

4,338,308 Shares of Common Stock

The selling stockholders of EnteroMedics Inc. may offer and resell up to 4,338,308 shares of our common stock under this prospectus, each for their own accounts. These shares were issued in a private placement on February 24, 2009.

The prices at which these stockholders may sell these shares will be determined by the prevailing market price for shares of our common stock or in negotiated transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying market prices determined at the time of sale or at negotiated prices. We cannot predict when or in what amounts a selling stockholder may sell any of the shares offered by this prospectus. We will not receive any of the proceeds from the sale of these shares. All expenses of registration incurred in connection with this offering are being borne by us, but all selling and other expenses incurred by the selling stockholders will be borne by the selling stockholders.

Our common stock is quoted on the NASDAQ Global Market under the symbol "ETRM." On April 8, 2009, the last sale price of our common stock as reported on the NASDAQ Global Market was \$1.28 per share.

Investing in our common stock involves risks. You should consider carefully the risks and uncertainties set forth in the section entitled "Risk Factors" beginning on page 3 of this prospectus and in the documents we file with the Securities and Exchange Commission that are incorporated by reference in this prospectus before making a decision to purchase our stock.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is April 30, 2009.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (SEC). The prospectus relates to 4,338,308 shares of our common stock which the selling stockholders named in this prospectus may sell from time to time. We will not receive any of the proceeds from these sales. We have agreed to pay the expenses incurred in registering these shares, including legal and accounting fees.

These shares have not been registered under the securities laws of any state or other jurisdiction as of the date of this prospectus. The selling stockholders should not make an offer of these shares in any state where the offer is not permitted. Brokers or dealers should confirm the existence of an exemption from registration or effect a registration in connection with any offer and sale of these shares.

You should rely only on the information contained or incorporated by reference in this prospectus or any supplement to this prospectus. We have not authorized anyone to provide you with different information or to make representations not contained in this prospectus. This prospectus is neither an offer to sell nor a solicitation of an offer to buy any securities other than those registered by this prospectus, nor is it an offer to sell or a solicitation of an offer to buy securities where an offer or solicitation would be unlawful. You should not assume that the information contained in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front cover of those documents.

Unless the context otherwise requires, the terms "we," "our," "EnteroMedics," and "the Company" refer to EnteroMedics Inc., a Delaware corporation, and our subsidiary.

All references in this prospectus to "\$," "U.S. Dollars" and "dollars" are to United States dollars.

In the United States we have registered trademarks for VBLOC, ENTEROMEDICS and MAESTRO each registered with the United States Patent and Trademark Office, and have received a Notice of Allowance and first extension of time to file a Statement of Use on our application to register the mark EMPOWER. In addition, the marks VBLOC, MAESTRO and ENTEROMEDICS are the subject of either a trademark registration or application for registration in Australia, China, Mexico, the European Community, Saudi Arabia, the United Arab Emirates and Switzerland. We have also taken steps to seek registration of these three marks in Brazil.

ENTEROMEDICS INC.

We are a development stage medical device company focused on the design and development of devices that use neuroblocking technology to treat obesity, its associated co-morbidities, and other gastrointestinal disorders. Our proprietary neuroblocking technology, which we refer to as VBLOC therapy, is designed to intermittently block the vagus nerve using high-frequency, low-energy, electrical impulses. The vagus nerve controls much of the activity of the stomach, intestines and pancreas and plays a role in food processing. Our initial product under development is the Maestro System, which uses VBLOC therapy to limit the expansion of the stomach, help control hunger sensations between meals, reduce the frequency and intensity of stomach contractions and produce a feeling of early and prolonged fullness. Based on our understanding of vagal nerve function and nerve blocking from our preclinical studies and the results of our initial clinical trials, we believe the Maestro System may offer obese patients a minimally-invasive treatment alternative that has the potential to result in significant and sustained weight loss. In addition, data from sub-group analyses demonstrate that VBLOC therapy may hold promise in improving the obesity-related comorbidities of diabetes and hypertension, independent of, and prior to, substantial weight loss. We are conducting, or plan to conduct, feasibility studies in each of these co-morbidities to assess VBLOC therapy's potential in addressing multiple indications.

We are currently evaluating the Maestro System in human clinical trials conducted in the United States, Australia, Mexico, Norway and Switzerland. To date, we have not observed any mortality or any unanticipated adverse device effects in these clinical trials. We have also not observed any long-term problematic clinical side effects in any patients, including in those patients who have been using the Maestro System for more than one year.

