BioElectronics Corp
Form 10-K
March 31, 2010

U.S. SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-K

x Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended December 31, 2009

¨ Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from to .

Commission File Number 021-74972

BIOELECTRONICS CORPORATION
(Exact name of registrant as specified in its charter)

Maryland	52-2278149
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification number)

4539 Metropolitan Court
Frederick, Maryland 21704
(Address of principal executive offices and zip code)

Phone: 301.874.4890
Fax: 301.874.6935
(Registrant's telephone number, including area code)

Securities registered under Section 12(b) of the Exchange Act:
None.

Securities registered under Section 12(g) of the Exchange Act:
None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes x No ¨

Indicate by check mark whether the issuer (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the issuer was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. (1) Yes x No ¨ (2) Yes ¨ No x

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.45 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ¨ No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer ¨ (Do not check if a smaller reporting company)	Smaller reporting company x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

The aggregate market value of the ordinary shares, $0.001 par value per share ("Shares"), of the registrant held by non-affiliates on June 30, 2009 was $26,961,010.

The Company is authorized to issue 1,500,000,000 Shares. As of March 30, 2010, the Company has issued and outstanding 1,461,998,871 Shares.

DOCUMENTS INCORPORATED BY REFERENCE

None.

BIOELECTRONICS CORPORATION

FORM 10-K

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The statements contained in this Report that are not historical facts are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995 with respect to our financial condition, results of operations and business, which can be identified by the use of forward-looking terminology, such as “estimates,” “projects,” “plans,” “believes,” “expects,” “anticipates,” “intends,” or the negative thereof or other variations thereon, or by discussions of strategy that involve risks and uncertainties. Management wishes to caution the reader of the forward-looking statements that such statements, which are contained in this Report, reflect our current beliefs with respect to future events and involve known and unknown risks, uncertainties and other factors, including, but not limited to, economic, competitive, regulatory, technological, key employee, and general business factors affecting our operations, markets, growth, services, products, licenses and other factors discussed in our other filings with the Securities and Exchange Commission, and that these statements are only estimates or predictions. No assurances can be given regarding the achievement of future results, as actual results may differ materially as a result of risks facing us, and actual events may differ from the assumptions underlying the statements that have been made regarding anticipated events. Factors that may cause our actual results, performance or achievements, or industry results, to differ materially from those contemplated by such forward-looking statements include, without limitation:

- The availability of additional funds to successfully pursue our business plan;
- The cooperation of industry service partners that have signed agreements with us;
- Our ability to market our services to current and new customers and generate customer demand for our products and services in the geographical areas in which we operate;
- The highly competitive nature of our industry;
- Our ability to retain key personnel;
- Our ability to maintain adequate customer care and manage our churn rate;
- Our ability to maintain, attract and integrate internal management, technical information and management information systems;
- Our ability to manage rapid growth while maintaining adequate controls and procedures;
- The availability and maintenance of suitable vendor relationships, in a timely manner, at reasonable cost;
- General economic conditions.

These forward-looking statements are subject to numerous assumptions, risks and uncertainties that may cause our actual results to be materially different from any future results expressed or implied by us in those statements.

These risk factors should be considered in connection with any subsequent written or oral forward-looking statements that we or persons acting on our behalf may issue. All written and oral forward looking statements made in connection with this Report that are attributable to us or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements. Given these uncertainties, we caution investors not to unduly rely on our forward-looking statements. We do not undertake any obligation to review or confirm analysts’ expectations or estimates or to release publicly any revisions to any forward-looking statements to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events. Further, the information about our intentions contained in this document is a statement of our intention as of the date of this document and is based upon, among other things, the existing regulatory environment, industry conditions, market conditions and prices, the economy in general and our assumptions as of such date. We may change our intentions, at any time and without notice, based upon any changes in such factors, in our assumptions or otherwise.

PART I

Item 1. Business.

1. Form and year of organization: BioElectronics Corporation ("the Company") was formed as a Maryland Corporation in April 2000.

2. Description of the Company's business as a smaller reporting company.

a. Principal products or services and their markets: BioElectronics Corporation is the maker of inexpensive, drug–free, anti-inflammatory medical devices and patches; its primary SIC code is 3845. The Company's wafer thin patches contain an embedded microchip and battery that deliver pulsed electromagnetic energy, a clinically proven and widely accepted anti-inflammatory and pain relief therapy that heretofore has only been possible to obtain from large, facility-based equipment. BioElectronics markets and sells its current products under the brand names ActiPatch®, Allay™, RecoveryRx™ and HealFast™.

The dermal patch delivery system creates a multitude of new product opportunities for chronic and acute inflammatory conditions. The market potential is estimated at $10 billion or 400 million incidents worldwide, according to a study titled "Report on BioElectronics, Corp. – Sizing the Market Opportunity and Assessing Possible Outcomes for the Company." The current market for medical devices is United States, Europe, and Asia. The distinctive value proposition of the device is the delivery of drug-free therapy that reduces pain and inflammation and accelerates healing by 30% to 50% when compared with the present standard methods of patient care. The current major applications are:

- Medical Surgeries
- Chronic Wounds
- Oral Surgeries
- Sprains and Strains
- Lower Back Pain
- Chronic Repetitive Stress Injuries, Heel Pain, Carpal Tunnel, Bursitis, etc.

The Company manufactures a medical device that reduces inflammation without the use of drugs, topical ointments, heat or cold therapy. Inflammation occurs following a variety of insults such as surgery, lacerations of the skin and soft tissues, sprains and strains, (including those of the low back), repetitive stress injuries such as plantar fasciitis, carpal tunnel syndrome, and tennis elbow. The Company has branded its device for many applications and separated the market for the products into four distinct segments- retail products designed for consumer use, a women's health product, medical professional products and veterinary use products.

How the device works:

The body's natural response to soft tissue trauma is a localized inflammatory reaction. The damaged cells separate to prevent the transmission of infection. The cells leak fluid and cellular components break down while the cellular debris causes inflammation, swelling and pain.

This inflammatory response, which has a physiologic protective action, in fact creates an environment in which the healing process is actually prolonged or stalled in chronic wounds.

The devices use proven medical technology to truncate the body's inflammatory response (i.e. breaks the cycle of chronic inflammation). It does this by delivering pulsed electromagnetic energy directly to the affected area and driving out the edematous fluid along with byproducts of the damaged tissue. This provides a well-demonstrated and significant overall improvement in the restorative and recovery process following injury. As a result the pain associated with soft tissue injury is often substantially reduced.

The Retail Products and Market

The Company has developed distinct retail treatment kits.

Five kits are marketed as ActiPatch® Therapy for Pain - for Back, Knee, Wrist, Tennis Elbow, and Heel Pain. The kits are unique to the market as drug free, anti-inflammatory therapeutic agents that rapidly and safely reduce pain, swelling and healing times.

Each retail kit is designed for either 360 or 720 hours of use and includes a free extremity wrap and an unconditional money back guarantee. Priced at $39.95, the cost benefit of these kits is an overwhelming sales proposition. These products are currently available in the retail environment in Canada and Europe.

Women's Health Product and Market

The Allay™ Menstrual Pain Therapy kit addresses dysmenorrhea, the painful monthly cramps experienced by 40% of women during sometime in their life. The market for drug-free relief is enormous. Current treatment such as heat pads and medications such as NSAIDs are not as effective, nor as safe.

Medical Professionals Market

The Company has been marketing to the U.S. medical market for almost three years. Most of the past sales efforts have centered on plastic surgery and podiatry. Sales increases have been very slow, partly due to the lack of clinical evidence, partly due to the lack of a skilled sales force and partly due to less than desirable product design. In 2008, the Company redesigned the product line, refocused on the plastic surgery, Orthopedic and Sports Medicine markets and branded this line under the trademark name RecoveryRx™. This current product line consists of five distinct kits:

- Jaw Surgery Recovery Kit
- General Surgery Recovery Kit
- Breast Recovery Kit
- C-Section Recovery Kit
- Eye Surgery Recovery Kit

Also in development are products for hernias and other surgeries including Dental and Oral surgery. Additionally, the medical products are being used and tested for eye disease, noses surgeries, skin grafts, and wound care. Finally, the Company recently obtained reimbursement approval from the Maryland state Medicaid program for kidney compromised patients, and we believe that we can also obtain reimbursement for cardiovascular and diabetic patients.

The Veterinary Market

The Company has a distribution agreement with eMarkets Group of North Caldwell, New Jersey. The products are marketed under the trade names HealFast and the HealFast PetPatch. The products are a drug-free therapy for horses, cats and dogs that reduce swelling and pain, while speeding healing of muscle and tendon injuries, sores and incisions. There are currently approximately 162 million companion animals in the United States and about 7 million horses.

b. Distribution methods of the products or services: Most of the sales are through distribution agreements with companies which sell items on a wholesale basis to retail outlets, such as drug stores and medical supply outlets.

c. Status of any publicly announced new product or service: During 2009, our focus was on developing product, obtaining additional domestic and international distribution channels, conducting market research, completing additional clinical trials, eliminating debt, and strengthening the balance sheet. The motivations for continued clinical trials are marketing enrichment and obtaining additional U.S. Food and Drug Administration (FDA) approved therapeutic indications for existing and future products. Securing additional U.S. FDA approval is central to market entry and product acceptance. Below are listed currently planned or underway clinical studies:

Plantar Fasciitis (Heel Pain) Study – Chief Investigator, Joel Brook, D.P.M. – A double-blind randomized study spanning a 7-day treatment period. Subjects recorded pain levels using a Visual Analogue Scale (VAS). Subjects also kept a log of medication taken during the 7-day treatment period. Clinical data demonstrated a reduction in pain in the active ActiPatch group and a large clinically significant different in pain medication usage. The active ActiPatch group took 55% less medication taken than the placebo ActiPatch group.

