

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

**SCHEDULE 14A
(Rule 14a-101)**

**Proxy Statement Pursuant To Section 14(a) Of
The Securities Exchange Act Of 1934**

Filed by the Registrant [X]

Filed by a Party other than the Registrant []

Check the appropriate box:

- [] Preliminary Proxy Statement
- [] Confidential, for Use of the Commissions Only (as permitted by Rule 14a-6(e)(2))
- [X] Definitive Proxy Statement
- [] Definitive Additional Materials
- [] Soliciting Material Pursuant to Section 240.14a-12

BOVIE MEDICAL CORPORATION

(Name of Registrant as Specified in its Charter)

-

N/A

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of filing fee (Check the appropriate box):

- [X] No fee required.
 - [] Fee computed on table below per Exchange Act Rules 14a-6(i)(4) and 0-11.
 - (1) Title of each class of securities to which transaction applies:
 - (2) Aggregate number of securities to which transaction applies:
 - (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount which the filing fee is calculated and state how it was determined):
 - (4) Proposed maximum aggregate value of transaction:
 - (5) Total fee paid:
 - [] Fee paid previously with preliminary materials.
 - [] Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11 (a)(2) and identify the filing for which the offset was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing:
 - (1) Amount previously paid:
 - (2) Form, Schedule or Registration Statement No.:
 - (3) Filing Party:
 - (4) Date Filed:
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BOVIE MEDICAL CORPORATION
734 Walt Whitman Road, Suite #207
Melville, NY 11747

December 9, 2010

NOTICE OF 2010 ANNUAL MEETING OF STOCKHOLDERS

Dear Stockholder:

On behalf of your Board of Directors of Bovie Medical Corporation (the "Company"), you are cordially invited to attend the 2010 Annual Meeting of Stockholders to be held on December 9, 2010 at 3PM Eastern Standard Time at the Company's facility located at 5115 Ulmerton Road, Clearwater, Florida 33760, Telephone No. 727-384-2323.

Information Concerning Solicitation and Voting

The Board of Directors is soliciting proxies for the 2010 Annual Meeting of Stockholders to be held on December 9, 2010. This Proxy Statement contains information for you to consider when deciding how to vote on the matters brought before the meeting.

Voting materials, which include the Proxy Statement, Proxy Card and the 2009 Annual Report, are being mailed to stockholders on or about November 1, 2010. The executive facilities of our Company are located at 734 Walt Whitman Road, Suite 207, Melville, NY 11747, telephone number 631-421-5452.

At the meeting, stockholders will be asked to:

1. Elect eight (8) directors to the Board of Directors of the Company to serve until the 2011 Annual Meeting of Stockholders;
2. Ratify the appointment of Kingery & Crouse PA as independent auditors for the Company for the fiscal year ending December 31, 2010; and
3. Transact such other business that may properly come before the meeting.

All stockholders are invited to attend the meeting. The close of business on October 27, 2010 is the record date for determining stockholders entitled to vote at the Annual Meeting. Consequently, only stockholders whose names appear on our books as owning our Common Stock at the close of business on October 27, 2010 will be entitled to notice of, and to vote at, the Annual Meeting and adjournment or postponement thereof.

Your vote is important to us. Please complete, sign, date and promptly return the proxy in the enclosed envelope, so that your shares will be represented whether or not you attend the annual meeting. Returning a proxy will not deprive you of your right to attend the meeting and vote your shares in person.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE STOCKHOLDER MEETING TO BE HELD DECEMBER 9, 2010:

THIS NOTICE OF ANNUAL MEETING, PROXY STATEMENT, PROXY CARD AND REPORT ON FORM 10-K FOR THE PERIOD ENDING DECEMBER 31, 2009 IS AVAILABLE AT www.boviemed.com. CLICK ON THE BUTTON "Investor Relations".

By order of the Board of Directors

/s/ Andrew Makrides
CHAIRMAN AND CHIEF EXECUTIVE OFFICER

October 29, 2010
Melville, New York

PROXY STATEMENT
BOVIE MEDICAL CORPORATION

Information Concerning Solicitation and Voting

Our Board of Directors is soliciting proxies for the 2010 Annual Meeting of Stockholders to be held at 3PM Eastern Standard Time on December 9, 2010. This Proxy Statement contains important information for you to consider when deciding how to vote on the matters brought before the meeting.

Voting materials, which include the Proxy Statement, Proxy Card and the 2009 Annual Report, are being mailed to stockholders on or about November 1, 2010. The executive facilities of our Company are located at 734 Walt Whitman Road, Suite 207, Melville, NY 11747.

Bovie will bear the expense of soliciting proxies. Management estimates that the cost of solicitation of proxies will be approximately \$25,000 to be incurred solely by Bovie. We will reimburse banks, brokers and other custodians, nominees and fiduciaries for reasonable charges and expenses incurred in forwarding soliciting materials to their clients.

ABOUT THE ANNUAL MEETING

WHO IS SOLICITATING YOUR VOTE?

The Board of Directors of Bovie Medical Corporation (the "Company") is soliciting your vote at the 2010 Annual Meeting of Bovie's common stockholders being held at 3PM Eastern Standard Time on December 9, 2010 at the Company's facility located at 5115 Ulmerton Road, Clearwater, Florida 33760, Telephone No. 727-384-2323.

WHAT WILL YOU BE VOTING ON?

Election of eight (8) directors to the Board of Directors; Ratification of Kingery & Crouse, PA, as Bovie's auditors for the fiscal year ending December 31, 2010 and any other matters which may properly come before the meeting.

HOW MANY VOTES DO STOCKHOLDERS HAVE?

You will have one vote for every share of the Company's common stock you owned of record on October 27, 2010 (the "Record Date").

HOW MANY VOTES CAN BE CAST BY ALL COMMON STOCKHOLDERS?

One vote for each of the Company's outstanding shares of common stock which were outstanding on the Record Date. The common stock will vote as a single class on all matters scheduled to be voted on at the Annual Meeting. There is no cumulative voting.

HOW MANY VOTES MUST BE PRESENT TO HOLD THE MEETING?

A majority of the outstanding shares of common stock entitled to vote represented in person or by proxy constitute a quorum. Abstentions and broker non-votes will count for purposes of determining whether a quorum exists, but not for voting purposes.

HOW MAY I VOTE MY SHARES?

You can vote either in person at the Annual Meeting or by proxy without attending the Annual Meeting. We urge you to vote by proxy even if you plan to attend the Annual Meeting so that we will know as soon as possible that enough votes will be present for us to hold the meeting.

(a) How may I vote my shares in person at the meeting?

If your shares are registered directly in your name with our transfer agent, Manhattan Transfer Registrar Co., on the Record Date, you are considered, with respect to those shares, the stockholder of record, and the proxy materials and proxy card are being sent directly to you by the Company. As the stockholder of record, you have the right to vote in person at the meeting. If your shares are held in a brokerage account or by another nominee, you are considered the beneficial owner of shares held in street name, and the proxy materials are being forwarded to you together with a voting instruction card. As the beneficial owner, you are also invited to attend the Annual Meeting. Since you are a beneficial owner and not the stockholder of record, you may not vote these shares in person at the meeting unless you obtain a "legal proxy" from the broker, trustee or nominee that holds your shares in its name, giving you the right to vote the shares at the meeting.

(b) How can I vote my shares without attending the meeting?

Whether you hold shares directly as a registered stockholder of record or beneficially in street name, you may vote without attending the meeting. You may vote by granting a proxy or, for shares held in street name, by submitting voting instructions to your broker or nominee. In most cases, you will be able to do this by telephone, by using the internet or by mail. Please refer to the summary instructions included with proxy materials and on your proxy card. For shares held in street name, the voting instruction card will be included in the materials forwarded by the broker or nominee. If you have telephone or internet access, you may submit your proxy by following the instructions with your proxy materials and on your proxy card. You may submit your proxy by mail by signing your proxy card or, for shares held in street name, by following the voting instructions with your proxy materials and on your proxy card. You may submit your proxy by mail by signing your proxy card or, for shares held in street name, by following the voting instruction card included in the materials forwarded by your stockbroker or nominee and mailing it in the enclosed, postage paid envelope. If you provide specific voting instructions, your shares will be voted as you have instructed.

CAN YOU CHANGE YOUR VOTE?

(a) Can a stockholder change his vote?

Yes. Any registered stockholder who voted by proxy or in person may change his or her vote at any time before recording the votes on the date of the Annual Meeting.