In 2008, we completed enrollment and implantation of subjects in our pivotal clinical study, the EMPOWER trial. The EMPOWER trial is a multi-center, randomized, double-blind, prospective, placebo-controlled pivotal study being conducted in the United States and selected international centers. Assuming that the data from the trial is positive, we plan to use data from our EMPOWER trial to support our premarket approval application for the Maestro System, which we expect to submit in late 2009. If the U.S. Food and Drug Administration (FDA) grants us approval, we anticipate we will be able to commercialize the Maestro System in the United States in early 2011. In the event that the Maestro System receives FDA approval, we expect to recruit and retain personnel responsible for commercial operations, sales and marketing, customer service, reimbursement and technical service in order to support the commercial launch of our product. Given the time required to locate and train appropriate personnel, we expect to commence that process prior to actually receiving FDA approval. We will also need to increase production volumes of our products in connection with commercialization. We rely primarily on third-party manufacturers and suppliers to produce our products and will continue to select qualified suppliers and contract manufacturers that can supply products on a commercial scale according to our proprietary specifications.

We were incorporated in Minnesota in December 2002 under the name Beta Medical, Inc. In 2003, we changed our name to EnteroMedics Inc. and in 2004 we reincorporated in Delaware. As of December 31, 2008, we had a total of 53 employees, all of which are located in the United States. Our principal executive offices are located at 2800 Patton Road, St. Paul, Minnesota 55113, and our telephone number is (651) 634-3003.

RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the risk factors described below, together with the other information included in our Annual Report on Form 10-K before you decide to invest in our securities. Additional risks and uncertainties not presently known to us or that we do not currently believe are important to an investor, if they materialize, also may adversely affect the Company.

Risks Related to our Business and Industry

We are a development stage company with a limited history of operations and no approved products, and we cannot assure you that we will ever have a commercialized product.

We are a development stage company with a limited operating history upon which you can evaluate our business. We currently do not have any products cleared or approved for commercialization or any other source of revenue, and we do not expect to have a commercialized product until at least early 2011. We have been engaged in research and development since our inception in 2002 and have invested substantially all of our time and resources in developing our VBLOC therapy, which we intend to commercialize initially in the form of our Maestro System. The success of our business will depend on our ability to obtain regulatory approval to market our Maestro System and any products we may develop in the future and our ability to create product sales, successfully introduce new products, establish our sales force and control costs, all of which we may be unable to do. If we are unable to successfully develop, receive regulatory approval for and commercialize our Maestro System for its indicated use, we may never generate revenue or be profitable and we may have to cease operations. Our lack of a significant operating history also limits your ability to make a comparative evaluation of us, our products and our prospects.

We have incurred losses since inception and we anticipate that we will continue to incur increasing losses for the foreseeable future.

We have incurred losses in each year since our formation in 2002. As of December 31, 2008, we had a deficit accumulated during the development stage of \$101.3 million. Our net losses applicable to common stockholders for the fiscal years ended December 31, 2008, 2007 and 2006 were \$37.9 million, \$28.6 million and \$17.7 million, respectively. We have funded our operations to date principally from the sale of our securities and through the issuance of indebtedness. Development of a new medical device, including conducting clinical trials and seeking regulatory approvals, is a long, expensive and uncertain process. If our Maestro System is approved for marketing by the U.S. Food and Drug Administration (FDA) we expect to incur significant sales and marketing expenses prior to recording sufficient revenue to offset these expenses. We expect our general and administrative expenses to increase as we continue to add the infrastructure necessary to support operating as a public company and develop our intellectual property portfolio. For these reasons, we expect to continue to incur significant and increasing operating losses for the next several years. These losses, among other things, have had and will continue to have an adverse effect on our stockholders' equity and working capital. Because of the numerous risks and uncertainties associated with developing new medical devices, we are unable to predict the extent of any future losses or when we will become profitable, if ever.

We have not received, and may never receive, approval from the FDA or the regulatory body in any other country to market our Maestro System for the treatment of obesity.

We do not have the necessary regulatory approvals to market our Maestro System in the United States or in any foreign market other than the European Community for which we received CE Mark approval

on March 4, 2009. We plan initially to launch our product, if approved, in the United States, but ultimately will also seek to commercialize our Maestro System in countries outside the United States.

We cannot market our product in the United States unless it has been approved by the FDA. The FDA approval process involves, among other things, successfully completing clinical trials and obtaining a premarket approval (PMA). The PMA process requires us to prove the safety and efficacy of our Maestro System to the FDA's satisfaction. This process can be expensive and uncertain, requires detailed and comprehensive scientific and human clinical data, generally takes one to three years after a PMA application is filed, and notwithstanding the effort and expense incurred, may never result in the FDA granting a PMA. Because VBLOC therapy represents a novel way to effect weight loss in the treatment of obesity, and because there is a large population of obese patients who might be eligible for treatment, it is possible that the FDA and other regulatory bodies will review an application for approval of our Maestro System with greater scrutiny, which could cause that process to be lengthier and more involved than that for products without such characteristics. The FDA can delay, limit or deny approval of a PMA application for many reasons, including:

- our inability to demonstrate safety or effectiveness to the FDA's satisfaction;
- the data from our preclinical studies and clinical trials may be insufficient to support approval;
- the facilities of our third-party manufacturers or suppliers may not meet applicable requirements;
- our compliance with preclinical, clinical or other regulations;
- our inability to meet the FDA's statistical requirements or changes in statistical tests or significance levels the FDA requires for approval of a medical device, including ours; and
- changes in the FDA approval policies, expectations with regard to the type or amount of scientific data required or adoption of new regulations may require additional data or additional clinical studies.