Delayed Onset Muscle Soreness Study – Chief Investigator, Sheena Kong, M.D. - This was an observational study to evaluate the treatment of Delayed Onset Muscle Soreness (DOMS). After a vigorous resistance training exercise regiment designed to induce DOMS, 102 study participants were placed into one of three groups: 1) a control group; 2) a group that utilized the ActiPatch device; and 3) a group that received over-the-counter strength acetaminophen in the form of Extra Strength Tylenol after a vigorous resistance training exercise regiment designed to induce DOMS. The data yielded by this study appears to demonstrate that the use of ActiPatch for the treatment of Delayed Onset Muscle Soreness (DOMS) is both safe and effective. Additionally, the data yielded by the study appears to demonstrate that the continuous use of ActiPatch will result in significantly less DOMS-related pain and muscle soreness compared to a treatment regiment consisting of an OTC dosage of acetaminophen.

Primary Dysmenorrhea (Menstrual Pain) Study – Primary Investigator, Barry Eppley, M.D.D.M.D. – This clinical study was a placebo controlled, double-blind, prospective randomized trial comparing the efficacy and effectiveness of an active Allay device to an inactive (placebo) Allay device. The primary outcome measure was reduction of menstrual pain in comparison with prior baseline scores. The intensity of pain was measured using a VAS. Of the active group, 77.1% reported either complete elimination or reduction in their typical menstrual pain symptoms. Allay was demonstrated to be a safe and effective drug-free method for the treatment of primary dysmenorrhea. It may be used as a primary treatment method for those women with moderate dysmenorrhea who prefer not to take oral medication. In more severe cases of dysmenorrhea, it could be an adjuvant treatment to reduce the amount of oral medications needed. Further controlled clinical studies are needed for further evaluation.

d. Competitive business conditions and the smaller reporting company's competitive position in the industry and methods of competition: The manufacture, distribution and sale of medical devices and equipment designed to relieve swelling and pain or to treat chronic wounds is competitive and some of the Company's competitors possess significant product sales, and greater experience, financial resources, operating history and marketing capabilities than us. For example, Diapulse Corporation of America, Inc. manufactures and markets devices that are deemed by the U.S. FDA to be substantially equivalent to some of the Company's products. Regenesis Biomedical and Ivivi Technologies also manufacture and market devices that deliver PEMF therapy. A number of other manufacturers, both domestic and foreign, and distributors market shortwave diathermy devices that produce deep tissue heat and may be used for the treatment of certain of the medical conditions that the Company's products are used for. The Company's products may also compete with pain relief drugs and pain relief medical devices, as well as other forms of treatment.

The Company's ability to compete effectively with other companies is materially dependent upon the proprietary nature of its technologies. We rely primarily on patents and trade secrets to protect our technologies. There can be no assurance that the Company will not be required to resort to litigation to protect its patented technologies and other proprietary rights or that we will not be the subject of additional patent litigation to defend its existing and proposed products and processes against claims of patent infringement or any other intellectual property claims. Such litigation could result in substantial costs, diversion of management's attention, and diversion of Company resources.

The Company strives to protect its trade secrets, including the processes, concepts, ideas and documentation associated with our technologies, through the use of confidentiality agreements and non-competition agreements with our current employees and with other parties to whom we have divulged such trade secrets. If our employees or other parties breach our confidentiality agreements and non-competition agreements or if these agreements are not sufficient to protect our technology or are found to be unenforceable, our competitors could acquire and use information that we consider to be our trade secrets, and we may not be able to compete effectively. Some of the Company's competitors have substantially greater financial, marketing, technical and manufacturing resources, and we may not be profitable if our competitors are also able to take advantage of our trade secrets.

The Company may decide for business reasons to retain certain knowledge that it considers proprietary as confidential and elect to protect such information as a trade secret, as business confidential information or as know-how. In that event, the Company must rely upon trade secrets, know-how, confidentiality and non-disclosure agreements and continuing technological innovation to maintain our competitive position. There can be no assurance that others will not independently develop substantially equivalent proprietary information or otherwise gain access to or disclose such information.

The Company's ability to commercially exploit its products must be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in connection with the development of new medical devices and products. We believe that in order to continue to be competitive, we need to develop and maintain sufficient market share. Our methods of competition include continuing our efforts to develop and sell products, which, when compared to existing products, perform more efficiently and are available at prices that are acceptable to the market; displaying our products and providing associated literature at major industry trade shows; and pursuing alliance opportunities for the distribution of our products. We further believe that our competitive advantages with respect to our products include: the clinical efficacy of our technology and products, the benefits of treatments utilizing our products, which include treatments that are non-invasive and painless, are free from known side-effects and are not susceptible to overdose or abuse, do not require special training to implement, may be applied to any part of the body; and the relevant experience of the members of our consultants including, among others, Dr. David Genecov, an internationally recognized surgeon, and Dr. Kenneth McLeoad, a principal innovator in PEMF technology.

e. Sources and availability of raw materials and the names of principal suppliers: The raw materials used as components in Company's products, mainly bandaging material and electronic circuit boards, are readily available worldwide. The Company's manufacturers work on behalf of many similar companies, and possess additional capacity to fulfill Company's anticipated needs.

f. Patents, trademarks, licenses, franchises, concessions, royalty agreements or labor contracts, including duration: The rights to the technology and patents supporting the development of the current product line were acquired by BioElectronics in 2000. Prior to that time, the previous owners of the technology and patents had invested over $4.65 million in electronic engineering prototypes, production runs, and in confirming clinical studies. The Company has been issued U.S. Patent #7551957B2 and has additional patents pending in the United States and worldwide.

g. Need for any government approval of principal products or services. If government approval is necessary and the smaller reporting company has not yet received that approval, discuss the status of the approval within the government approval process:

- The Company was granted its first approval from the U.S. FDA under a 510(k) in August 2002. Prior to U.S. FDA approval and the establishment of its research and development group, PAW, LLC (the family of Andrew Whelan, President) paid and expensed the cost of development.

- In December 2004, the Company received ISO and CE (European Common Market) certification. In 2005, Health Canada approved ActiPatch® Therapy for the relief of pain in musculoskeletal complaints.

- In early 2008, the Company redesigned its product and manufacturing process and established new disease specific products and distinct medical and retail product lines. It also shifted its attention to international sales.

Generally during its history, with regard to its efforts in 2009 and beyond, the Company cannot assure that it will be successful in obtaining U.S. FDA clearance, and without such clearance, we will be unable to enter the relief of pain and discomfort associated with primary dysmenorrhea market in the United States. There are numerous medications used in the treatment of pain and discomfort associated with primary dysmenorrhea, and if we receive clearance to market this product, we intend to offer it as an alternative to such medications. These commonplace medications have been required to carry warning labels due to potential dangerous side-effects (and some withdrawn altogether), as compared to our non-invasive, drug-free alternative device with no known side-effects.

h. Effect of existing or probable governmental regulations on the business: After a device is placed on the market, within the United States, numerous regulatory requirements apply. These include:

Ø Quality System Regulations, or QSR, which require finished device manufacturers, including contract manufacturers, to follow stringent design, testing, control, documentation and other quality assurance procedures during all aspects of the manufacturing process;

Ø labeling regulations and U.S. FDA prohibitions against the promotion of products for uncleared, unapproved or "off-label" uses;

Ø medical device reporting regulations, which require that manufacturers report to the U.S. FDA if their device may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if the malfunction of that or a similar company device were to recur; and

Ø post-market surveillance regulations, which apply when necessary to protect the public health or to provide additional safety and effectiveness data for the device.

The U.S. FDA has broad post-market and regulatory enforcement powers. The Company is subject to unannounced inspections by the U.S. FDA to determine the Company’s compliance with the QSR and other regulations, and these inspections include the manufacturing facilities of BioElectronics Corporation. Our location has been registered with the U.S. FDA as a Medical Device establishment. Such registration is renewable annually, and although we do not believe that the registration will fail to be renewed by the U.S. FDA, there can be no assurance of such renewal. The failure of the Company to obtain any annual renewal would have a material adverse effect on us.

Failure to comply with applicable regulatory requirements can result in enforcement action by the U.S. FDA or the Department of Justice, which may include any of the following sanctions, among others:

- Ø fines, injunctions and civil penalties;
- Ø mandatory recall or seizure of our products;
- Ø operating restrictions and partial suspension or total shutdown of production;
- Ø refusing our requests for 510(k) clearance or pre-market approval of new products or new intended uses;
- Ø withdrawing 510(k) clearance or pre-market approvals that are already granted; and
- Ø criminal prosecution.

The U.S. FDA also has the authority to require us to repair, replace or refund the cost of any medical device that has been manufactured for us or distributed by us. If any of these events were to occur, they could have a material adverse effect on our business. We also are subject to a wide range of federal, state and local laws and regulations, including those related to the environment, health and safety, land use and quality assurance. We believe that we are in complete compliance with these laws and regulations as currently in effect, and our compliance with such laws will not have a material adverse effect on our capital expenditures, earnings and competitive and financial position.

The primary regulatory environment in Europe is that of the European Union, which consists of 27 countries encompassing most of the major countries in Europe. Three member states of the European Free Trade Association have voluntarily adopted laws and regulations that mirror those of the European Union with respect to medical devices. Other countries, such as Switzerland, have entered into Mutual Recognition Agreements and allow the marketing of medical devices that meet European Union requirements.