(b) How can I change my vote after I return my proxy card?

Provided you are the stockholder of record or have legal proxy from your nominee, you may revoke your proxy and change your vote at any time before the final vote at the meeting. You may do this by signing and submitting a new proxy card bearing a later date, or by attending the meeting and voting in person. Attending the meeting will not revoke your proxy unless you specifically request it.

WHAT IF YOU DO NOT VOTE FOR SOME OF THE MATTERS LISTED ON YOUR PROXY?

If you return a signed proxy without indicating your vote for some or all of the proposals, your shares will be voted "FOR" the Board's nominees for director, "FOR" the ratification of the appointment of Kingery & Crouse, PA and in the proxy holder's best judgment as to any other matters raised at the Annual Meeting.

WHAT IF YOU VOTE "ABSTAIN"?

A vote to "abstain" on any matter indicates that your shares will not be voted for such matter and will have the effect of a vote against the proposal.

CAN YOUR SHARES BE VOTED IF YOU DO NOT RETURN YOUR PROXY AND DO NOT ATTEND THE ANNUAL MEETING?

A broker non-vote occurs when a nominee holding shares for a beneficial owner does not vote on a particular proposal because the nominee does not have discretionary voting power for that particular item, and has not received instructions from the beneficial owner. Broker non-votes count for quorum purposes but not for voting purposes.

If you do not attend and vote your shares which are registered in your name or if you do not otherwise fill out the proxy card and vote by proxy, your shares will not be voted.

WHAT HAPPENS IF THE MEETING IS POSTPONED OR ADJOURNED?

Your proxy will still be valid and may be voted at the postponed or adjourned meeting. You will still be able to change or revoke your proxy until it is actually voted.

WHAT IS HOUSEHOLDING OF ANNUAL MEETING MATERIALS?

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statement and annual reports. This means that only one copy of our proxy statement and annual report to Stockholders may have been sent to multiple Stockholders in your household. We will promptly deliver a separate copy of either document to you if you contact the Secretary at the following address or telephone number: 5115 Ulmerton Road, Clearwater, Florida 33760, Telephone No. 727-384-2323. If you want to receive separate copies of the proxy statement or the annual report to Stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker or other nominee record holder, or you may contact the Company at the above address or telephone number.

DO STOCKHOLDERS HAVE DISSENTER'S RIGHTS?

Stockholders are not entitled to dissenter's rights of appraisal with respect to the proposals being voted on.

PROPOSAL ONE

ELECTION OF DIRECTORS AND MANAGEMENT INFORMATION

The Governance and Nominating Committee has nominated eight persons consisting of Andrew Makrides, J. Robert Saron, Michael Norman, George W. Kromer, Jr., August Lentricchia, Steven MacLaren, Peter Pardoll and Gregory Konesky, each a current Director, for re-election to the Board of Directors. Each director serves from the date of his or her election until the next annual meeting of stockholders and until his successor is duly elected and qualified. The accompanying proxy card will be voted in favor of the persons named above to serve as directors, unless the Stockholder indicates to the contrary on the proxy card. See "Information Regarding Executive Officers and Directors" for biographical information as to each nominee.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT YOU VOTE "FOR" THIS PROPOSAL 1 TO ELECT AS DIRECTORS THE EIGHT NOMINEES PROPOSED BY THE GOVERNANCE AND NOMINATING COMMITTEE OF THE BOARD OF DIRECTORS.

Information Regarding our Board of Directors

Our Certificate of Incorporation and Bylaws provide for our Company to be managed by or under the direction of the Board of Directors. Under our Certificate of Incorporation and Bylaws, the number of directors is fixed from time to time by the Board of Directors. The maximum number of directors is currently fixed at nine, and the number of directors serving on the Board is currently eight. Due to a recent vacancy, our Board of Directors currently consists of eight directors, five of which have been determined to be "independent" as defined by the applicable rules of the NYSE Amex Market and the Securities and Exchange Commission. These "independent" directors are Michael Norman, August Lentricchia, Steven MacLaren, Dr. Peter Pardoll, and Gregory Konesky. Our Common Stock is listed on the NYSE Amex Market.

The primary responsibilities of our Board of Directors are to provide oversight, strategic guidance, counseling and direction to our management. Our Board of Directors meets on a regular basis and additionally as required. Written or electronic materials are distributed in advance of meetings as a general rule and our Board of Directors schedules meetings with, and presentations from, members of our senior management on a regular basis and as required.

Directors are elected at the Annual Meeting of Stockholders and hold office until our next Annual Meeting and until their successors are elected and qualified. Officers are appointed by the Board of Directors and serve at the pleasure of the Board of Directors.

The Board of Directors held six (6) meetings during the 2009 fiscal year. All of the directors attended 100% of the meetings of the Board of Directors and of the committees on which they served except one director who attended five (5) meetings of the Board of Directors. While we encourage all members of the Board of Directors to attend Annual Meetings of Stockholders, there is no formal policy as to their attendance.

Legal Proceedings Involving Directors

There were no legal proceedings involving the nominees to the Board of Directors in the past ten years.

Board Leadership

The Board has no formal policy with respect to separation of the positions of Chairman and CEO or with respect to whether the Chairman should be a member of management or an independent director, and believes that these are matters that should be discussed and determined by the Board from time to time. Currently, Andrew Makrides serves as our Chairman and CEO. Given the fact that Mr. Makrides, in his capacity as our CEO is tasked with the responsibility of implementing our corporate strategy, we believe he is best suited for leading discussions, at the Board level, regarding performance relative to our corporate strategy, and this discussion accounts for a significant portion of the time devoted at our Board meetings.

Risk Management

The Board believes that risk management is an important component of the Company's corporate strategy. While we assess specific risks at our committee levels, the Board, as a whole, oversees our risk management process, and discusses and reviews with management major policies with respect to risk assessment and risk management. The Board is regularly informed through its interactions with management and committee reports about risks we face in the course of our business. Finally, the Board believes the combined Chairman and CEO role assists us in our implementation of major policies addressing our risks.

INFORMATION REGARDING EXECUTIVE OFFICERS AND DIRECTORS

The following table sets forth the names, ages and positions within the Company of each of our directors and executive officers.

<u>Name of Nominee</u>	<u>Age</u>	<u>Independent</u>	<u>Position</u>
Andrew Makrides	68	No	Chairman of the Board, President and CEO
J. Robert Saron	57	No	Chief Sales and Marketing Officer, Director
George Kromer	69	No	Research Analyst and Director
Michael Norman	52	Yes	Director
August Lentricchia	55	Yes	Director
Moshe Citronowicz	57	No	Executive Vice President and Chief Operating Officer
Gary D. Pickett	59	No	Chief Financial Officer, Treasurer and Secretary
Steven MacLaren	40	Yes	Director
Peter Pardoll	63	Yes	Director
Gregory Konesky	56	Yes	Director
Leonard Keen	53	No	Vice President and General Counsel
Jeff Rencher	43	No	Vice President Sales and Marketing

Andrew Makrides, Esq., age 68, Chairman of the Board and President, member of the Board of Directors, received a Bachelor of Arts degree in Psychology from Hofstra University and a Juris Doctor Degree from Brooklyn Law School. He is a member of the Bar of the State of New York and practiced law from 1968 until joining Bovie Medical Corporation as a co-founder and Executive Vice President and director, in 1982. Mr. Makrides became President of the Company in 1985 and the CEO in December 1998 and has served as such to date. Mr. Makrides qualifications to serve as a director include over 28 years of knowledge and experience in the medical industry and his focus on customer, employee and stockholder relationships.

J. Robert Saron, age 57, Director, holds a Bachelor degree in Social and Behavioral Science from the University of South Florida. From 1988 to present Mr. Saron has served as a director of the Company. Mr. Saron previously served as CEO and Chairman of the Board of the Company from 1994 to December 1998 and is currently the Chief Sales and Marketing Officer. Mr. Saron also serves on two industry boards, as a director on the Health Industry Distributors Association Education Foundation and as President of the Health Care Manufacturing Marketing Council. Mr. Saron's qualifications to serve as a director include over 22 years of experience in marketing and distribution in the medical industry as well as management experience in financial and operational matters.

