the resale of shares of Bovie common stock issued to the selling stockholders to be sold from time-to-time by the selling stockholders. Other terms of our agreement with respect to the registration of the shares are set forth under the caption “Plan of Distribution” below.

Preferred Stock

In addition, pursuant to our Certificate of Incorporation, the Board has authority to issue up to 10,000,000 shares of preferred stock and to fix the rights, preferences, privileges and restrictions, including voting rights, of these shares without any further vote or action by the stockholders. The rights of the holders of the common stock will be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire a majority of the outstanding voting stock of the company, thereby delaying, deferring or preventing a change in control of the company. Furthermore, such preferred stock may have other rights, including economic rights, senior to the common stock, and as a result, the issuance of such preferred stock could have a material adverse effect on the common stockholders including the market price of the common stock.

These problems could discourage potential acquisition proposals and could delay or prevent a change in control of the company. Such provisions could diminish the opportunities for a stockholder to participate in tender offers, including tender offers at a price above the then current market price of the common stock. Such provisions also may inhibit fluctuations in the market price of the common stock that could result from takeover attempts.

As of the date of this prospectus, there have not been issued any shares of preferred stock nor is there any plan to do so as of this date.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Manhattan Transfer Registrar Co., 57 Eastwood Road, Miller Place, New York 11764.

SELLING STOCKHOLDERS

The shares of common stock offered hereby were acquired by the selling stockholders in connection with a private placement by ACMI Corporation, the former owner of 3,000,000 shares of Bovie common stock. The selling stockholders may each offer and sell all of their shares, from time to time, pursuant to this prospectus.

The following table sets forth the number of shares owned by each selling stockholder as of September 30, 2004, the amount offered and the percentage owned by the selling stockholders after the offering, assuming the sale of all shares offered by this prospectus. No estimate can be given as to the amount of shares owned by each selling stockholder after completion of this offering because each selling stockholder may offer and sell all, some or none of the shares. The shares offered by this prospectus may be offered from time to time by each selling stockholder named below:

Names of Selling Stockholders	Number of Shares Owned Prior to Offering	Number of Shares Offered Hereunder	% of Outstanding Shares Owned After Offering
The Frost National Bank FBO Renaissance US Growth Investment Trust PLC, Trust No. W00740100 Attn.: Russell Cleveland[3]	1,000,000	1,000,000	0.0%
The Frost National Bank FBO, Renaissance Capital Growth & Income Fund III, Inc., Trust No. W00740000 Attn.: Russell Cleveland[3]	300,000	300,000	0.0%
The Frost National Bank FBO, BFS US Special Opportunities Trust PLC, Trust No. W00118000 Attn.: Russell Cleveland[3]	1,000,000	1,000,000	0.0%
Jeffrey R. Kowski	30,000	30,000	0.0%
R&R Opportunity Fund, LP Attn.: John Bohrer[3]	60,000	60,000	0.0%
Michael R. Snow	100,000	50,000	0.72%
Cordillera Fund, L.P. Attn.: Stephen Carter and James P. Andrew[3]	100,000	100,000	0.0%

Names of Selling Stockholders	Number of Shares Owned Prior to Offering	Number of Shares Offered Hereunder	% of Outstanding Shares Owned After Offering
John A. Selzer	30,000	30,000	30,000
MidSouth Investor Fund LP[4] Attn.: L.O. Heidtke[3]	100,000	50,000	0.72%
Larry Hopfenspirger	143,300	30,000	1.03%
Kuekenhof Equity Fund, LP[4] Attn.: Michael C. James[3]	100,000	100,000	0.0%
Infinity Capital Partners, LP Attn.: Michael Feinsod[3]	100,000	100,000	0.0%
MFN, LLC[4] Attn.: Anthony Ottimo[3]	50,000	50,000	0.0%
Richard Molinsky	50,000	50,000	0.0%
Robert A. Melnick	20,000	20,000	0.0%
Gene Salkind	30,000	30,000	0.0%

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1. Assumes the sale, transfer or other disposition of all common stock offered pursuant to this prospectus by the selling stockholder.
2. Assumes 13,853,628 shares will be outstanding as of the termination of the offering and does not take I into account other issuances by our company for other reasons during the term of the offering.
3. Name of individual at the entity who has voting or investment control over the shares of common stock of Bovie.
4. This seller purchased its shares in the ordinary course of business; and at the time of such seller’s purchase of the securities being registered for resale, such seller had no agreements or understandings, directly or indirectly, with any person to distribute the securities.