In order to market our Maestro System outside of the United States, we will need to establish and comply with the numerous and varying regulatory requirements of other countries regarding safety and efficacy. Approval procedures vary among countries and can involve additional product testing and additional administrative review periods. The time required to obtain approval in other countries may differ from that required to obtain FDA approval. The regulatory approval process in other countries may also include all of the risks detailed above regarding FDA approval in the United States. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others. While we have received the European CE Mark, we cannot assure you when, or if, we will be able to commence sales in the European Economic Area or obtain approval to market our Maestro System in other countries outside the United States.

We may not obtain the necessary regulatory approvals to market our Maestro System in the United States or anywhere else. Even if we obtain approval, the FDA or other regulatory authorities may require expensive or burdensome post-market testing or controls. Any delay in, failure to receive or maintain, or significant limitation on approval for our Maestro System could prevent us from generating revenue or achieving profitability and we may be forced to cease operations.

We may be unable to complete our EMPOWER pivotal trial or other trials, or we may experience significant delays in completing our clinical trials, which could prevent or delay regulatory approval of our Maestro System and impair our financial position.

Our application for an investigational device exemption (IDE) for the EMPOWER pivotal trial, a randomized, prospective, placebo-controlled multi-center trial of our Maestro System in the United States, has been approved by the FDA. In 2008 we completed enrollment and implantation of subjects in the EMPOWER trial. Conducting a clinical trial of this size, which involves screening, assessing, testing, treating and monitoring patients at up to 13 sites across the country and two in Australia, and coordinating with patients and clinical institutions, is a complex and uncertain process.

The completion of the EMPOWER trial, and our other ongoing clinical trials, could be delayed, suspended or terminated for several reasons, including:

- ongoing discussions with regulatory authorities regarding the scope or design of our preclinical results or clinical trial or requests for supplemental information with respect to our preclinical results or clinical trial results;
- our failure or inability to conduct the clinical trials in accordance with regulatory requirements;
- sites currently participating in the trial may drop out of the trial, which may require us to engage new sites or petition the FDA for an expansion of the number of sites that are permitted to be involved in the trial;
- patients may not remain in or complete, clinical trials at the rates we expect;
- patients may experience serious adverse events or side effects during the trial, which, whether or not related to our product, could cause the FDA or other regulatory authorities to place the clinical trial on hold;
- clinical investigators may not perform our clinical trials on our anticipated schedule or consistent with the clinical trial protocol and good clinical practices; and
- we may be unable to obtain a sufficient supply of our Maestro System necessary for the timely conduct of the clinical trials.

If our clinical trials are delayed it will take us longer to ultimately commercialize a product and generate revenue or the delay could result in our being unable to do so. Moreover, our development costs will increase if we have material delays in our clinical trials or if we need to perform more or larger clinical trials than planned.

Even if we complete our EMPOWER trial and our other clinical trials, these trials may not produce results that are sufficient to support approval of a PMA application.

We will consider our Maestro System to be effective if the EMPOWER trial demonstrates an average of at least 17 percentage points of excess weight loss (EWL) between the active and control groups at 12 months, with a 97.5% confidence interval of 10 to 24 percentage points of EWL. The FDA has indicated to us that they believe that a 20 to 25 percentage point greater EWL than a control group, absent a known and statistically validated safety profile, is the appropriate efficacy criterion for the EMPOWER trial. Thus, there is a risk that, even if we achieve our endpoint of an average of at least 17 percentage points of

EWL between the active and control groups at 12 months, with a 97.5% confidence interval of 10 to 24 percentage points of EWL, the FDA may not approve our Maestro System. To date, we have limited clinical data regarding the efficacy of our therapy at 12 months upon which to evaluate our ability to meet either our or the FDA's proposed efficacy endpoint. Our results and our ability to obtain approval from the FDA for our Maestro System may also depend on the measurement standards we use to evaluate the excess weight loss data. In addition, there is a risk that the FDA may require us to conduct a longer clinical trial, submit additional follow-up data, or engage in other costly and time consuming activities that may delay the FDA's approval of the Maestro System. If our clinical trials fail to produce sufficient data to support a PMA application, it will take us longer to ultimately commercialize a product and generate revenue or the delay could result in our being unable to do so. Moreover, our development costs will increase if, to achieve sufficient data to support PMA, we need to perform more or larger clinical trials than planned.