George Kromer, Jr., age 69, became a director on October 1, 1995. On January 1, 2006 Mr. Kromer accepted an employment position with Bovie Medical Corporation as research analyst for the company in which he still maintains his capacity as a director. Mr. Kromer had been writing for business publications since 1980. In 1976, he received a Master's Degree in health administration from Long Island University. He was engaged as a Senior Hospital Care Investigator for the City of New York Health & Hospital Corporation from 1966 to 1986. He also holds a Bachelor of Science Degree from Long Island University's Brooklyn Campus and an Associate in Applied Science Degree from New York City Community College, Brooklyn, New York. Mr. Kromer's qualifications to serve as a director include over 30 years of business analyst experience with a specialty in the medical industry.

Moshe Citronowicz, age 57, is a graduate of the University of Be'er Sheva, Be'er Sheva, Israel, with a Bachelor of Science Degree in electrical engineering. Since coming to the United States in 1978, Mr. Citronowicz has worked in a variety of manufacturing and high technology industries. In October 1993, Mr. Citronowicz joined the Company as Vice President of Operations. He is responsible for all areas of manufacturing, purchasing, product redesign, as well as new product design. In September 1997, Mr. Citronowicz was appointed by the Board of Directors to the position of Executive Vice President and Chief Operating Officer.

Gary D. Pickett, CPA, age 59, holds an MBA from the University of Tampa, a BS degree in Accounting from Florida State University, and served five years as a field artillery officer in the United States Army. Mr. Pickett joined as controller of Bovie in March 2006 and became Chief Financial Officer in October 2006. During the past five years, Mr. Pickett held positions of Director of Financial Systems with Progress Energy Services of Raleigh, NC, Vice President and Controller of Progress Rail Services, a subsidiary of Progress Energy Services in Albertville, AL, each of which were non-affiliated with Bovie. He has had extensive experience in Sarbanes-Oxley implementation as well as GAAP accounting and SEC Reporting.

Michael Norman, CPA age 52, joined Bovie in 2004. He manages the CPA firm, Michael Norman, CPA, PC since 1994 specializing in business financial planning as well as governmental and financial auditing. Mr. Norman is a member of the Nassau County Board of Assessors, Treasurer of the Don Monti Memorial Research Foundation and a Glen Cove City Councilman, all located on Long Island, New York. Mr. Norman's qualifications to serve as a director include over 20 years of experience as a certified public accountant and his qualification and designation to serve as our Audit Committee's financial expert.

August Lentricchia, age 55, is presently employed by Freedom Tax and Financial Services Bohemia as a Registered Representative since 2001. He is also licensed as a Registered Representative and investment consultant of HD Vest Investment Services, a non-bank subsidiary of Wells Fargo and Company. He has also served as an investment consultant for Citibank. He received a BA degree from the University of Arizona in 1977 and has received a Masters degree in Education from Dowling College in 2004. Mr. Lentricchia's qualifications to serve as a director include has over 25 years of financial and investment experience.

Steven MacLaren, age 40, joined Bovie as a director in April 2008. Mr. MacLaren is a 1991 graduate of The Ohio State University in Columbus, Ohio with a BSBA degree in accounting. He is currently the president and a shareholder of Ronin Consulting Group, Inc. of Belleair Bluffs, Florida, which he started in February 2004 and which has provided consulting services for Bovie Medical since August 2005. Previous to this he served as the CFO and a technical currency trader of Capital Management Group, LLC, an investment company located in Naples, FL from November 2001 through February 2004. Mr. MacLaren has a history with the Company as he also served as Bovie Medical's Controller from November 1996 through October 2001. Mr. MacLaren serves as the Chairman of our Compensation Committee and the Nominating Committee. Mr. MacLaren qualifications to serve as a director include approximately 20 years of business and financial experience and his knowledge and understanding of operational matters.

Dr. Peter Pardoll, age 63, joined Bovie as a director in April 2009 and is board certified in Internal Medicine and Gastroenterology. He attended Emory University for undergraduate studies and graduated with honors from the Medical College of Virginia in 1971. Dr. Pardoll then completed three years internal medicine training at the University of Miami Affiliated Hospitals, and subsequently completed his GI fellowship at University of South Florida. He was the founding partner of the Center for Digestive Diseases ("CDD") in St. Petersburg, Florida. During his 28 years of practice, he established a successful clinical research division of CDD performing studies and research for major pharmaceutical companies. He developed techniques to educate physician colleagues on laser therapeutics in GI endoscopy, bronchoscopy and urology. Dr. Pardoll is the past president of the Florida GI Society. He has been elected a Master of the American College of Gastroenterology ("ACG") and was elected as a Trustee for a 6-year term to the ACG Board. He remains active with his national organizations and as a healthcare consultant. Dr. Pardoll's qualifications to serve as a director include over 28 years of experience as a practicing physician and scientific consultant.

Gregory A. Konesky, age 56, joined Bovie as a director in December 2009 and is a 1977 graduate of Polytechnic University Brooklyn, NY with a BSEE degree in computer science. He has been a scientific consultant to Bovie Medical Corporation for over 12 years. He is a member of the Bovie's Scientific Advisory Board and is Lead Scientist for the Company's J-Plasma technology. He has two patents granted and three pending, and has authored over 51 articles on a wide range of subjects including medical plasma technology, optical communications, astrobiology, and others. Mr. Konesky's qualifications to serve as a director include his service as a technical advisor to the investment community and his extensive technical and scientific background.

Leonard Keen, Esq., age 53, joined Bovie as Vice President & General Counsel in March 2010. Previously, Mr. Keen provided information technology, business and legal consulting services to the Company since 1999. Mr. Keen holds a JD degree, with Honors, from the University of Florida, Levin College of Law and a BS degree, *cum laude*, in chemistry from the University of Miami. Admitted to Florida state and federal courts, and a U.S. Registered Patent Attorney, Mr. Keen has served as a partner with the Atlanta intellectual property boutique law firm of Kaplan Ward & Patel, an associate with the Orlando intellectual property boutique law firm of Allen Dyer et al., and as a solo practitioner focusing on business law, intellectual property law and mergers and acquisitions. Mr. Keen also served as VP, Strategic & Legal Affairs and General Counsel at NCR Self-Service Travel (formerly Kinetics, Inc.). Mr. Keen is an adjunct professor for intellectual property and law courses at Seminole State College and Florida Institute of Technology, and a UCF Technology Incubator Excellence in Entrepreneurship panelist. Prior to entering the practice of law, Mr. Keen spent 20 years conducting biomedical research, working in the medical device and computer science fields, and serving as an information technology and operations executive in corporate settings.

Jeff Rencher, age 43, joined Bovie in April, 2010 as a sales and marketing consultant ,becoming V.P. of Sales and Marketing, Surgical Products in June 2010. Mr. Rencher has been employed in the medical device industry since 1993. Prior to joining Bovie, Mr. Rencher was employed by Opticor Medical, Inc. rising to V.P. of Sales and Marketing and Inlet Medical Inc., rising to Vice President-Sales. At each of these companies, Mr. Rencher built a national sales force, created marketing material, and generated new sales through the sales channels he has developed over his 17 years in the industry. Mr. Rencher holds a BS in Biology from Tulane University, an Emergency Medical Technician Certificate and has completed a course in Medical Industry Management at St. Thomas University in Minneapolis, MN.

COMMITTEES OF OUR BOARD OF DIRECTORS

We have a standing Audit Committee, Compensation Committee and Governance and Nominating Committee.

Audit Committee

The Audit Committee assists the full Board of Directors in its general oversight of our financial reporting, internal controls, and audit functions, and is directly responsible for the appointment, compensation and oversight of the work of our independent registered public

accounting firm. The Audit Committee reviews and discusses with management and our independent accountants the annual audited and quarterly financial statements, reviews the integrity of the financial reporting processes, both internal and external, reviews the qualifications, performance and independence of our independent accountants, and prepares the Audit Committee Report included in the Company's Annual Report on Form 10-K in accordance with rules and regulations of the Securities and Exchange Commission. The Audit Committee has the power to investigate any matter brought to its attention within the scope of its duties. It also has the authority to retain counsel and advisors to fulfill its responsibilities and duties. The Audit Committee also acts as a qualified legal compliance committee.

The members of our Audit Committee are Michael Norman CPA, Dr. Peter Pardoll and August Lentricchia. Our Board of Directors has determined that Messers Norman, Pardoll and Lentricchia are “independent” under Rule 10A-3(b) of the Securities Exchange Act of 1934, as amended, and the applicable rules of the NYSE Amex Exchange. Michael Norman serves as our Chairman and financial expert for the Committee. The Audit Committee meets as often as it determines necessary but not less frequently than once every fiscal quarter. During 2009, the Audit Committee held four (4) meetings.