PLAN OF DISTRIBUTION

The selling stockholders each may transfer, pledge, donate or assign the Common Stock to lenders or others and each of these persons and their transferees and successors in interest will be deemed to be a "selling stockholder" for purposes of this prospectus. The number of shares of Common Stock beneficially owned by a selling stockholder who transfers, pledges, donates or assigns Common Stock will decrease as and when he or it takes such actions. The plan of distribution for Common Stock sold under this prospectus will otherwise remain unchanged, except that the transferees, pledgees, donees or other successors will become selling stockholders hereunder.

Method of Sale

The Common Stock may be sold pursuant to this prospectus by a selling stockholder in any of the following ways:

The Common Stock may be sold through underwriters in one or more underwritten offerings on a firm commitment or best efforts basis.

The Common Stock may be sold through a broker or brokers. Transactions through broker-dealers may include block trades in which brokers or dealers will attempt to sell the Common Stock as agents but may position and resell the block as principal(s) to facilitate the transaction. The Common Stock may be sold through dealers or agents or to dealers acting as market makers.

The Common Stock may be sold on the American Stock Exchange on which the securities are listed or may be sold in private sales directly to purchasers.

A selling stockholder may enter into hedging transactions with third parties (including broker-dealers), and the third parties may engage in short sales of the Common Stock in the course of hedging the positions they assume with such selling stockholder, including, without limitation, in connection with distribution of the Common Stock by such third parties. In addition, the selling stockholder may sell short the Common Stock, and in such instances, this prospectus may be delivered in connection with such short sales and the Common Stock offered hereby may be used to cover such short sales. The selling stockholder may also enter into option or other transactions with third parties that involve the delivery of the Common Stock to the third parties, who may then resell or otherwise transfer such Common Stock.

The selling stockholder may also loan or pledge the Common Stock and the borrower or pledgee may sell the Common Stock as loaned or upon a default may sell or otherwise transfer the pledged Common Stock.

Common Stock covered by this prospectus, which qualifies for sale pursuant to Rule 144 of the Securities Exchange Act of 1933 may also be sold under Rule 144 rather than pursuant to this prospectus.

Each selling stockholder reserves the right to accept and, together with its or his agent from time to time, to reject, in whole or in part, any proposed purchase of Common Stock to be made directly or through agents.

Timing and Price

The Common Stock may be sold from time to time by a selling stockholder. There is no assurance that any selling stockholder will sell or dispose of Common Stock.

Selling stockholders will be subject to applicable provisions of the Securities Exchange Act of 1934 and the SEC rules and regulations under that Act, and such provisions may limit the timing of purchases and sales of our securities by them.

Common Stock may be sold at a fixed price, which may be changed, or at varying prices determined at the time of sale or at negotiated prices. Such prices will be determined by the holders of the Common Stock or by agreement between such holders and purchasers or underwriters and/or dealers (who may receive fees or commissions in connection with the sales).

Proceeds, Commissions and Expenses

We will not receive any of the proceeds from this offering.

The selling stockholder will be responsible for payment of all commissions, concessions and discounts of underwriters, dealers or agents, if any.

We are being reimbursed up to $60,000 by ACMI Corporation (which sold the shares to the selling stockholders) and, if expenses exceed that amount, then by the selling stockholders for all further costs of the registration of the securities, including, without limitation, SEC filing fees and expenses of compliance with state securities or "blue sky" laws.

The selling stockholder and any broker-dealers or agents that participate with the selling stockholders in the distribution of the Common Stock may be deemed to be "underwriters" within the meaning of the Securities Act, and any commissions received by them and any profit on the resale of the Common Stock may be deemed to be underwriting commissions or discounts under the Securities Act.