The European Union has adopted numerous directives and European Standardization Committees have promulgated voluntary standards regulating the design, manufacture, clinical trials, labeling and adverse event reporting for medical devices. Devices that comply with the requirements of a relevant directive will be entitled to bear a CE conformity marking (which stands for Conformite Europeenne), indicating that the device conforms with the essential requirements of the applicable directives and, accordingly, can be commercially distributed throughout the member states of the European Union, the member states of the European Free Trade Association and countries which have entered into a Mutual Recognition Agreement. The method of assessing conformity varies depending on the type and class of the product, but normally involves a combination of self-assessment by the manufacturer of the product and a third-party assessment by a Notified Body, an independent and neutral institution appointed by a country to conduct the conformity assessment. This third-party assessment may consist of an audit of the manufacturer's quality system and specific testing of the manufacturer's device. An assessment by a Notified Body in one member state of the European Union, the European Free Trade Association or one country which has entered into a Mutual Recognition Agreement is required in order for a manufacturer to commercially distribute the product throughout these countries. ISO 9001 and ISO 13845 certifications are voluntary harmonized standards. Compliance establishes the presumption of conformity with the essential requirements for a CE Marking.

i. Estimate of the amount spent during each of the last two fiscal years on research and development activities, and if applicable, the extent to which the cost of such activities is borne directly by customers: The Company's R&D costs have been minimal. New product research and development is done by in-house engineers and a consulting biophysicist

j. Number of total employees and number of full-time employees: Currently, the Company employs 9 full time staff members and contracts for consulting services with an additional 3 persons. None of the Company's employees are represented by unions or collective bargaining agreements. We believe that our relationships with our employees are good.

3. Reports to security holders. The following will be disclosed in any registration statement the Company files under the Securities Act of 1933:

i. Though not required to deliver an annual report to security holders, the Company will voluntarily send an annual report, which will include audited financial statements;

ii. The Company has voluntarily agreed to become a reporting company with the Securities and Exchange Commission and subject to its reporting requirements, including the filing of periodic reports and any other required information;

iii. That the public may read and copy any materials file by the Company with the Commission at the SEC's Public Reference Room at 100 F Street, NE., Washington, DC 20549, on official business days during the hours of 10 a.m. to 3 p.m. State that the public may obtain information on the operation of the Public Reference Room by calling the Commission at 1-800-SEC-0330. The Commission maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the Commission and state the address of that site (http://www.sec.gov). The Company maintains its own website at http://www.BIELCorp.com, where it will also post this information.

Item 1A. Risk Factors. The Company is not required to provide the information required by this Item because the Company is a smaller reporting company.

Item 1B. Unresolved Staff Comments. The Company is not required to provide the information required by this Item because the Company is a smaller reporting company.

Item 2. Properties. The Company's principal corporate office is located at 4539 Metropolitan Court, Frederick, Maryland 21704 where it leases approximately 3,000 square feet. The Company uses approximately 1,600 square feet for its production and packaging facility and 1,400 square feet for its executive offices. The approximate rental amount is $5,800 per month. The lease term expires in 2011.

Item 3. Legal Proceedings.

The Company and Andrew Whelan, President & CEO are defendants in a lawsuit brought by a plaintiff who is seeking damages arising from a breach by the Company of certain alleged oral contractual obligations. The plaintiff claims that, pursuant to these alleged obligations, he would have been entitled to receive common stock from the Company as compensation for rendering certain services to the Company. The matter was submitted to arbitration at which the plaintiff prevailed and a judgment was entered against BioElectronics Corporation, PAW, LLC and Andrew Whelan in the amount of $1,217,919.10. The Company and Mr. Whelan have filed a Petition to Vacate Arbitration Award. As of this date, there has been no ruling on the motion. The Company believes the plaintiff's claims to be without merit and the arbitrator's decision to have been possible only by a manifest disregard of the law. The Company intends to defend the lawsuit and pursue any counterclaims vigorously.

Item 4 (Removed and Reserved). Not applicable.

PART II

Item 5. Market for Registrant's Common equity, Related Stockholder Matters and Issuer Purchases of equity Securities.

Market for Securities

The Company's common stock currently trades via PinkSheets at http://www.OTCMarkets.com, under the symbol BIEL. The high and low closing price for each quarterly period of our last two fiscal years is listed below:

	High	Low
Fiscal 2008		
1 st Quarter	$ 0.054	$ 0.0255
2 nd Quarter	0.045	0.02
3 rd Quarter	0.0224	0.006
4 th Quarter	0.0125	0.0037
Fiscal 2009		
1 st Quarter	$ 0.0045	$ 0.001
2 nd Quarter	0.049	0.0011
3 rd Quarter	0.12	0.021
4 th Quarter	0.103	0.04

* The quotations reflect inter-dealer prices, without mark-up, mark-down or commission and may not represent actual transactions.

Penny Stock Considerations

The Company's shares will be "penny stocks" as that term is generally defined in the Securities Exchange Act of 1934 to mean equity securities with a price of less than $5.00. Our shares thus will be subject to rules that impose sales practice and disclosure requirements on broker-dealers who engage in certain transactions involving a penny stock.

Under the penny stock regulations, a broker-dealer selling a penny stock to anyone other than an established customer or accredited investor must make a special suitability determination regarding the purchaser and must receive the purchaser's written consent to the transaction prior to the sale, unless the broker-dealer is otherwise exempt. Generally, an individual with a net worth in excess of $1,000,000 or annual income exceeding $100,000 individually or $300,000 together with his or her spouse is considered an accredited investor. In addition, under the penny stock regulations the broker-dealer is required to:

* Deliver, prior to any transaction involving a penny stock, a disclosure schedule prepared by the Securities and Exchange Commissions relating to the penny stock market, unless the broker-dealer or the transaction is otherwise exempt;

* Disclose commissions payable to the broker-dealer and our registered representatives and current bid and offer quotations for the securities;

* Send monthly statements disclosing recent price information pertaining to the penny stock held in a customer's account, the account's value and information regarding the limited market in penny stocks; and

* Make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction, prior to conducting any penny stock transaction in the customer's account.

Because of these regulations, broker-dealers may encounter difficulties in their attempt to sell shares of our common stock, which may affect the ability of selling stockholders or other holders to sell their shares in the secondary market and have the effect of reducing the level of trading activity in the secondary market. These additional sales practice and disclosure requirements could impede the sale of our securities, if our securities become publicly traded. In addition, the liquidity for our securities may be decreased, with a corresponding decrease in the price of our securities. Our shares in all probability will be subject to such penny stock rules and our stockholders will, in all likelihood, find it difficult to sell their securities.

Holders

As of December 31, 2009, the Company had 16,011 holders of record of its common stock.

Securities as Compensation

The Company effected multiple transactions using its Common Stock as compensation in 2009, 2008 and 2007 to non-employees pursuant to consulting services agreements. These issuances were made in reliance upon Section 4(2) of the Securities Act of 1933. The mandated tabular disclosure is contained in Item 12, infra, and an explanatory schedule is contained in Item 15, infra.

Dividends

The Company has not declared any cash dividends on our common stock since its inception and do not anticipate paying such dividends in the foreseeable future. We plan to retain any future earnings for use in our business. Any decisions as to future payments of dividends will depend on our earnings and financial position and such other facts, as the board of directors deems relevant.

Recent Sales of Unregistered Securities

In years of 2007, 2008 and 2009, the Company sold unregistered securities, the proceeds of which were used for day-to-day operating capital, by filing Form D Notice of Sale of Securities Pursuant to Regulation D, Section 4(6) and/or Uniform Limited Offering Exemption with the Securities and Exchange Commission. There was no underwriter related to the transactions, nor any commissions paid. A schedule of these series of transactions is provided in exhibit contained in Item 15, infra.

Item 6. Selected Financial Data. The Company is not required to provide the information required by this Item because the Company is a smaller reporting company.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

This Form 10-K may contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements involve a number of risks and uncertainties including, without limitation, those identified under Item 1A. "Risk Factors" and elsewhere in this Form 10-K. We undertake no obligation to revise any forward-looking statements in order to reflect events or circumstances that may arise after the date of this report. Readers are urged to carefully review and consider the various disclosures made in this report and in our other filings with the SEC that attempt to advise interested parties of the risks and factors that may affect our business.

INTRODUCTION

We are the maker of inexpensive, drug–free, anti-inflammatory medical devices and patches. Our wafer thin patches contain an embedded microchip and battery that deliver pulsed electromagnetic energy, a clinically proven and widely accepted anti-inflammatory and pain relief therapy that heretofore has only been possible to obtain from large, facility-based equipment. We market and sell our products under the brand names ActiPatch®, Allay™, RecoveryRx™ and HealFast™.

During 2009, our focus was on developing product, obtaining additional domestic and international distribution channels, conducting market research, completing additional clinical trials, eliminating debt, and strengthening the balance sheet. The motivations for continued clinical trials are marketing enrichment and obtaining additional U.S. Food and Drug Administration (FDA) approved therapeutic indications for existing and future products. Securing additional U.S. FDA approval is central to market entry and product acceptance.

Our customers include pharmacies, supermarkets, physicians, direct response television and distributors. Plastic surgery is the only domestic market segment with current U.S. FDA market clearance. Consequently, until additional clearances are received from the U.S. FDA, domestic sales are restricted primarily to medical providers, and the majority of sales will be located outside the United States. As of December 31, 2009, we have established distribution agreements with distributors in Korea, Singapore, Malaysia, Canada, Columbia, Italy, Scandinavia, Saudi Arabia, Japan, Benelux, the Balkans, Austria, Australia, China and South America. The international market is expected to further expand going forward and to eventually constitute two-thirds of our total sales.