A copy of the Audit Committee Charter will be provided to any person without charge upon written request to the Company’s address to the attention of the Secretary. A copy of the Audit Committee Charter is available www.boviemed.com. Select the “Investor Relations” button.

Governance and Nominating Committee

The Governance and Nominating Committee is responsible for matters relating to the corporate governance of our company and the nomination of members of the Board and committees thereof. Our Governance and Nominating Committee consists of four independent members of the Board of Directors, Steven MacLaren who serves as Chairman, Michael Norman CPA, August Lentricchia, and Dr. Peter Pardoll. The Governance and Nominating Committee meets as often as it determines necessary, but not less than once a year.

When considering whether directors and nominees have the experience, qualifications, attributes or skills, taken as a whole, to enable the Board of Directors to satisfy its oversight responsibilities effectively in light of the Company’s business and structure, the Governance and Nominating Committee focused primarily on each person’s background and experience as reflected in the information discussed in each of the directors’ individual biographies set forth immediately above. We believe that our directors provide an appropriate mix of experience and skills relevant to the size and nature of our business. As more specifically described in such person’s individual biographies set forth above, our directors possess relevant and industry-specific experience and knowledge in the medical, engineering and business fields, as the case may be, which we believe enhances the Board’s ability to oversee, evaluate and direct our overall corporate strategy. The Governance and Nominating Committee annually reviews and makes recommendations to the Board regarding the composition and size of the Board so that the Board consists of members with the proper expertise, skills, attributes, and personal and professional backgrounds needed by the Board, consistent with applicable regulatory requirements.

The Governance and Nominating Committee believes that all directors, including nominees, should possess the highest personal and professional ethics, integrity, and values, and be committed to representing the long-term interests of our stockholders. The Governance and Nominating Committee will consider criteria including the nominee’s current or recent experience as a senior executive officer, whether the nominee is independent, as that term is defined in existing independence requirements of the NYSE Amex Market and the Securities and Exchange Commission, the business, scientific or engineering experience currently desired on the Board, geography, the nominee’s industry experience, and the nominee’s general ability to enhance the overall composition of the Board.

The Governance and Nominating Committee does not have a formal policy on diversity; however, in recommending directors, the Board and the Committee consider the specific background and experience of the Board members and other personal attributes in an effort to provide a diverse mix of capabilities, contributions and viewpoints which the Board believes enables it to function effectively as the Board of Directors of a company with our size and nature of business.

During 2009, the Governance and Nominating Committee held two (2) meetings.

If a Stockholder wishes to nominate a candidate to be considered for election as a director at the 2011 Annual Meeting of Stockholders, he or she must submit nominations in accordance with the procedures set forth in "Stockholder Proposals For Next Annual Meeting." If a Stockholder wishes simply to propose a candidate for consideration as a nominee by the Governance and Nominating Committee, he or she should submit any pertinent information regarding the candidate to the members of the Governance and Nominating Committee of Bovie Medical Corporation, c/o Secretary, 5115 Ulmerton Road, Clearwater, Florida 33760.

A copy of the Governance and Nominating Committee Charter will be provided to any person without charge upon written request to the Company's address to the attention of the Secretary. A copy of the Governance and Nominating Committee Charter is available www.boviemed.com. Select the "Investor Relations" button.

Compensation Committee

The Compensation Committee is responsible for overseeing our compensation and employee benefit plans (including those involving the issuance of our equity securities) and practices, including formulating, evaluating, and approving the compensation of our executive officers and reviewing and recommending to the full Board of Directors the compensation of our Chief Executive Officer. With respect to executive officer compensation, the Compensation Committee receives recommendations and information from senior management. The Committee is also responsible for recommending the level of Board of Directors' compensation to the full Board of Directors. Our Compensation Committee consists of four independent members of the Board of Directors, Steven MacLaren who serves as Chairman, Michael Norman CPA, August Lentricchia, and Dr. Peter Pardoll. The Compensation Committee meets as often as it determines necessary, but not less than once a year.

During 2009, the Compensation Committee held one (1) meeting.

In 2009, the Compensation Committee did not engage any independent consultants.

A copy of the Compensation Committee Charter will be provided to any person without charge upon written request to the Company's address to the attention of the Secretary. A copy of the Compensation Committee Charter is available www.boviemed.com. Select the "Investor Relations" button.

The table below indicates the current membership of each committee and how many times the Board and each committee met in 2009:

	<u>Board</u>	<u>Audit</u>	<u>Governance and Nominating</u>	<u>Compensation</u>
Andrew Makrides	Chair			
J. Robert Saron	Member			
George Kromer	Member			
Michael Norman	Member	Chair*	Member	Member
August Lentricchia	Member		Member	Member
Steven MacLaren	Member		Chair	Chair
Peter Pardoll	Member	Member	Member	Member
Gregory Konesky	Member			
Number of Meetings	6	4	2	1

*Mr. Norman has also been designated the Audit Committee's financial expert.

Stockholder Communications

The Board of Directors provides a process by which Stockholders may communicate with the Board, including our independent directors. Stockholders who wish to communicate with the Board may do so by sending written communications addressed to any director or the entire Board of Directors of Bovie Medical Corporation, c/o Secretary, 734 Walt Whitman Road, Melville, NY 11747. All mail received at the above address that is addressed to the Board of Directors or any individual director will be relayed by the Company to the Board of Directors or individual director. On a periodic basis, all such communications will be compiled by the Secretary and submitted to the Board of Directors or the individual director whom the communications are addressed.

Code of Ethics

On March 30, 2004, Bovie adopted an executive employee ethics code.

A copy of the code of ethics which expressly relates to the CEO and CFO will be provided without charge to any person upon request to Bovie Medical Corporation, 734 Walt Whitman Road, Melville, NY 11747, Attn: Andrew Makrides.

COMPENSATION DISCUSSION AND ANALYSIS

General Compensation Philosophy

The primary objective of our compensation program for employees, including our compensation program for executive officers, is to attract, retain, and motivate qualified individuals and reward them in a manner that is fair to all stockholders. We strive to provide incentives for every employee that rewards them for their contribution to the Company.

Our compensation program is designed to be competitive with other employment opportunities and to align the interests of all employees, including executive officers, with the long-term interests of our stockholders. Historically, for our executive officers, we link a much higher percentage of total compensation to incentive compensation such as stock based compensation than we do for other employees; however, this has not been the case over the last few years as few executive officers have received incentive-based compensation.

With these objectives in mind, our Board has built executive and non-executive compensation programs that consists of two principal elements - Base Salary and grants of stock options and/or shares of restricted stock.

Compensation Program and Elements of Compensation

Base Salary

Bovie pays base salaries to its Named Executive Officers (as defined below) in order to provide a consistent, minimum level of pay that sustained individual performance warrants. The Company also believes that a competitive annual base salary is important to attract and retain an appropriate caliber of talent for each position over time.

The annual base salaries of our Named Executive Officers are determined by its Compensation Committee and approved by the Board of Directors. All salary decisions are based on each Named Executive Officer's level of responsibility, experience and recent and past performance, as determined by the Compensation Committee. The Compensation Committee does not benchmark its base salaries in any way, nor do they presently employ the services of a compensation consultant.

Stock Options

The second component of executive compensation is equity grants which have mainly come in the form of stock options. Bovie believes that equity ownership in the Company is important to provide its Named Executive Officers with long-term incentives to better align interests of executives with the interests of stockholders and build value for Bovie stockholders. In addition, the equity compensation is designed to attract and retain the executive management team. Stock options have value only if the stock price increases over time and, therefore, provide executives with an incentive to build Bovie's value. This characteristic ensures that the Named Executive Officers have a meaningful portion of their compensation tied to future stock price increases and rewards management for long-term strategic planning through the resulting enhancement of the stock price.

Stock option awards to Named Executive Officers are entirely discretionary. The CEO and COO recommend to the Compensation Committee which individuals should be awarded stock options. The Compensation Committee considers the prior contribution of these individuals and their expected future contributions to the growth of Bovie then formulates and presents the recommended allocation of stock option awards to the Board of Directors for approval. The Board of Directors approves or, if necessary, modifies the Committee's recommendations.