Registration of the Common Stock

We agreed with the selling stockholders to keep the registration statement, of which this prospectus is a part, effective until the earlier of:

The expiration of two (2) years from the date hereof;

Such time as all of the shares offered by this prospectus have been sold by the selling stockholders;

Such time as all of the shares have been otherwise transferred to persons who may trade such shares without restriction under the Securities Act; or

Such time as the selling stockholders may sell all of the shares held by them without registration pursuant to Rule 144 under the Securities Act.

We intend to de-register any of the shares not sold by the selling stockholders at the end of such period. At such time, however, any unsold shares may be otherwise freely tradable subject to compliance with Rule 144 under the Securities Act.

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LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Sierchio Greco & Greco, LLP. As of November 15, 2004, Alfred V. Greco, a principal of Alfred V. Greco PLLC, a partner of Sierchio Greco & Greco, LLP, beneficially owned an aggregate of 381,500 shares of our common stock, inclusive of options. Mr. Greco is also a director of our Company.

EXPERTS

The consolidated financial statements and the related consolidated financial statement schedules incorporated in this prospectus by reference from the Company's Annual Report on Form l0-KSB for the year ended December 31, 2004 have been audited by Bloom & Company LLP, independent auditors, as stated in their report, which is incorporated herein by reference, and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's public Reference Room at 450 Fifth Street, N.W., Washington, D.C. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. Our SEC filings are also available to the public from the SEC's website at http://www.sec.gov. Our common stock is listed on the American Stock Exchange or AMEX, under the symbol "BVX" and all reports, proxy statements and other information filed by us with the AMEX may be inspected at the AMEX's offices at 86 Trinity Place, New York, New York 10005. You may find additional information about us and our subsidiaries at http://www.boviemedical.com. The information on our website is not a part of this prospectus.

We incorporate by reference into this prospectus the documents listed below and any future filings we make with the SEC under Section 13(a), 13(c) 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") (other than information in such future filings deemed, under SEC rules, not to have been filed), after the date of this prospectus and until the selling stockholders have sold all of the common stock to which this prospectus relates or this offering is otherwise terminated.

- Our Registration Statement on Form 8-A 12B filed with the SEC on November 3 2003;
- Our Current Report on Form 8-K filed with the SEC on October 4 2004;
- Our Current Report on Form 8K filed with the SEC on December 30 2004; and
- Our Annual Report on Form 10KSB for the year ended December 31 2004 filed with the SEC on March 31 2005.

The information incorporated by reference in this prospectus is an important part of this prospectus. Any statement in a document incorporated by reference in this prospectus will be deemed to be modified or superseded to the extent a statement contained in this prospectus or any other subsequently filed document that is incorporated by reference in this prospectus modifies or supersedes such statement.

Upon request, Bovie will provide, free of charge, to each person to whom a prospectus is delivered, including a beneficial owner, a copy of any or all information that has been incorporated by reference in the prospectus but not delivered with the prospectus. Any such request may be made orally or in writing to Bovie Medical Corporation, 7100 30th Avenue North, St. Petersburg, Florida 33710, Attention: Charles Peabody, Secretary, Tel. No.: (727) 384-2323.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth the fees and expenses in connection with the issuance and distribution of the securities being registered hereunder. Except for the SEC registration fee, all amounts are estimates.

SEC registration fee	$950
Accounting fees and expenses	$25,000
Legal fees and expenses	$85,000
Printing and engraving expenses	$5,000
Miscellaneous expenses	$4,000
Total	$120,000

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 145 of the Delaware General Corporation Law ("DGCL") permits indemnification of officers, directors and other corporate agents under certain circumstances and subject to certain limitations. The Registrant's Certificate of Incorporation and Bylaws provided that the Registrant shall indemnify its directors, officers, employees and agents to the full extent permitted by the DGCL, including in circumstances in which indemnification is otherwise discretionary under such law. In addition, with the approval of the Board of Directors and the stockholders, the Registrant has entered into separate indemnification agreements with its directors, officers and certain employees which require the Registrant, among other things, to indemnify them against certain liabilities which may arise by reason of their status or service (other than liabilities arising from willful misconduct of a culpable nature) and to obtain directors' and officers' insurance, if available on reasonable terms.