MAJOR GOALS, SIGNIFICANT ACTIVITIES AND RESULTS DURING 2009

BioElectronics' operational plan is centered on marketing oriented functions. We believe our product set is very strong, our quality is very high, our ISO-certified production capabilities are extensive, and our Company is structured for accelerated growth. Over the past 24 months, the Company has significantly strengthened its product lines, improved product quality, created new packaging, and redesigned marketing materials. During the year ended December 31, 2009, we reduced our level of debt, improved our cash position and significantly reduced our overhead expenses. We believe we now have a robust product line with strong features and functions and are taking further actions to strengthen our balance sheet and establish profitable operations.

We have several major goals to continue the advancement of its business operations, including: 1) completing additional clinical trials; 2) obtaining additional U.S. FDA and international product market clearances; 3) continuing to build our four primary brands; 4) building domestic distribution, including direct response television commercials and drug/grocery store-based distribution; and 5) continuing to expand our already growing international distribution network.

Completion of Clinical Trials

We have been aggressively pursuing the completion of several clinical trials. Our heel/foot clinical trial was recently conducted in October 2009 yielding a strong product advocacy and 100% safety. Future additional clinical trials include: cesarean section recovery, breast augmentation recovery, and menstrual pain and cramping associated dysmenorrhea. Our international distribution groups also sponsored other clinical trials. Upon completion of these studies, the data may be used in U.S. FDA submissions and to support our marketing claims both domestically and abroad.

Additional U.S. Government FDA and International Regulatory Body Filings

Our product is currently classified as a high risk, Class III device. We have U.S. FDA market clearance for the treatment of edema following blepharoplasty. We have filed two additional 510(k) market clearance applications for "relief of musculoskeletal pain" and "relief of menstrual cycle pain and discomfort" for over-the-counter sales. Even though the U.S. FDA is reluctant to give us over-the-counter clearance for a Class III device, we are currently pursuing both reclassification and approval of the pending applications. As we expand internationally, we are required to and do obtain additional market clearance in each country.

Continue to Build Our Four Primary Markets

We augmented our marketing team in 2009 with two experienced Brand Managers to help build our brands. In the coming months, we plan to add additional brand management staff to further assist our marketing efforts.

Because BioElectronics has only limited U.S. FDA clearance of its products, mass distribution to direct consumers in the United States is prohibited. We believe U.S. FDA clearance for some of our products is forthcoming, and thus, we are currently in the process of identifying and building a domestic distribution network.

Continued Expansion of Our Already Growing International Distribution Network

BioElectronics has made steady, significant progress in building an international distribution network. Due to the Company obtaining over-the-counter sales approval for its products in Canada, Europe and other markets, it has had regular interest from international distribution companies to market and distribute the product lines. Our strategy has been to partner with distributors that have the experience and financial ability to place our products into the consumer goods retail sales channels. We have seen success in executing this strategy relative to Canada, Western Europe and Italy. As retail distribution is a core strategy, the Company is regularly in negotiations with existing and future distributors, and hopes to sign additional contracts with qualified distributors in Asia, Europe, South/Central America and Australia.

As part of its intent to regularly expand the distribution of its products, BioElectronics in 2009 expanded its television presence around the world via the international Direct Response Televisions (DRTV) campaign. To establish its DRTV program, the Company has developed television materials produced by leading companies it has retained (Schulberg Media Works for English-speaking markets, and RC Productions for Hispanic markets) for both the Actipatch Back Pain product and the Allay Menstrual Pain Therapy product. Subsequently, the commercials are extremely helpful with establishing partnerships with major DRTV companies to test our products in many countries. The Company contracted with TeleDEPOT in Latin America, where it completed a very successful test in some of the countries. In Canada, we are partnering with Northern Response, one of the world’s largest DRTV companies. Northern Response is also looking for further opportunities in six additional international locations that show interest in our products. The Canadian test is scheduled to begin on April 5, 2010. In Australia and New Zealand, Brand Developers will test the Back Pain commercial.

Other Issues Relative to Plan of Operations

Cash Requirements - BioElectronics is currently in a strong current asset position with its current assets significantly exceeding current liabilities, yielding a current ratio well above one. As is typical for most growth companies, BioElectronics may, in the future, need to raise additional funds to finance its working capital requirements. It is unknown at this time how much, if any, additional funds will be needed to execute our business plan, as it is highly dependent upon our sales growth trajectory over the coming quarters.

Research and Development – Our technologies are already highly developed and many of our products are currently on the international market. We are designing several new products based on our core technologies with developmental costs being financed through normal cash flows.

Expected Purchase or Sale of Plant and Significant Equipment - BioElectronics does not anticipate any major purchases or sales of plant or significant equipment.

Expected Changes in the Number of Employees - We are currently recruiting new talent, and it is expected the majority of our hiring will focus on marketing personnel, although our support and manufacturing staff will also be expanded. Our hiring plans are dependent upon revenue growth rates over the coming quarters.

RESULTS OF OPERATIONS

Our principal activity, to sell and market in the U.S. retail market, has not yet commenced due to the lack of U.S. FDA approval for our product. As a result, we consider ourselves a development stage entity in accordance with FASB Accounting Standards Codification Topic 915, “Development Stage Enterprise”, and accordingly present, in our financial statements, the results of operations and other disclosures for the company for the period from our inception, April 10, 2000, to December 31, 2009.

Year Ended December 31, 2009 Compared to Year Ended December 31, 2008

Revenue. Revenue from operations for the years ended December 31, 2009 and 2008 amounted to approximately $1,146,000 and $717,000, respectively, an increase of $429,000 or 60% over the prior year. The following table summarizes the company’s domestic, international and veterinary (related party) revenues earned during the years ended December 31, 2009 and 2008:

	For the Years Ended December 31,			
	2009		2008	
	Amounts	Percentage	Amounts	Percentage
Domestic	$ 263,815	23%	$ 254,927	36%
International	610,785	53%	461,828	64%
Veterinary	271,047	24%	-	-
	$ 1,145,647	100%	$ 716,755	100%

International sales increased by approximately $149,000 or 32% in 2009 from 2008 as a result of new distributorship agreements signed in 2009 and increased sales through agreements signed in prior years. Revenues from international sales for the year ended December 31, 2009 include $150,000 of sales related to a bill and hold transaction. The units will be shipped in 2010 to help meet the distribution 2010 purchase obligation.

Veterinary revenues of $271,047 were recorded in connection with a distribution agreement signed on February 9, 2009 with eMarkets, a company owned and controlled by a member of the board of directors and sister of our president. The agreement provides for eMarkets to be the exclusive distributor of our veterinary products to customers in certain countries outside of the United States for a period of three years. The specialized veterinary products sold to eMarkets include approximately $216,000 of revenues related to bill and hold transactions and for which the related product is expected to be delivered during the fourth quarter of 2010.

Cost of Goods Sold and Gross Margin. Costs of goods sold for the years ended December 31, 2009 and 2008 amounted to approximately $390,000 and $509,000, respectively. Gross margin increased from approximately 29% of sales for the year ended December 31, 2008 to approximately 66% for the year ended December 31, 2009. The increase was the result of higher sales prices per unit, lower production costs (which arose primarily from improvements in productivity) and a substantially lower defect rate. We expect gross margins on our products to be in the range of 66% to 70% of sales in the future, depending on product mix and sales prices. This gross margin range is consistent with other medical device and pharmaceutical companies.

General and Administrative Expense. For the year ended December 31, 2009, general and administrative expenses amounted to approximately $904,000 as compared to $2,040,000 in 2008, a decrease of $1,136,000 or 56% over the prior year. The decrease in general and administrative expenses in 2009 was primarily driven by reduced consulting expenses.

General and administrative expenses of approximately $904,000 for the year ended December 31, 2009 included approximately $147,000 in sales support expenses, approximately $34,000 in consulting expense, approximately $15,000 in depreciation and approximately $709,000 in other general and administrative expenses.

General and administrative expenses of approximately $2,040,000 for the year ended December 31, 2008, consisted of approximately $439,000 in sales support expenses, approximately $551,000 in consulting expense, approximately $15,000 in depreciation and $1,035,000 in other general and administrative expenses.

Interest Expense. Interest expense decreased to approximately $111,000 for the year ended December 31, 2009 from $192,000 in the comparable period in 2008. The decrease in interest expense was attributed to the payoff of senior secured convertible notes, during the year ended 2009.

Net Loss. Net losses decreased from approximately $2,024,000 during 2008 to approximately $260,000 during 2009. Losses were minimized primarily due to a significant increase in sales and reduction in costs.

Year Ended December 31, 2008 Compared to Year Ended December 31, 2007

Revenue. Revenue from operations for the years ended December 31, 2008 and 2007 were approximately $717,000 and $603,000, respectively, an increase of $114,000 or 19% over the prior year. The following table summarizes the company's domestic and international revenues earned during the years ended December 31, 2008 and 2007:

	For the Years Ended December 31,			
	2008		2007	
	Amounts	Percentage	Amounts	Percentage
Domestic	$ 254,927	36%	$ 232,871	39%
International	461,828	64%	370,239	61%
	$ 716,755	100%	$ 603,110	100%

The primary contributor to the increase in revenue is continued expansion of international and domestic markets.

Cost of Goods Sold and Gross Margin. Costs of goods sold for the years ended December 31, 2008 and 2007 were approximately $509,000 and $170,000, respectively. Gross margin decreased from 72% for the year ended December 31, 2007 to 29% for the year ended December 31, 2008, as a result of higher production costs which arose primarily from improvements in product design and packaging.

General and Administrative Expense. For the year ended December 31, 2008, general and administrative expenses amounted to approximately $2,040,000 as compared to $1,818,000 in 2007, an increase of $222,000 or 12% over the prior year. The slight increase in general and administrative expenses in 2008 was primarily driven by the increase in sales support expenses and payroll expense related to the hiring of vice president in international sales.