Perquisites and Other Benefits

Bovie's Named Executive Officers are eligible for the same health and welfare programs and benefits as the rest of its employees in their respective locations. In addition, Bovie's CEO, COO, and Chief Sales and Marketing Officer each receive an automobile allowance of approximately \$6,300 per year.

Bovie's Named Executive Officers are entitled to participate in and receive employer contributions to Bovie's 401(k) Savings Plan. However, during January of 2009 management made the decision to suspend the employer 401(k) match for 2009. For more information on employer contributions to the 401(k) Savings Plan see the Summary Compensation Table and its footnotes.

Tax and Accounting Considerations

Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"), places a limit of \$1,000,000 on the amount of compensation that we may deduct as a business expense in any year with respect to each of our most highly paid executives unless, among other things, such compensation is performance-based and has been approved by stockholders. The non-performance-based compensation paid to our executive officers for the 2009 fiscal year did not exceed the \$1 million limit per executive officer. Accounting considerations also play an important role in the design of our executive compensation program. Accounting rules such as FAS 123R require us to expense the cost of our stock option grants which reduces the amount of our reported profits. Because of option expensing and the impact of dilution on our stockholders, we pay close attention to the number and value of the shares underlying stock options we grant.

Summary Compensation Table

The following table sets forth the compensation paid to our chief executive officer, chief financial officer, and other highly compensated officers, our “named executive officers,” with respect to the Company’s fiscal years ended December 31, 2009, December 31, 2008, and December 31, 2007. The Company has no executive officers other than the “named executive officers.”

Name And Principal Position (a)	Year (b)	Salary (\$) (c)	Bonus (\$) ** (d)	Stock Awards (\$) (e)	Option Awards (\$) * (f)	Non- Equity Incentive Plan Compensa- tion Earnings (\$) (g)	Change in Pension Value and Nonquali- fied Deferred compensa- tion Earnings (\$) (h)	All Other Compen- sation (\$) (i)	Total (\$) (j)
Andrew Makrides President, CEO, Chairman of the Board	2009	\$205,252	0	0	0	0	0	\$ 18,463(1)	\$223,715
	2008	\$208,598	\$ 3,870	0	0	0	0	\$ 20,553(9)	\$233,021
	2007	\$195,452	\$ 3,685	0	0	0	0	\$ 21,770(6)	\$220,907
Gary D. Pickett CFO, Treasurer, Secretary	2009	\$101,186	0	0	\$ 43,750(8)	0	0	\$ 483(2)	\$145,419
	2008	\$104,083	\$ 1,961	0	0	0	0	\$ 3,316(16)	\$109,360
	2007	\$ 94,457	\$ 1,904	0	\$ 88,200(7)	0	0	\$ 3,097(10)	\$187,658
J. Robert Saron Chief Sales and Marketing Officer and Director	2009	\$290,651	0	0	0	0	0	\$ 10,972(3)	\$301,623
	2008	\$295,650	\$ 5,480	0	0	0	0	\$ 21,312(12)	\$322,442
	2007	\$276,680	\$ 5,218	0	0	0	0	\$ 20,413(11)	\$302,311
Moshe Citronowicz Vice President Chief Operating Officer	2009	\$213,549	0	0	0	0	0	\$ 14,069(4)	\$227,618
	2008	\$213,197	\$ 4,026	0	0	0	0	\$ 21,055(14)	\$238,278
	2007	\$203,349	\$ 3,834	0	0	0	0	\$ 20,109(13)	\$227,292
Steve Livneh President Bovie Canada***	2009	\$190,225(18)	0	0	0	0	0	\$ 1,849(5)	\$192,074
	2008	\$164,959	\$ 2,747	0	0	0	0	\$ 6,575(17)	\$174,281
	2007	\$174,155	\$ 3,523	0	0	0	0	\$ 12,664(15)	\$190,342

* These columns represent the grant date fair value of the awards as calculated in accordance with FASB ASC 718 (Stock Compensation). Pursuant to SEC rule changes effective February 28, 2010, we are required to reflect the total grant date fair values of the option grants in the year of grant, rather than the portion of this amount that was recognized for financial statement reporting purposes in a given fiscal year which was required under the prior SEC rules, resulting in a change to the amounts reported in prior Annual Reports.

** Column (d) consists of amounts for annual bonuses given to all employees equal to one week of base compensation.

***Steve Livneh is no longer affiliated with the Company.

(1) This amount includes: \$155 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,310; life insurance premiums of \$432; and health insurance premiums of \$11,567.

(2) This amount includes: \$118 of employer contributions under the Bovie Employee 401(k) savings plan; and life insurance premiums of \$365.

(3) This amount includes: \$336 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,310; life insurance premiums of \$470; and health insurance premiums of \$3,856.

(4) This amount includes: \$242 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,310; life insurance premiums of \$470; and health insurance premiums of \$7,047.

(5) This amount includes: \$207 of employer contributions under the Bovie Employee 401(k) savings plan; life insurance premiums of \$192; and health insurance premiums of \$1,450.

(6) This amount includes: \$3,759 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,310; life insurance premiums of \$396; and health insurance premiums of \$11,305.

(7) In 2007 a total of 25,000 options were granted to Mr. Pickett as follows: 20,000 stock options granted on January 12, 2007 with a fair value of \$3.66 per option; 5,000 stock options granted on March 29, 2007 with a fair value of \$3.00 per option.

(8) On October 26, 2009 a total of 12,500 options were granted to Mr. Pickett with a fair value of \$3.50 per option.

(9) This amount includes: \$4,151 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,431; life insurance premiums of \$396; and health insurance premiums of \$9,576.

(10) This amount includes: \$2,834 of employer contributions under the Bovie Employee 401(k) savings plan; and life insurance premiums of \$263.

(11) This amount includes: \$8,140 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,310; life insurance premiums of \$434; and health insurance premiums of \$5,529.

(12) This amount includes: \$8,738 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,431; life insurance premiums of \$434; and health insurance premiums of \$5,709.

(13) This amount includes: \$5,982 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,310; life insurance premiums of \$434; and health insurance premiums of \$7,383.

(14) This amount includes: \$6,470 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,431; life insurance premiums of \$434; and health insurance premiums of \$7,720.

(15) This amount includes: \$4,591 of employer contributions under the Bovie Employee 401(k) savings plan; car allowance of \$6,310; life insurance premiums of \$192; and health insurance premiums of \$1,571.

(16) This amount includes: \$2,970 of employer contributions under the Bovie Employee 401(k) savings plan; and life insurance premiums of \$346.

(17) This amount includes: \$4,976 of employer contributions under the Bovie Employee 401(k) savings plan; life insurance premiums of \$192; and health insurance premiums of \$1,407.

(18) This amount includes unused vacation pay for the 3 year period of employment in the amount of \$31,704

Employment Agreements and Potential Payments Upon Termination or Change in Control

At December 31, 2009, we were obligated under employment contracts with Mr. Makrides, Mr. Saron, and Mr. Citronowicz that are set to expire in January 2014 and contain an automatic extension for a period of one year unless we provide the executives with appropriate written notice pursuant to the contracts. The employment agreements provide, among other things, that the Executive may be terminated as follows:

- (a) Upon the death of the Executive, in which case the Executive's estate shall be paid the basic annual compensation due the Employee pro-rated through the date of death.
- (b) By the resignation of the Executive at any time upon at least thirty (30) days prior written notice to Bovie in which case Bovie shall be obligated to pay the Employee the basic annual compensation due him pro-rated to the effective date of termination,
- (c) By Bovie, "for cause" if during the term of the Employment Agreement the Employee violates the non-competition provisions of his employment agreement, or is found guilty in a court of law of any crime of moral turpitude in which case the contract would be terminated and provisions for future compensation forfeited.
- (d) By Bovie, without cause, with the majority approval of the Board of Directors, at any time upon at least thirty (30) days prior written notice to the Executive. In this case Bovie shall be obligated to pay the Executive compensation in effect at such time, including all bonuses, accrued or prorated, and expenses up to the date of termination. Thereafter, for the period remaining under the contract, Bovie shall pay the Executive the salary in effect at the time of termination payable weekly until the end of their contract.
- (e) If Bovie fails to meet its obligations to the Executive on a timely basis, or if there is a change in the control of Bovie, the Executive may elect to terminate his employment agreement. Upon any such termination or breach of any of its obligations under the Employment Agreement, Bovie shall pay the Executive a lump sum severance equal to three times the annual salary and bonus in effect the month preceding such termination or breach as well as any other sums which may be due under the terms of the Employment Agreement up to the date of termination.