These indemnification provisions may be sufficiently broad to permit indemnification of the Registrant's officers, directors and other corporate agents for liabilities (including reimbursement of expenses incurred) arising under the Securities Act of 1933.

There is no pending litigation or proceeding involving a director, officer, employee or other agent of the Registrant in which indemnification is being sought nor is the Registrant aware of any threatened litigation that may result in a claim for indemnification by any director, officer, employee or other agent of the Registrant.

The Registrant has obtained liability insurance for the benefit of its directors and officers.

ITEM 16. EXHIBITS

The following documents are filed as part of this Registration Statement:

Exhibit Number	Description
4.1+	Stock Certificate of Bovie
4.2+	Registration Rights Agreement dated May 8, 1998 between Maxxim Medical, Inc. and An-Con Genetics, Inc.
4.3+	Assignment of Registration Rights between Bovie Medical Corporation and Buyers of shares of Bovie Medical Corporation Common Stock dated September, 2004
5	Opinion of Sierchio Greco & Greco LLP
10.1+	Common Stock Purchase Agreement dated as of September 24, 2004, among ACMI Corporation and selling stockholders
23.1	Consent of Sierchio Greco & Greco LLP (contained in Exhibit 5)
23.2	Consent of Bloom & Company, Independent Auditors
24+	Power of Attorney (contained in the signature page hereof)
99.1+	Agreement between Arthrex, Inc. and Bovie Medical Corporation dated June, 2002.

+ Previously filed.

ITEM 17. UNDERTAKINGS

Insofar as indemnification by the Registrant for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions referenced in Item 15 of this Registration Statement 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 hereunder, 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 in 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.

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 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. 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 a 20% 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.

(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 section 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.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in the form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective; and

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial bona fide offering thereof.

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-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Melville, State of New York on April 25, 2005.

BOVIE MEDICAL CORPORATION

By:/S/ Andrew Makrides_____
Andrew Makrides
President, Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 2 to Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Name	Title	Date
/S/ Andrew Makrides_ Andrew Makrides	President, Chief Executive Officer, Director, (Principal Executive Officer)	April 25, 2005
/S/ Charles Peabody*_ Charles Peabody	Vice President of Finance, Secretary, (Principal Financial Officer)	April 25, 2005
/S/George W. Kromer*_ George W. Kromer	Director	April 25, 2005
/S/ Alfred V. Greco*__ Alfred V. Greco	Director	April 25, 2005
/S/ J. Robert Saron____	Director	April 25, 2005
/S/Michael Norman* Michael Norman	Director	April 25, 2005
/S/ Randy Rossi*____ Randy Rossi	Director	April 25, 2005
/S/ Brian H. Madden* Brian H. Madden	Director	April 25, 2005

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* Signed on behalf of the named party by Andrew Makrides, attorney in fact.

INDEX TO EXHIBITS

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4.2	Registration Rights Agreement dated May 8, 1998 between Maxxim Medical, Inc. and An-Con Genetics, Inc.[1]
4.3	Assignment of Registration Rights between Bovie Medical Corporation and Buyers of shares of Bovie Medical Corporation Common Stock dated September, 2004[1]
5	Opinion of Sierchio Greco & Greco LLP[2]
23.1	Consent of Sierchio Greco & Greco LLP (contained in Exhibit 5)[2]
23.2	Consent of Bloom & Company, LLP Independent Auditors[2]
24	Power of Attorney (contained on the signature page of the Registration Statement)[1]
99.1	Agreement between Arthrex, Inc. and Bovie Medical Corporation dated June, 2002.[3]

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1. Previously filed.
2. Filed herewith.
3. We previously filed this Agreement which is the subject of an application for confidential treatment with confidential portions deleted and set apart by asterisks.