General and administrative expenses of approximately $2,040,000 for the year ended December 31, 2008 consisted of approximately $439,000 in sales support expenses, approximately $551,000 in consulting expense, approximately $15,000 in depreciation and $1,035,000 in other general and administrative expenses.

General and administrative expenses of approximately $1,818,000 for the year ended December 31, 2007 consisted of approximately $343,000 in sales support expenses, approximately $543,000 in consulting expense, approximately $19,000 in depreciation and approximately $912,000 in other general and administrative expenses.

Interest Expense. Interest expense decreased to approximately $192,000 for the year ended December 31, 2008 from $588,000 in the comparable period in 2007. The increase in interest expense was primarily attributable to the amortization of discount on warrants of approximately $351,000, as related to the senior convertible notes agreement. Such expense was fully amortized by the end of December 31, 2007.

Net Loss. Net losses increased slightly from approximately $2,003,000 during 2007 to approximately $2,024,000 during 2008. This slight increase is due to lower gross margin and higher general and administrative expenses.

LIQUIDITY AND CAPITAL RESOURCES

Our sources of funds are primarily cash flows from financing activities. We raise funds for our operations by borrowing on notes, agreements with third parties and related parties, and selling equity in the capital markets. We are still operating as a development stage company, in which we are devoting substantially all of our present efforts to developing our business. For every year since our inception, we have generated negative cash flow from operations. At December 31, 2009, our cash and cash equivalents were approximately $296,000. Since the end of fiscal 2008, the increase of approximately $241,000 in our cash and cash equivalents resulted primarily from the issuance of related party notes payable during the year.

Since our inception on April 10, 2000, the majority of our financing has been provided by the Company's founders including the CEO, certain board members, and their immediate family and associates. As of December 31, 2009, all of the Company's financing was provided by these related parties through long-term notes payable. We present these notes payable as long-term liabilities in our financial statements, as the holders of these notes (who are related parties) have no current intention to pursue repayment of these amounts.

At December 31, 2009, we had positive working capital of approximately $1,026,000 as compared to negative working capital of approximately $1,164,000 at December 31, 2008. The negative working capital at December 31, 2008 arose due to the low level of current assets (which was the result of low level of sales and higher expenses to that date), and balances due to suppliers (reported as accounts payable and accrued expenses) and under our senior secured notes payable. The senior secured convertible notes were repaid and converted to equity in 2009.

On January 1, 2005, we entered into an unsecured revolving convertible promissory note agreement ("the Revolver") with IBEX, LLC ("IBEX") a related party, for a maximum limit of $2,000,000, with interest at the Prime Rate plus 2%, and all accrued interest and principal due on or before January 1, 2015, whether by the payment of cash or by conversion into shares of our common stock. The Revolver is convertible at various conversion prices based on the VWAP for the 10 trading days preceding the date of conversion. IBEX, LLC is a limited liability company, whose President is the daughter of the President of the Company. As of December 31, 2009, an amount of approximately $1,288,000 was drawn from the Revolver.

Additionally, on August 1, 2009, we entered into a convertible promissory note agreement with IBEX, for $519,920, with simple interest at 8% per annum. All accrued interest and principal are due on or before August 31, 2011, whether by the payment of cash or by conversion into shares of our common stock. The promissory note is convertible equal to the quotient of (i) a sum equal to the entire outstanding principal and interest, divided by (ii) the conversion price of $0.019 per share.

Net Cash Used In Operating Activities. Net cash used in operating activities amounted to approximately $1,363,000, $521,000 and $1,335,000 in the years ended December 31, 2009, 2008 and 2007, respectively.

Net cash used in operating activities of approximately $1,363,000 in the year ended December 31, 2009 was primarily because of the increase in trade and other receivables of approximately $333,000, decrease in accrued expenses of approximately $216,000, decrease in accounts payable of approximately $181,000, increase in due from related party of approximately $165,000, and increase in inventory of approximately $136,000. Non-cash reconciling items mainly include stock-based compensation expense of approximately $243,000 and adjustment to related party notes payable of approximately $266,000.

Net cash used in operating activities of approximately $521,000 in the year ended December 31, 2008 was primarily because of the decrease in trade and other receivables of approximately $130,000, increase in accrued expenses of approximately $261,000, decrease in inventory of approximately $126,000, and increase in customer deposits of approximately $119,000. Non-cash reconciling items mainly include stock-based compensation expense of approximately $400,000 and approximately $247,000 increase in related party notes payable for services rendered.

Net cash used in operating activities of approximately $1,335,000 in the year ended December 31, 2007 was primarily because of the increase in inventory of approximately $128,000 and decrease in accounts payable of approximately $148,000. Non-cash reconciling items mainly include amortization of non-cash debt issuance costs of approximately $351,000, non-cash interest related to convertible notes payable of approximately $205,000 and increase in related party notes payable for services rendered of approximately $309,000.

Net Cash Used in Investing Activities. We did not make any significant investments in fixed or other long-term assets during the years ended December 31, 2009, 2008, and 2007 and therefore, did not have any substantial cash flows from investing activities.

Net Cash Provided by Financing Activities. Net cash provided by financing activities amounted to approximately $1,604,000 and $547,000 in the years ended December 31, 2009 and December 31, 2008, respectively.

During the year ended December 31, 2009, the Company generated $2,597,860 in cash from financing activities through the issuance of notes payable to related parties (amounting to $1,725,360) and the sale of common shares to investors (amounting to $872,500). The proceeds received from these activities were used to repay certain notes payable (amounting to $994,025) and to fund operations during the year.

During the year ended December 31, 2008, the company generated $547,021 in cash from financing activities through the issuance of notes payable to related parties (amounting to $461,371) and the sale of common shares to investors (amounting to $198,250). The funds received were used to repay certain notes payable (amounting to $112,600) and to fund operations.

Net cash provided by financing activities for the year ended December 31, 2008 was approximately $547,000 compared to approximately $1,243,000 in 2007. The decrease of approximately $696,000 was primarily because of the reduction in proceeds obtained from related party notes payable by approximately $501,000.

Going concern. The Company's financial statements have been prepared on a going concern basis which contemplates the realization of assets and the liquidation of liabilities in the ordinary course of business. We have incurred substantial losses from operations in 2009 and prior years, including a net loss of $259,977 for the year ended December 31, 2009. The Company also has an accumulated deficit as of December 31, 2009 of $10,644,490.

We are currently looking for additional financing to provide funds for operations and complete our developmental activities. However, we can provide no assurance that we will be able to obtain financing on reasonable terms and at sufficient levels to enable us to complete developmental activities, receive U.S. FDA approval and develop sufficient sales revenue and achieve profitable operations. Until sufficient financing has been received to complete our developmental activities, there exists substantial doubt as to our ability to continue as a going concern. Our auditors have issued an opinion for the year ended December 31, 2009, which states that there is substantial doubt about our ability to continue as a going concern.

OBLIGATIONS AND CONTRACTUAL COMMITMENTS

The following table reflects our current contractual commitments as of December 31, 2009:

	Payments Due by Period				
	Total	2010	2011-2012	2013-2014	Thereafter
Operating leases	$ 120,030	$ 60,895	$ 55,096	$ 4,039	$ —
Long-term liabilities (1)	1,824,176	—	536,222	—	1,287,954
Total contractual obligations	$ 1,944,206	$ 60,895	$ 591,318	$ 4,039	$ 1,287,954

(1) These liabilities represent the Revolver loan and the convertible promissory note with IBEX.

At December 31, 2009, we had available a $2,000,000 revolving credit facility with approximately $1,288,000 balance with IBEX, a related party. For additional information regarding our credit facility and operating leases, see Notes 7 and 12, respectively, of our financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Our estimates and assumptions are based upon a combination of historical information and various other assumptions believed to be reasonable under the particular circumstances. Actual results could differ from those estimates. Certain of the accounting policies which most impact our consolidated financial statements and that require management to make difficult, subjective or complex judgments are described below. See also “Note 2. Summary of Significant Accounting Policies,” to our consolidated financial statements included in Item 15 of this Annual Report on Form 10-K.

Development Stage Company

We devote substantially all of our present efforts to developing our business. One of our principal operations, to sell and market in the U.S. retail market, has not yet commenced as of December 31, 2009 pending U.S. FDA clearance approval. All losses accumulated since inception have been considered as part of our development stage activities. Costs of start-up activities, including organizational costs, are expensed as incurred.

Revenue Recognition

We recognize revenue when evidence of an arrangement exists, such as the presence of an executed sales agreement, pricing is fixed and determinable, collection is reasonably assured and shipment has occurred or title of the goods has been transferred to our buyers. Payment is due on a net basis in 30 days. If the customer is deemed not credit worthy, payment in advance is required. Our agreement with customers includes a right of return. An allowance for returns has been provided for the years ended December 31, 2009, 2008 and 2007. Defective units are replaced at the request of the customer.

We enter into bill and hold arrangements from time-to-time with certain distributors, pursuant to which of our products are purchased by our distributor for shipment at a later date. We recognize revenue on bill and hold arrangements when the following 7 criteria have been met: 1) the risk of ownership has passed to the buyer; 2) the buyer has made a fixed commitment to purchase the goods, preferably in writing; 3) the buyer, and not the seller, has requested that the transaction is on a bill and hold basis; 4) there is a fixed schedule for delivery of the goods, indicating a delivery date that is reasonable and consistent with the buyer's business purpose; 5) the buyer has not retained any specific performance obligations such that the earnings process is not complete; 6) the ordered goods are segregated from the seller's inventory and is not being used to fill other orders; and 7) the product must be complete and ready for shipment. In addition, payment must be received and/or fixed payment dates be agreed with the customer pursuant to which the risk of collection is reduced to a minimal level.