We have an employment contract with Mr. Pickett to serve as Chief Financial Officer which has a current expiration date of June 2012. In the event of a change of control, the contract provides that Mr. Pickett will receive salary and bonus in effect up to the date of the remaining portion of the contract.

On October 10, 2006, the Company entered into a three year contract with Mr. Livneh to serve as President of Bovie Canada which contract allows for a two year extension, unless the Company provides written notice of its intention not to renew prior to the expiration date. During August of 2009, in line with the provisions of the contract, the Company provided written notice to Mr. Livneh of its intent not to renew his employment contract. As of August 11, 2010, Mr. Livneh is no longer affiliated with the Company.

As of December 31, 2009, there are no other employment contracts that have non-cancelable terms in excess of one year.

Grants of Plan-Based Awards

All options granted to our named executive officers in 2009 are incentive stock options. The exercise price per share of each option granted to our named executive officers was determined in good faith by our Board of Directors on the date of the grant. All of the stock options granted to our named executive officers in 2009 were granted under our 2003 Key Services Stock Option Plan.

The following table sets forth certain information regarding grants of plan-based awards to our named executive officers for the fiscal year ended December 31, 2009:

Grants of Plan-Based Awards

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards			Estimated Future Payouts Under Equity Incentive Plan Awards			All Other Stock Awards:	All Other Option Awards:	Exercise Price of Option Awards	Grant Date Fair Value of Stock and Options (1)
		Threshold	Target	Maximum	Threshold	Target	Maximum				
Gary Pickett	10/26/09	-	-	-	-	-	-	-	12,500	8.32	\$104,000

(1) Amounts shown represent the total fair value of awards calculated as of the grant date in accordance with ASC 718 and do not represent cash payments made to the individuals, amounts realized or amounts that may be realized. For incentive stock awards, grant date fair value is calculated using the closing price of the Company's common stock on the date of grant. In accordance with ASC 718, the grant date fair value for stock option awards granted on October 26, 2009 was \$8.32.

Options Exercises During Fiscal 2009

The following table summarizes the options exercised during the year ended December 31, 2009 and the value realized upon exercise:

Name	Option Awards	
	Number of Shares Acquired on Exercise	Value Realized Upon Exercise (\$)(1)
Andrew Makrides	--	--
J. Robert Saron	--	--
Moshe Citronowicz	--	--
Steve Livneh	--	--
Gary Pickett	--	--

[Missing Graphic Reference]

(1) The value realized equals the excess of the fair market value of our common stock on the exercise date over the option exercise price, multiplied by the number of options exercised.

Outstanding Equity Awards

The following table presents information with respect to each unexercised stock option held by Bovie's Named Executive Officers as of December 31, 2009.

Name	Outstanding Equity Awards at 12/31/09			
	# of Securities Underlying Unexercised Options (# Exercisable)	# of Securities Underlying Unexercised Options (# Unexercisable) (*)	Option Exercise Price (\$/sh)	Option Expiration Date 10 Years After Grant Date
Andrew Makrides	25,000	--	3.25	9/29/2013
	25,000	--	2.13	9/23/2014
	25,000	--	2.25	5/5/2015
J. Robert Saron	12,500	--	3.25	9/29/2013
	12,500	--	2.13	9/23/2014
	12,500	--	2.25	5/5/2015
Moshe Citronowicz	25,000	--	3.25	9/29/2013
	25,000	--	2.13	9/23/2014
	25,000	--	2.25	5/5/2015
Gary Pickett	20,000	14,286	8.66	1/12/2017
	5,000	3,572	7.10	3/29/2017
	12,500	12,500	8.32	10/26/2019
Steve Livneh	(1) 100,000	--	3.26	1/1/2016

(1) Issued in the name of Henvil Corporation as part of the Purchase Agreement to acquire the MEG technology. Steve Livneh is the principal owner of Henvil Corporation.

Compensation of Non-Employee Directors

The following is a table showing the director compensation for the year ended December 31, 2009:

Name	Fees Earned Or Paid In Cash (\$)	Stock Awards (\$)	Option Awards (\$) ***	Non-Equity Incentive Plan Compensation (\$)	Change in Pension Value and Nonqualified Deferred Compensation Earnings (\$)	All Other Compensation (\$)	Total (\$)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Brian Madden **	0	0	\$ 35,000* (1)	0	0	0	\$ 35,000
Michael Norman	0	0	\$ 35,000* (2)	0	0	0	\$ 35,000
August Lentricchia	0	0	\$ 35,000* (3)	0	0	0	\$ 35,000
Steven MacLaren	0	0	\$ 35,000* (4)	0	0	0	\$ 35,000
Dr. Peter Pardoll	0	0	\$ 26,250* (5)	0	0	0	\$ 26,250
Greg Konesky	0	0	\$ 26,250* (6)	0	0	0	\$ 26,250

*** These columns represent the grant date fair value of the awards as calculated in accordance with FASB ASC 718 (Stock Compensation). Pursuant to SEC rule changes effective February 28, 2010, we are required to reflect the total grant date fair values of the option grants in the year of grant, rather than the portion of this amount that was recognized for financial statement reporting purposes in a given fiscal year which was required under the prior SEC rules, resulting in a change to the amounts reported in prior Annual Reports.

* (1) Mr. Madden was granted 10,000 stock options on October 26, 2009 which had a fair value of \$3.50 per option.

* (2) Mr. Norman was granted 10,000 stock options on October 26, 2009 which had a fair value of \$3.50 per option.

* (3) Mr. Lentricchia was granted 10,000 stock options on October 26, 2009 which had a fair value of \$3.50 per option.

* (4) Mr. MacLaren was granted 10,000 stock options on October 26, 2009 which had a fair value of \$3.50 per option.

* (5) Dr. Pardoll was granted 7,500 stock options on October 26, 2009 which had a fair value of \$3.50 per option.

* (6) Mr. Konesky was granted 7,500 stock options on December 29, 2009 which had a fair value of \$3.50 per option.

** Mr. Madden resigned from the board in November 2009 for personal reasons and was replaced by Gregory Konesky.

Directors' compensation is determined by the Board of Directors based upon recommendations from the Compensation Committee. The Board periodically grants directors stock options in order to assure that they have proper incentives and an opportunity for an ownership interest in common with other stockholders.

Compensation Committee Interlocks and Insider Participation

The Compensation Committee of the Board of Directors is responsible for determining the compensation of executive officers of the Company, as well as compensation awarded pursuant to the Company's equity incentive plans.

Messrs. MacLaren, Norman, Lentricchia and Pardoll served on the Compensation Committee during 2009, with Mr. MacLaren serving as Chairman.

No member of the Compensation Committee is or has been an officer or employee of the Company or any of its subsidiaries although Mr. MacLaren presently acts as a consultant to the Company and Dr. Pardoll had previously acted as a consultant to the Company. In addition, no member of the Compensation Committee had any relationships with the Company or any other entity that require disclosure under the proxy rules and regulations promulgated by the SEC.

COMPENSATION COMMITTEE REPORT

The Audit Committee Report that follows shall not be deemed to be incorporated by reference into any filing made by the Company under the Securities Act of 1933 or the Securities Exchange Act of 1934, notwithstanding any general statement contained in any such filing incorporating this proxy statement by reference, except to the extent the Company incorporates such Report by specific reference.

Our Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis contained in the Company's Annual Report on Form 10-K with management. Based on our Compensation Committee's review of and the discussions with management with respect to the Compensation Discussion and Analysis, our Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this Proxy Statement and in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2009 for filing with the SEC. Our Compensation Committee's members are Steven MacLaren, Michael Norman, Dr. Peter Pardoll and August Lentricchia.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Security Ownership of Certain Beneficial Owners

The following table sets forth certain information as of October 19, 2010, with respect to the beneficial ownership of the Company's common stock by its executive officers, directors, all persons known by the Company to be the beneficial owners of more than 5% of its outstanding shares and by all officers and directors as a group.

Name and Address	Number of Shares		Nature of Ownership	Percentage of Ownership (i)
	Title	Owned (i)		
Andrew Makrides 734 Walt Whitman Road Melville, NY 11746	Common	674,213(ii)	Beneficial	3.8%
George Kromer P.O. Box 188 Farmingville, NY 11738	Common	341,508(iii)	Beneficial	1.9%

Name and Address	Number of Shares		Nature of Ownership	Percentage of Ownership (i)
	Title	Owned (i)		
J. Robert Saron 5115 Ulmerton Rd. Clearwater, FL 33760	Common	424,819 (iv)	Beneficial	2.4%
Gregory Konesky Rolling Hill Rd. Hampton Bays, NY 11946	Common	23,300 (vi)	Beneficial	0.1%
Mike Norman 410 Jericho Tpke. Jericho, NY	Common	70,357 (vii)	Beneficial	0.4%
Dr. Peter Pardoll 34 Paradise Lane Treasure Island, FL 33706	Common	91,407 (viii)	Beneficial	0.5%
Moshe Citronowicz 5115 Ulmerton Rd. Clearwater, FL 33760	Common	481,504 (v)	Beneficial	2.7%
Gary Pickett 5115 Ulmerton Rd. Clearwater, FL 33760	Common	12,500 (ix)	Beneficial	0.1%
August Lentricchia 734 Walt Whitman Road Melville, NY 11746	Common	6,243 (x)	Beneficial	0.0%
Steven MacLaren 5115 Ulmerton Rd. Clearwater, FL 33760	Common	5,715 (xi)	Beneficial	*
Leonard Keen 5115 Ulmerton Rd. Clearwater, FL 33760	Common	— (xii)	Beneficial	0.0%
Jeff Rencher 5115 Ulmerton Rd. Clearwater, FL 33760	Common	— (xiii)	Beneficial	0.0%
Officers and Directors as a group (10 Persons)		2,131,566(xiv)		11.8%

* Less than 1%.

(i) Based on 17,702,513 outstanding shares of Common Stock as of October 19, 2010 and 1,883,100 outstanding options to acquire a like number of shares of Common Stock as of October 19, 2010, of which officers and directors owned a total of 375,715 options and 1,755,851 shares at October 19, 2010. We have calculated the percentages on the basis of the amount of outstanding securities plus, for each person or group, any securities that person or group has current or future right to acquire pursuant to options, warrants, conversion privileges or other rights.

- (ii) Includes 599,213 shares and 75,000 ten year options owned by Mr. Makrides to purchase shares of Common Stock of the Company. Exercise prices for his options range from \$2.13 for 25,000 shares to \$3.25 for 25,000 shares.
- (iii) Includes 266,508 shares and 75,000 ten year options owned by Mr. Kromer to purchase shares of the Company. Exercise prices for his options range from \$2.13 for 25,000 shares to \$3.25 for 25,000 shares.
- (iv) Includes 387,319 shares and 37,500 ten year options owned by Mr. Saron, exercisable at prices ranging from \$2.13 per share for 12,500 shares, and \$3.25 per share for 12,500 shares.
- (v) Includes 406,504 shares and 75,000 ten year options owned by Mr. Citronowicz exercisable at prices ranging from \$2.13 for 25,000 shares to \$3.25 for 25,000 shares.
- (vi) Includes 3,300 shares and 20,000 ten year options owned by Mr. Konesky exercisable at prices ranging from \$1.30 to \$7.85. Does not include options to purchase 12,500 shares which vest over a seven year period.
- (vii) Includes 70,357 ten year options owned by Mr. Norman exercisable at prices ranging from \$2.13 to \$8.66. Does not include options to purchase 34,643 shares which vest over a seven year period.
- (viii) Includes 91,407 shares of which 18,278 are owned by Dr. Pardoll's wife. Does not include options to purchase 17,500 shares which vest over a seven year period.
- (ix) Includes 12,500 ten year options owned to Mr. Pickett exercisable at prices ranging from \$7.10 to \$8.66. Does not include options to purchase 35,000 shares which vest over a seven year period.
- (x) Includes 1,600 Shares owned by Mr. Lentricchia and 4,643 ten year options issued to Mr. Lentricchia exercisable at prices ranging from \$7.68 to \$8.32. Does not include options to purchase 22,857 shares which vest over a seven year period.
- (xi) Includes 5,715 ten year options owned to Mr. MacLaren exercisable at prices ranging from \$7.33 to \$8.66. Does not include options to purchase 26,785 shares which vest over a seven year period.
- (xii) Does not include options to purchase 110,000 shares which vest over a seven year period at exercise prices ranging from \$2.46 to \$7.45 per share.
- (xiii) Does not include options to purchase 30,000 shares which vest based upon his achieving three defined Surgical Product Sales levels at an exercise price of \$6.00 per share.
- (xiv) Includes 375,715 shares reserved for outstanding options owned by all Executive Officers and directors as a group. The last date options can be exercised is October 19, 2010.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities Exchange Act of 1934 requires our officers and directors, and persons who own more than ten percent of a registered class of our equity securities, to file reports of ownership and changes in ownership with the Securities and Exchange Commission. Officers, directors and greater than ten-percent shareholders are required by SEC regulation to furnish us with copies of all Section 16(a) forms they file.

Based solely on a review of the copies of such forms furnished to us, we believe that during the year ended December 31, 2009 all officers, directors and ten percent beneficial owners who were subject to the provisions of Section 16(a) complied with all of the filing requirements during the year.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Our policy is that employees, non-employees, and third parties must obtain authorization from the appropriate department executive manager, for any business relationship or proposed business transaction in which they or an immediate family member has a direct or indirect interest, or from which they or an immediate family member may derive a personal benefit (a “related party transaction”). The maximum dollar amount of related party transactions that may be approved as described above in this paragraph in any calendar year is \$120,000. Any related party transactions that would bring the total value of such transactions to greater than \$120,000 must be referred to the Audit Committee to determine the procedure for approval, and then have the recommendations presented to the Board of Directors for approval.

Steve Livneh, a former director and former officer of Bovie, is the founder and principal of Lican Developments LTD (“Lican”), an Ontario, Canada Corporation. During 2009 Lican was paid \$50,000 related to an installment payment from an October 2006 purchase agreement. The remaining amounts owed under this arrangement are reflected as a Due to Lican in our consolidated financial statements. Lican may in the future also receive ongoing royalties ranging from 2.5% to 3% of sales of certain products; however, our relationship with Mr. Livneh is the subject of ongoing litigation.

Steven MacLaren, a director of Bovie, is president and a shareholder of Ronin Consulting Group, Inc., a company which provided various financial and analytical project consulting services to Bovie. Ronin Consulting Group, Inc. was paid fees approximating \$99,800 and \$100,000 during 2009, and for the portion of 2008 he was a director, respectively.

Dr. Peter Pardoll, a director of Bovie, is the principal owner of Medical Education Associates, LLC, which provided medical field consulting services to Bovie. Medical Education Associates, LLC was paid fees approximating \$40,000 since he became a director in April 2009.

A relative of Bovie’s chief operating officer is considered a related party. Arik Zoran, the brother of our Chief Operating Officer, is an employee of the Company in charge of the engineering department and was paid inclusive of benefits \$188,363, \$197,272, and \$166,487 for 2009, 2008 and 2007 respectively.

Starting November 1, 2009, Lican provided research and development consulting in the continued development of our Seal-N-Cut product line and was paid consulting fees approximating \$21,000.

PROPOSAL TWO

RATIFICATION OF SELECTION OF AUDITORS

The Board, upon the recommendation of the Audit Committee, has appointed Kingery & Crouse PA, (“Kingery”) Certified Public Accountants, as the Company’s independent auditors for the fiscal year ending December 31, 2010. Representatives of Kingery are expected to be available at the meeting to respond to appropriate questions and will be given the opportunity to make a statement if they desire to do so. If the stockholders do not ratify the appointment of this firm, the appointment of another firm of independent certified public accountants will be considered by the Board of Directors.

THE BOARD RECOMMENDS THAT YOU VOTE "FOR" RATIFICATION OF KINGERY & CROUSE, PA AS THE COMPANY'S INDEPENDENT AUDITORS FOR FISCAL YEAR ENDING DECEMBER 31, 2010.

The following table sets forth the aggregate fees billed to us for fiscal years ended December 31, 2009 and 2008 by our current and previous accountants (Kingery & Crouse P.A. and Bloom & Co. LLP, respectively):

	<u>2009</u>	<u>2008</u>
Audit Fees (1)	\$ 143,021	\$ 162,651
Non-Audit Fees:		
Related Fees(2)	51,659	52,935
Tax Fees(3)	6,648	5,689
All other Fees(4)	12,565	12,882
Total Fees billed	<u>\$ 213,803</u>	<u>\$ 234,157</u>

(1) Audit fees consist of fees billed for professional services rendered for the audit of Bovie’s annual financial statements and reviews of its interim consolidated financial statements included in quarterly reports and other services related to statutory and regulatory filings or engagements.