Inventories

Our inventories consist of raw materials, supplies and finished goods. All inventories are valued at lower of average cost or market determined under the first-in, first-out method. We periodically review our inventories and identify items considered outdated or obsolete. Such items are reduced to their estimated net realizable value.

Issuance of stock in exchange for services received

We receive services from consultants and others in exchange for shares of our common stock. All issuances of our stock in exchange for services received are assigned a per share amount determined with reference to either the market value of the shares issued or the value of consideration received, whichever is more readily determinable. Due to the low price and lack of trading in our stock, we believe that the fair value of the services received is more readily determinable, and therefore, we used it to record the related expense in the statement and value attributed to the common shares issued.

Our accounting policy for equity instruments issued to consultants and vendors in exchange for goods and services follows the provisions of the relevant authoritative guidance, in which the measurement date for the fair value of the equity instruments issued is determined at the earlier of (i) the date at which a commitment for performance by the consultant or vendor is reached or (ii) the date at which the consultant or vendor's performance is complete.

NEW ACCOUNTING STANDARDS

Accounting Standards Codification

In June 2009, the FASB issued Statement of Financial Accounting Standards ("SFAS") No. 168, The FASB Accounting Standards Codification and the Hierarchy of Generally Accepted Accounting Principles (the "Codification"). This standard replaces SFAS No. 162, The Hierarchy of Generally Accepted Accounting Principles, and establishes only two levels of U.S. generally accepted accounting principles ("GAAP"), authoritative and nonauthoritative. The FASB ASC has become the source of authoritative, nongovernmental GAAP, except for rules and interpretive releases of the SEC, which are sources of authoritative GAAP for SEC registrants. All other nongrandfathered, non-SEC accounting literature not included in the Codification will become nonauthoritative. This standard is effective for financial statements for interim or annual reporting periods ending after September 15, 2009. The adoption of the Codification changed our references to GAAP accounting standards but did not impact our results of operations, financial position or liquidity.

Participating Securities Granted in Share-Based Transactions

Effective January 1, 2009, we adopted a new accounting standard included in ASC 260, Earnings Per Share (formerly FASB Staff Position ("FSP") Emerging Issues Task Force ("EITF") 03-6-1, Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities). The new guidance clarifies that non-vested share-based payment awards that entitle their holders to receive nonforfeitable dividends or dividend equivalents before vesting should be considered participating securities and included in basic earnings per share. Our adoption of the new accounting standard did not have a material effect on previously issued or current earnings per share.

Fair Value Measurement and Disclosure

Effective January 1, 2009, we adopted a new accounting standard included in ASC 820, Fair Value Measurements and Disclosures ("ASC 820") (formerly FASB FSP No 157-2, Effective Date of FASB Statement No. 157), which delayed the effective date for disclosing all non-financial assets and non-financial liabilities, except for items that are recognized or disclosed at fair value on a recurring basis (at least annually). This standard did not have a material impact on our financial statements.

In April 2009, the FASB issued new guidance for determining when a transaction is not orderly and for estimating fair value when there has been a significant decrease in the volume and level of activity for an asset or liability. The new guidance, which is now part of ASC 820 (formerly FSP 157-4, Determining Fair Value When the Volume and Level of Activity for the Asset or Liability Have Significantly Decreased and Identifying Transactions That Are Not Orderly), requires disclosure of the inputs and valuation techniques used, as well as any changes in valuation techniques and inputs used during the period, to measure fair value in interim and annual periods. In addition, the presentation of the fair value hierarchy is required to be presented by major security type as described in ASC 320, Investments — Debt and Equity Securities. The provisions of the new standard were effective for interim periods ending after June 15, 2009. The adoption of the new standard on April 1, 2009 did not have a material effect on our financial statements.

In April 2009, we adopted a new accounting standard included in ASC 820, (formerly FSP 107-1 and Accounting Principles Board ("APB") 28-1, Interim Disclosures about Fair Value of Financial Instruments). The new standard requires disclosures of the fair value of financial instruments for interim reporting periods of publicly traded companies in addition to the annual disclosure required at year-end. The provisions of the new standard were effective for the interim periods ending after June 15, 2009. Our adoption of this new accounting standard did not have a material effect on our financial statements.

In August 2009, the FASB issued new guidance relating to the accounting for the fair value measurement of liabilities. The new guidance, which is now part of ASC 820, provides clarification that in certain circumstances in which a quoted price in an active market for the identical liability is not available, a company is required to measure fair value using one or more of the following valuation techniques: the quoted price of the identical liability when traded as an asset, the quoted prices for similar liabilities or similar liabilities when traded as assets, or another valuation technique that is consistent with the principles of fair value measurements. The new guidance clarifies that a company is not required to include an adjustment for restrictions that prevent the transfer of the liability and if an adjustment is applied to the quoted price used in a valuation technique, the result is a Level 2 or 3 fair value measurement. The new guidance is effective for interim and annual periods beginning after August 27, 2009. Our adoption of the new guidance did not have a material effect on our financial statements.

Derivative Instruments and Hedging Activities

Effective January 1, 2009, we adopted a new accounting standard included in ASC 815, Derivatives and Hedging (SFAS No. 161, Disclosures about Derivative Instruments and Hedging Activities, an amendment of SFAS No. 133). The new accounting standard requires enhanced disclosures about an entity's derivative and hedging activities and is effective for fiscal years and interim periods beginning after November 15, 2008. Since the new accounting standard only required additional disclosure, the adoption did not impact our financial statements.

Other-Than-Temporary Impairments

In April 2009, the FASB issued new guidance for the accounting for other-than-temporary impairments. Under the new guidance, which is part of ASC 320, Investments — Debt and Equity Securities (formerly FSP 115-2 and 124-2, Recognition and Presentation of Other-Than-Temporary Impairments), an other-than-temporary impairment is recognized when an entity has the intent to sell a debt security or when it is more likely than not that an entity will be required to sell the debt security before its anticipated recovery in value. The new guidance does not amend existing recognition and measurement guidance related to other-than-temporary impairments of equity securities and is effective for interim and annual reporting periods ending after June 15, 2009. Our adoption of the new guidance did not have a material effect on our financial statements.

Subsequent Events

In May 2009, the FASB issued new guidance for subsequent events. The new guidance, which is part of ASC 855, Subsequent Events (formerly SFAS No. 165, Subsequent Events) is intended to establish general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. Specifically, this guidance sets forth the period after the balance sheet date during which management of a reporting entity should evaluate events or transactions that may occur for potential recognition or disclosure in the financial statements, the circumstances under which an entity should recognize events or transactions occurring after the balance sheet date in its financial statements, and the disclosures that an entity should make about events or transactions that occurred after the balance sheet date. The new guidance is effective for fiscal years and interim periods ended after June 15, 2009 and will be applied prospectively. Our adoption of the new guidance did not have a material effect on our financial statements. Management has evaluated the impact of events occurring after December 31, 2009 up to the date of issuance of these financial statements. These statements contain all necessary adjustments and disclosures resulting from that evaluation.

INTEREST RATE AND FOREIGN EXCHANGE RISK

We are subject to interest rate risk on our notes payable and related party notes payable. We do not expect our business, results of operations, financial position or cash flows to be affected to any significant degree by a sudden change in market interest rates. We operate our business within the United States and sell to the United States and certain international locations such as Italy, Canada, Saudi Arabia, Scandinavia, Netherlands and Singapore. We execute all transactions in U.S. dollars, and, therefore, we have no foreign exchange risk.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We have minimal market risk inherent in our financial position. We do not have any derivative financial instruments and do not hold any derivative financial instruments for trading purposes. Our market risk primarily represents the potential loss arising from adverse changes in market interest rates. Our results from operations could be impacted by decreases in interest rates on our cash and cash equivalents. Additionally, we may be exposed to market risk from changes in interest rates related to any debt that may be outstanding under our related party notes payable. We do not expect our cash flows to be affected to any significant degree by a sudden change in market interest rates.

We operate our business within the United States and sell to the United States and certain international locations such as Italy, Canada, Saudi Arabia, Scandinavia, Netherlands and Singapore. We execute all of our transactions in U.S. dollars and therefore do not have any foreign currency exchange risk.

Item 8. Financial Statements and Supplementary Data

Our audited Financial Statements are contained pursuant to Item 15 of this Form 10-K, as Exhibit 99.

Item 9. Changes in and Disagreeements with Accountants and Financial Disclosure. Not Applicable.

Item 9A. Controls and Procedures

Attached as exhibits to this Annual Report on Form 10-K are certifications of our President and Chief Executive Officer ("CEO") which are required pursuant to Rule 13a-14 of the Exchange Act. This "Controls and Procedures" section of this Annual Report on Form 10-K includes information concerning the controls and controls evaluation referenced in the certifications. This section of the Annual Report on Form 10-K should be read in conjunction with the certifications for a more complete understanding of the matters presented.

Evaluation of disclosure controls and procedures

We evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Annual Report on Form 10-K. Disclosure controls and procedures are designed to ensure that information required to be disclosed in our reports filed under the Exchange Act, such as this Annual Report on Form 10-K are recorded, processed, summarized and reported within the time periods specified by the SEC. Disclosure controls are also designed to ensure that such information is accumulated and communicated to our CEO and other management, as appropriate, to allow timely decisions regarding required disclosure.

Based on the evaluation, our President and Chief Executive Officer after evaluating the effectiveness of our "disclosure controls and procedures" (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)), have concluded that, subject to the inherent limitations noted in this Part II, Item 9A, as of December 31, 2009, our disclosure controls and procedures were not effective due to the existence of several material weaknesses in our internal control over financial reporting, as discussed below.

Management's annual report on internal control over financial reporting

Management is responsible for establishing and maintaining internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Our management evaluated, under the supervision and with the participation of our President and Chief Executive Officer, the effectiveness of our internal control over financial reporting as of December 31, 2009.