(2) Related fees consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or reviews of Bovie’s consolidated financial statements and are not reported under “Audit Fees”.

(3) Tax fees consist of fees billed for professional services rendered for tax compliance and tax advice (domestic and international). These services include assistance regarding federal, state and international tax compliance, acquisitions and international tax planning.

(4) All other fees consist of fees for products and services other than the services reported above.

AUDIT COMMITTEE REPORT

Our Audit Committee is composed of “independent” directors, as determined in accordance with Rule 10A-3 of the Securities Exchange Act of 1934. The Audit Committee operates pursuant to a written charter adopted by the Board of Directors.

As described more fully in its charter, the purpose of the Audit Committee is to assist the Board of Directors with its oversight responsibilities regarding the integrity of our financial statements, our compliance with legal and regulatory requirements, assessing the independent registered public accounting firm’s qualifications, independence and performance for us. Management is responsible for preparation, presentation and integrity of our financial statements as well as our financial reporting process, accounting policies, internal audit function, internal accounting controls and disclosure controls and procedures. The independent registered public accounting firm is responsible for performing an independent audit of our consolidated financial statements in accordance with generally accepted auditing standards and to issue a report thereon. The Audit Committee’s responsibility is to monitor and oversee these processes. The following is the Audit Committee’s report submitted to the Board of Directors for 2009.

The Audit Committee has:

- reviewed and discussed our audited financial statements with management and Kingery & Crouse, P. A., the independent public accountants
- discussed with Kingery & Crouse, P.A. matters required to be discussed by Auditing Standard No. 5 of the PCAOB, as may be modified or supplemented; and
- received from Kingery & Crouse, P. A. the written disclosures and the letter regarding their independence as required by *PCAOB Rule 3526, Communication with Audit Committees Concerning Independence*, as may be modified or supplemented, and discussed the auditors’ independence with them.

In addition, the Audit Committee has met separately with management and with Kingery & Crouse, P. A.

Based on the review and discussions referred to above, the Audit Committee recommended to the Board of Directors that the audited financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2009 for filing with the Securities and Exchange Commission.

The Audit Committee
Michael Norman, Chairman
August Lentricchia
Dr. Peter Pardoll

The foregoing Audit Committee Report shall not be deemed incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, and shall not otherwise be deemed filed under these acts, except to the extent we specifically incorporate by reference into such filings.

STOCKHOLDER PROPOSALS FOR NEXT ANNUAL MEETING

Shareholder proposals intended to be considered for inclusion in the proxy statement for presentation at the Company's 2011 Annual Meeting of Stockholders must be received in writing at the Company's offices at 5115 Ulmerton Road, Clearwater, Florida 33760, Attn: Corporate Secretary, no later than July 4, 2011 for inclusion in the Company's proxy statement and proxy card relating to such meeting. Such proposals must comply with applicable SEC rules and regulations.

In order for any proposal that is not submitted for inclusion in next year's proxy statement (as described in the preceding paragraph) to be presented directly at next year's annual meeting, we must receive written notice of the proposal in a timely manner. If such notice is received, proxies may be voted at the discretion of management if we advise stockholders in next year's proxy statement about the nature of the matter and how management intends to vote on such matter.

OTHER MATTERS

The Board of Directors is not aware of any other matter other than those set forth in this proxy statement that will be presented for action at the Annual Meeting. If other matters properly come before the Annual Meeting, the persons appointed as proxies intend to vote the shares they represent in accordance with their best judgment in the interest of the Company.

DOCUMENTS INCLUDED WITH THIS PROXY STATEMENT

WE ARE PROVIDING HERewith, A COPY OF THE COMPANY'S ANNUAL REPORT ON FORM 10-K, WITHOUT EXHIBITS, FOR THE YEAR ENDED DECEMBER 31, 2009, INCLUDING THE FINANCIAL STATEMENTS AND SCHEDULES FILED THEREWITH. IF ANY PERSON RECEIVES THIS PROXY MATERIALS WITHOUT THE FOREGOING DOCUMENTS, THE COMPANY UNDERTAKES TO PROVIDE, WITHOUT CHARGE, UPON A WRITTEN OR ORAL REQUEST OF SUCH PERSON AND BY FIRST CLASS MAIL OR OTHER EQUALLY PROMPT MEANS WITHIN ONE BUSINESS DAY OF RECEIPT OF SUCH REQUEST, A COPY OF THE COMPANY'S ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2009, INCLUDING THE FINANCIAL STATEMENTS AND SCHEDULES FILED THEREWITH. WRITTEN REQUESTS FOR SUCH REPORTS SHOULD BE ADDRESSED TO THE OFFICE OF THE SECRETARY, BOVIE MEDICAL CORPORAITON, 5115 ULMERTON ROAD, CLEARWATER, FLORIDA 33760. THE COMPANY'S TELEPHONE NUMBER AT SUCH OFFICE IS (727) 384-2323.

WHETHER OR NOT YOU INTEND TO BE PRESENT AT THE ANNUAL MEETING, PLEASE COMPLETE, SIGN, DATE AND RETURN THE ENCLOSED PROXY AT YOUR EARLIEST CONVENIENCE.

By Order of the Board of Directors

BOVIE MEDICAL CORPORATION

PROXY

PROXY FOR THE ANNUAL MEETING OF STOCKHOLDERS TO BE HELD ON DECEMBER 9, 2010. THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned hereby acknowledges receipt of Notice of Annual Meeting of Stockholders and Proxy Statement of Bovie Medical Corporation in connection with the 2010 Annual Meeting to be held on December 9, 2010, and appoints Andrew Makrides and George W. Kromer, Jr., or either of them, proxy with power of substitution, for and in the name of the undersigned, and hereby authorizes each or either of them to represent and to vote, all the shares of common stock of Bovie Medical Corporation, a Delaware corporation ("Company"), that the undersigned would be entitled to vote at our Annual Meeting of Stockholders ("Annual Meeting") on December 9, 2010 and at any adjournments thereof, upon the matters set forth in the Notice of Annual Meeting, hereby revoking any proxy heretofore given. The proxy holder appointed hereby is further authorized to vote in his discretion upon such other business as may properly come before the Annual Meeting. This proxy will be voted as specified. **If no direction is made, this proxy will be voted in favor of all proposals.**

THE BOARD RECOMMENDS A VOTE "FOR" EACH NOMINEE LISTED ON PROPOSAL 1 AND "FOR" PROPOSAL 2.

**[X] Please mark your votes
as in this example using
dark ink only.**

1. The election of the following nominees to the Company's Board of Directors to serve until the 2011 Annual Meeting of Shareholders: Andrew Makrides, J. Robert Saron, Michael Norman, George W. Kromer, Jr., August Lentricchia, Steven MacLaren, Peter Pardoll and Gregory Konesky.

FOR
all nominees
(except as marked
to the contrary below)

WITHHOLD
AUTHORITY
to vote for all
nominees listed above

FOR ALL EXCEPT

Andrew Makrides
J. Robert Saron
Michael Norman
George W. Kromer, Jr.
August Lentricchia
Steven MacLaren
Peter Pardoll
Gregory Konesky

INSTRUCTION: To withhold authority to vote for any individual nominee(s), mark "FOR ALL EXCEPT" and check the box next to each nominee you wish to withhold authority.

2. The ratification of the appointment of Kingery & Crouse PA as the Company's independent public accountants for the year ending December 31, 2010.

FOR
[]

AGAINST
[]

ABSTAIN
[]

3. In their discretion, the proxyholders are authorized to vote upon such other business as may properly come before the meeting or an adjournment thereof, all as set out in the Notice and Proxy Statement relating to the Annual Meeting, receipt of which are hereby acknowledged.

Please sign exactly as your name appears and return this proxy card immediately in the enclosed stamped self-addressed envelope.

Signature(s) _____
Dated: _____

Signature _____

NOTE: Please mark, date and sign exactly as name(s) appear on this proxy and return the proxy card promptly using the enclosed envelope. If the signer is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. Executors, administrators, attorneys, trustees, or guardians should state full title or capacity. Joint owners should each sign. If signer is a partnership, please sign in partnership name by authorized person.