Based on its evaluation under the framework in Internal Control — Integrated Framework, issued by the Committee of Sponsoring Organizations of the Treadway Commission, our management concluded that our internal control over financial reporting was not effective as of December 31, 2009, due to the existence of significant deficiencies constituting material weaknesses, as described in greater detail below. A material weakness is a control deficiency, or combination of control deficiencies, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis.

This annual report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's independent registered public accounting firm pursuant to temporary rules of the SEC that permit the Company to provide only management's report in this annual report.

Limitations on Effectiveness of Controls

Our management, including our President and Chief Executive Officer, does not expect that our disclosure controls or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additional controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Material Weaknesses Identified

In connection with the preparation of our financial statements for the year ended December 31, 2009, certain significant deficiencies in internal control became evident to management that, in the aggregate, represent material weaknesses, including,

(i) Lack of a sufficient number of independent directors for our board and audit committee. We currently only have one independent director on our board, which is comprised of three directors, and on our audit committee, which is comprised of one director. Although we are considered a controlled company, whereby a group holds more than 50% of the voting power and as such are not required to have a majority of our board of directors be independent, it is our intention to have a majority of independent directors in due course.

(ii) Lack of a financial expert on our audit committee. We currently do not have an audit committee financial expert, as defined by SEC regulations, on our audit committee.

(iii) Insufficient segregation of duties in our finance and accounting functions due to limited personnel. During the year ended December 31, 2009, we had one person on staff that performed nearly all aspects of our financial reporting process, including, but not limited to, access to the underlying accounting records and systems, the ability to post and record journal entries and responsibility for the preparation of the financial statements. This creates certain incompatible duties and a lack of review over the financial reporting process that would likely result in a failure to detect errors in spreadsheets, calculations, or assumptions used to compile the financial statements and related disclosures as filed with the SEC. These control deficiencies could result in a material misstatement to our interim or annual consolidated financial statements that would not be prevented or detected.

As part of the communications by Berenfeld, Spritzer Shechter & Sheer LLP, ("Berenfeld, Spritzer"), with our Audit Committee with respect to Berenfeld, Spritzer's audit procedures for fiscal 2009, Berenfeld, Spritzer informed the audit committee that these deficiencies constituted material weaknesses, as defined by Auditing Standard No. 5, "An Audit of Internal Control Over Financial Reporting that is Integrated with an Audit of Financial Statements and Related Independence Rule and Conforming Amendments," established by the Public Company Accounting Oversight Board ("PCAOB").

Plan for Remediation of Material Weaknesses

We intend to take appropriate and reasonable steps to make the necessary improvements to remediate these deficiencies. We intend to consider the results of our remediation efforts and related testing as part of our year-end 2010 assessment of the effectiveness of our internal control over financial reporting.

We have implemented certain remediation measures and are in the process of designing and implementing additional remediation measures for the material weaknesses described in this Annual Report on Form 10-K. Such remediation activities include the following:

- At an appropriate time, we will recruit one or more additional independent board members to join our board of directors. Such recruitment will include at least one person who qualifies as an audit committee financial expert to join as an independent board member and as an audit committee member.

- We will hire or engage additional qualified and experienced accounting personnel as necessary to review our quarter-end closing processes as well as provide additional oversight and supervision within the accounting department.

In addition to the foregoing remediation efforts, we will continue to update the documentation of our internal control processes, including formal risk assessment of our financial reporting processes.

Changes in Internal Controls over Financial Reporting

There were no significant changes in internal control over financial reporting during the fourth quarter of 2009 that materially affected, or are reasonably likely to materially affect, our internal control over financing reporting.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Richard Staelin, Ph. D	Age 70	Chairman of the Board, Director
Andrew Whelan	Age 65	President / CEO / Director / CFO
Mary Whelan	Age 57	Director

Richard Staelin, Ph. D., Chairman of the Board
Dr. Staelin joined the board in 2006. He is the Edward and Rose Donnell Chaired Professor of Business Administration at Duke's Fuqua School of Business and the President of Informs Society for Marketing Scientists. He was an Associate Dean at The Fuqua School of Business, Duke University for 10 years, past Executive Director of Marketing Science Institute and has held numerous positions at the American Marketing Association (AMA) and The Institute of Management Science (TIMS). He was an editor or an editorial board member of Marketing Science, Journal of Marketing Research, the Journal of Marketing, the Journal of Consumer Psychology and the Journal of Consumer Research. He has also consulted for the FDA and the FTC. At December 31, 2009, Dr. Staelin owns approximately 950,000 shares of BioElectronics common stock.

Andrew J. Whelan, CEO, CFO. President and Board Member
Mr. Whelan is a founder of the Company and has served as the President and Chairman of the Board of Directors since April 2000. He is a seasoned business executive with a strong financial, consulting and management background. From 1993 to April 2000, Mr. Whelan served as the President of P.A. Whelan & Company, Inc., a consulting firm owned by Mr. Whelan and his wife that specialized in the health care industry. Mr. Whelan was also a founder of Drug Counters, Inc., a chain of managed care retail pharmacies, where he served as President and Chief Executive Officer from 1992 until 1993. Drug Counters was sold to Diagnostek, Inc. in 1994. From 1984 until 1992, Mr. Whelan served as Chairman of the Board of Directors and President of Physicians' Pharmaceutical Services, Inc., a public company of which he was a founder. Physicians Pharmaceutical Services was a charter member of the Maryland Chapter of Inc's Fastest Growing Companies in America. Mr. Whelan received his B.S. in accounting from St. Peter's College. Mr. Whelan does not currently own BioElectronics common stock.

Mary K. Whelan, Board Member
Ms. Whelan has served as a director of the Company since April 2002. Ms. Whelan also served as Vice President - Marketing from September 2002 until July 2003 and as Secretary from February 2002 until September 2004. Ms. Whelan currently is Founder and CEO, Revalent Media, Inc., a mobile marketing company. She was previously EVP at mPhase Technologies. She worked more than 20 years at AT&T Corp., Lucent Technologies, Inc. and Bell Labs. During that time, Ms. Whelan successfully launched many high technology products. Ms. Whelan served as Vice President - eBusiness at Lucent Technologies. Prior to that, Ms. Whelan served as Lucent's Vice President - Strategic Communications and Market Operations, in which capacity she was responsible for Lucent Technologies' global marketing operations, including marketing communications and customer programs, and for the global sales support environment for the worldwide sales force. That environment included channel development, sales training, recognition and compensation. Ms. Whelan received extensive experience in all aspects of marketing and public relations at AT&T. She also had P&L responsibility for AT&T's Directory business. Ms. Whelan is the sister of Andrew Whelan. At December 31, 2009, eMarkets Group, owned by Ms. Whelan, beneficially owns approximately 2.3 million shares of BioElectronics common stock.

Involvement in certain legal proceedings. No officer, director, or persons nominated for such positions, promoter or significant employee has been involved in the last five years in any of the following:

- Any bankruptcy petition filed by or against any business of which such person was a general partner or executive officer either at the time of the bankruptcy or within two years prior to that time;

- Any conviction in a criminal proceeding or being subject to a pending criminal proceeding (excluding traffic violations and other minor offenses);

- Being subject to any order, judgment, or decree, not subsequently reversed, suspended or vacated, of any court of competent jurisdiction, permanently or temporarily enjoining, barring, suspending or otherwise limiting his involvement in any type of business, securities or banking activities; and

- Being found by a court of competent jurisdiction (in a civil action), the Commission or the Commodity Futures Trading Commission to have violated a federal or state securities or commodities law, and the judgment has not been reversed, suspended, or vacated.

Regulation S-K Item 405:

Based solely upon a review of Forms 3 and 4 and amendments thereto furnished to the Company under 17 CFR 240.16a-3(e) during its most recent fiscal year and Form 5 and amendments thereto furnished to the Company with respect to its most recent fiscal year, and any written representation referred to in paragraph (b)(1) of this section, the Company is not aware of any director, officer, beneficial owner of more than ten percent of any class of equity securities of the Company registered pursuant to Section 12 that failed to file on a timely basis, as disclosed in the above Forms, reports required by Section 16(a) during the most recent fiscal year or prior years.

Regulation S-K Item 406:

The Company has adopted a written Code of Ethics applicable to its overall operations, including its principal executive, financial or accounting officer.

Regulation S-K Item 407(c)(3):

None.

Regulation S-K Item 407(d)(4) and (5):

The Company does not fulfill the requirements for this disclosure. However, the Company has an audit committee, consisting solely of Dr. Staelin.

Item 11. Executive Compensation.

2009 Summary Compensation Table

The following table sets forth the aggregate cash and other compensation paid, if any, for the years ended December 31, 2009 and 2008, to the Company's Principal Executive Officer and each of its other executive officers whose annual salary and non-equity incentive compensation for the fiscal years ended December 31, 2009 and 2008 exceeded $100,000 (the "Named Executive Officers").

Name and Principal Position	Year	Salary ($) (note 1)	Stock Awards ($) (note 1)	Option Awards ($) (note 1)	Non-Equity Incentive Plan Compensation ($) (note 2)	All Other Compensation ($) (note 1)	Total ($)
Andrew J. Whelan (1) (2) (3) President, Chief Executive Officer and Chief Financial Officer	2009	—	—	—	—	150,000	150,000
	2008	—	—	—	—	150,000	150,000

(1) Mr. Whelan is paid as an independent contractor for services provided. Mr. Whelan did not receive any stock awards, option awards, non-equity incentive plan compensation, employee benefits or other compensation of any type in respect of the years ended December 31, 2009 or 2008.

(2) Except for Mr. Whelan, the Company did not employ any other executive during the years ended December 31, 2009 and 2008, whose annual salary and non equity compensation for the years exceeded $100,000.

(3) During the years ended December 31, 2009 and 2008, the Company did not record any expense in its financial statements related to the issuance of stock options or equity compensation awards.

Narrative Disclosure to Summary Compensation Table

Employment Agreements

There is no written employment or similar agreement between the Company and Mr. Whelan.

Mr. Whelan is a founder of the Company and has served as the President, Chief Executive Officer, and Chief Financial Officer since April 2000. Mr. Whelan also served as the Chairman of the Board of Directors from April 2000 to July 2009, until such role was transferred to Richard Staelin. Following this date, Mr. Whelan serves as a member of the Board of Directors. Mr. Whelan was paid $150,000 for services provided during the years ended December 31, 2009 and 2008. Mr. Whelan did not receive any other types of compensation, such as stock or option awards, non-equity incentive plan compensation or other compensation for the years ended December 31, 2009 and 2008.

Material Terms of Option Grants and Grants of Restricted Stock

There were no option grants or grants of restricted stock to Mr. Whelan during the years ended December 31, 2009 and 2008.

Material Terms of Non-Equity Incentive Awards

There were no non-equity incentive awards granted to Mr. Whelan for the years ended December 31, 2009 and 2008.

ADDITIONAL COMPENSATION DISCLOSURE NARRATIVE

Retirement Benefits

The Company does not currently maintain or support a 401(k) or other defined contribution pension plan for any of its employees.

Executive Perquisites

The Company did not provide executive perquisites to Mr. Whelan during the years ended December 31, 2009 and 2008.

Post-Employment Compensation

The Company has not undertaken to provide any post-employment compensation or post-employment benefits of any type to Mr. Whelan, or any other executive, as of December 31, 2009.

The Company does not have any contract, agreement, plan of arrangement with Mr. Whelan that provides for payments to him at, following, or in connection with the executive's resignation, retirement or termination, a change in control if the issuer, or a change in the executive's responsibilities following a change in control.

2009 OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END TABLE

The following table summarizes the unexercised options, nonvested stock and equity incentive plan awards outstanding and held by the Principal Executive Officer as of December 31, 2009:

	Option Awards				Stock Awards	
Name	No. of Securities Underlying Unexercised Options (#) Exercisable	No. of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	No. of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)
Andrew J. Whelan	—	—	—	—	—	—

Notes:

(1) Mr. Whelan did not have any outstanding equity awards as of December 31, 2009.

DIRECTOR COMPENSATION

2009 DIRECTOR COMPENSATION TABLE

The following table sets forth the cash and noncash compensation paid to the Company's directors in respect of services provided during the year ended December 31, 2009:

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)	Option Awards ($) (1)	Total ($)
Richard Staelin,	—	—	—	—
Andrew J. Whelan	—	—	—	—
Mary K. Whelan	—	—	—	—

(1) There were no fees earned or paid (whether in the form of cash, stock or option awards) to any of the directors during the year ended December 31, 2009. In July 2009, 20,000,000 shares of common stock were issued to Mr. Staelin and Ms. Whelan respectively for their services as Board of Directors during the calendar year ended December 31, 2008. The value of the shares issued was recorded as directors' expenses for the year ended December 31, 2008 at $0.00225 per share, or $90,000 in total.

(2) There were no outstanding option awards held by directors as of December 31, 2009.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

During fiscal 2009, there is not a formal Compensation Committee. All Board of Directors participated in the material compensation decision. No interlocking relationships exist between any of these members of the Board or any executive officer of the Company.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Regulation S-K Item 201d: Securities authorized for issuance under equity compensation plans.

Equity Compensation Plan Information

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)		Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	-	$	-	-
Equity compensation plans not approved by security holders	10,000,000		0.30	4,115,000
Total	10,000,000	$	0.30	4,115,000

Regulation S-K Item 403a: Security ownership of certain beneficial owners of more than five percent (5%).

None

Regulation S-K Item 403b: Security ownership of Management.

(1) Title of class	(2) Name of beneficial owner	(3) Amount and nature of beneficial ownership	(4) Percent of class
Common	Richard Staelin	950,000	0.06 %
Common	Andrew J. Whelan	-	-
Common	Mary K. Whelan	2,318,472	0.16%

Unless otherwise indicated in the footnotes, the address for each principal shareholder is in the care of BioElectronics Corporation, 4539 Metropolitan Court, Frederick, Maryland 21704. To the best of the Company's knowledge, none of the Management's holdings may result in a future change in its control.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Regulation S-K Item 404:

On January 1, 2005, the Company entered into an unsecured revolving convertible promissory note agreement ("the Revolver") with IBEX, LLC ("IBEX") a related party, for a maximum limit of $2,000,000, with interest at the Prime Rate plus 2%, and all accrued interest and principal due on or before January 1, 2015, whether by the payment of cash or by conversion into shares of the Company's common stock. The Revolver is convertible at various conversion prices based on the VWAP for the 10 trading days preceding the date of conversion. IBEX, LLC is a limited liability company, whose President is the daughter of the President of the Company.

During the year ended December 31, 2007, IBEX converted $910,000 of the Revolver's outstanding balance and received 26,000,000 shares of the Company's common stock at conversion prices ranging from $.02 to $.10 per share.

During the year ended December 31, 2008, IBEX converted $722,400 of the Revolver's outstanding balance and received 57,000,000 shares of the Company's common stock at conversion prices ranging from less than $.01 to $.02 per share. At December 31, 2008, the balance of the Revolver was $1,099,722.

During the year ended December 31, 2009, IBEX converted $529,100 of the Revolver's outstanding balance and received 439,500,000 shares of the Company's common stock at conversion prices at less than $.01 per share. At December 31, 2009, the balance of the Revolver was $1,287,954.

In addition to the Revolver as described above, on August 1, 2009, the Company entered into a convertible promissory note agreement with IBEX, for $519,920, with simple interest at 8% per annum. All accrued interest and principal are due on or before August 31, 2011, whether by the payment of cash or by conversion into shares of the Company's common stock. The promissory note is convertible equal to the quotient of (i) a sum equal to the entire outstanding principal and interest, divided by (ii) the conversion price of $.019 per share. According to the Security Agreement dated August 1, 2009, the Company grants IBEX a security interest in, all of the right, title, and interest of the Company, in and to all of the Company's personal property and intellectual property, and all proceeds or replacements as collaterals.

The Company has entered into related party loans with various stockholders of the Company. The loans are interest-bearing at rates consisting of prime plus 2.0% (5.25% at December 31, 2009 and 7.00% at December 31, 2008) and stated rates at 8% with no stated maturity dates. During the year ended December 31, 2009, the Company obtained an additional loan of $1,033,249 from the shareholders and made payments of $893,000. The amounts owed to the stockholders other than IBEX as of December 31, 2009 and 2008 were $0 and $498,757, respectively.

Additionally, the Company signed a distribution agreement on February 9, 2009 with eMarkets Group, LLC (eMarkets) a company owned and controlled by a member of the board of directors and sister of the company's president. The agreement provides for eMarkets to be the exclusive distributor of the company's line of products to customers in certain countries outside of the United States for a period of three years. The distribution agreement lists the prices to be paid for the company's products by eMarkets and provides for the company to provide training and customer support at its own cost to support the distributor's sales function. Revenues for the year ended December 31, 2009 include $271,047 for sales and $63,496 for cost of goods sold to eMarkets, a related party, and a balance due from such company at December 31, 2009 of $165,297.

Regulation S-K Item 407(a):

The Company does not fulfill the requirements for this disclosure.

Item 14. Principal Accounting Fees and Services.

The following table represents aggregate fees billed to us during the years ended December 31, 2009 and 2008 by Berenfeld, Spritzer Shechter & Sheer LLP, our principal independent registered public accounting firm for the audit of our financial statements for 2008, 2007 and 2006.

Fiscal Year Ended December 31:	2009	2008
Audit Fees	$ 29,800	$ —
Audit-Related Fees	—	—
Tax Fees	—	—
All Other Fees	—	—
Total	$ 29,800	$ —

Audit fees primarily include services for auditing our financial statements along with reviews of our interim financial information. Berenfeld, Spritzer Shechter & Sheer LLP's work on these audits was performed by full time, regular employees and partners of the firm.

Audit-related fees include professional services rendered in connection with SEC registration statements. There were no audit related, tax or other fees billed during the years ended December 31, 2009 and 2008.

All fees described above were approved by our Audit Committee, and the Audit Committee considers whether the provision of the services rendered in respect of those fees is compatible with maintaining the auditor's independence.

PART IV
Item 15. Exhibits.

5.1	Securities as Compensation
5.2	Recent Sales of Unregistered Securities
10.1	Company’s Code of Business Conduct and Ethics
31.1	Certification of Principal Executive Officer and Principal Financial Officer
99	Financial Statements Period from April 10, 2000 (Inception) to December 31, 2009

- Report of Independent Registered Public Accounting Firm
- Balance Sheets
- Statements of Operations
- Statement of Changes in Stockholders’ Deficiency
- Statement of Cash Flows
- Notes to Financial Statements

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned; thereunto duly authorized, in Frederick, Maryland, on March 31, 2010.

BIOELECTRONICS CORPORATION

March 31, 2010 By: /S/ Andrew Whelan

Andrew Whelan

President, Chief Executive Officer, Chief Financial Officer and Director

(Principal Executive Officer and Principal Financial Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of Registrant and in the capacities indicated on March 31, 2010.

Signature	Title
/S/ Andrew Whelan Andrew Whelan	President, Chief Executive Officer, Chief Financial Officer and Director (Principal Executive Officer and Principal Financial Officer)

Exhibits