Even if we obtain the necessary regulatory approvals, our efforts to commercialize our Maestro System may not succeed or may encounter delays which could significantly harm our ability to generate revenue.

If we obtain regulatory approval to market our Maestro System, our ability to generate revenue will depend upon the successful commercialization of this product. Our efforts to commercialize our Maestro System may not succeed for a number of reasons, including:

- our Maestro System may not be accepted in the marketplace by physicians, patients and third-party payors;
- the price of our Maestro System, associated costs of the surgical procedure and treatment and the availability of sufficient third-party reimbursement for the procedure and therapy implantation and follow-up procedures;
- · appropriate reimbursement coding options may not exist to enable billing for the system implantation and follow-up procedures;
- we may not be able to sell our Maestro System at a price that allows us to meet the revenue targets necessary to generate revenue for profitability;
- the frequency and severity of any side effects of our VBLOC therapy;
- physicians and potential patients may not be aware of the perceived effectiveness and sustainability of the results of VBLOC therapy provided by our Maestro System;
- · we, or the investigators of our product, may not be able to have information on the outcome of the trials published in medical journals;
- the availability and perceived advantages and disadvantages of alternative treatments;
- patient noncompliance with wearing the external components of the Maestro RF System may render VBLOC therapy less effective in achieving long-term weight loss;
- · any rapid technological change may make our product obsolete;
- we may not be able to have our Maestro System manufactured in commercial quantities or at an acceptable cost;

- we may not have adequate financial or other resources to complete the development and commercialization of our Maestro System; and
- we may be sued for infringement of intellectual property rights and could be enjoined from manufacturing or selling our products.

Besides requiring physician adoption, market acceptance of our Maestro System will depend on successfully communicating the benefits of our VBLOC therapy to three additional constituencies involved in deciding whether to treat a particular patient using such therapy: (1) the potential patients themselves; (2) institutions such as hospitals, where the procedure would be performed and opinion leaders in these institutions; and (3) third-party payors, such as private healthcare insurers and Medicare, which would ultimately bear most of the costs of the various providers and equipment involved in our VBLOC therapy. Marketing to each of these constituencies requires a different marketing approach, and we must convince each of these groups of the efficacy and utility of our VBLOC therapy to be successful.

If our VBLOC therapy, or any other neuroblocking therapy for other gastrointestinal diseases and disorders that we may develop, does not achieve an adequate level of acceptance by the relevant constituencies, we may not generate significant product revenue and may not become profitable. The earliest we expect to be able to commercialize our Maestro System is early 2011, if at all. If we are not successful in the commercialization of our Maestro System for the treatment of obesity we may never generate any revenue and may be forced to cease operations.

We depend on clinical investigators and clinical sites to enroll patients in our clinical trials, and on other third parties to manage the trials and to perform related data collection and analysis, and, as a result, we may face costs and delays that are outside of our control.

We rely on clinical investigators and clinical sites to enroll patients in our clinical trials, including EMPOWER, and other third parties to manage the trials and to perform related data collection and analysis. However, we may not be able to control the amount and timing of resources that clinical sites may devote to our clinical trials. If these clinical investigators and clinical sites fail to enroll a sufficient number of patients in our clinical trials, to ensure compliance by patients with clinical protocols or comply with regulatory requirements, we will be unable to complete these trials, which could prevent us from obtaining regulatory approvals for our product. Our agreements with clinical investigators and clinical trial sites for clinical testing place substantial responsibilities on these parties and, if these parties fail to perform as expected, our trials could be delayed or terminated. If these clinical investigators, clinical sites or other third parties do not carry out their contractual duties or obligations or fail to meet expected deadlines, or if the quality or accuracy of the clinical data they obtain is compromised due to their failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated, or the clinical data may be rejected by the FDA, and we may be unable to obtain regulatory approval for, or successfully commercialize, our product.

Assuming we receive regulatory approval for the Maestro System, modifications to the Maestro System may require additional approval from the FDA, which may not be obtained or may delay our commercialization efforts.

The FDA requires medical device companies to initially make and document a determination of whether or not a modification requires a new approval, supplement or clearance; however, the FDA can review a company's decision. Any modifications to an FDA-approved device that could significantly affect its safety or efficacy, or that would constitute a major change in its intended use would require a supplemental IDE and possibly additional clinical studies and a separate PMA application. Product changes or revisions will require all the regulatory steps and associated risks discussed above including

testing, an IDE supplement and clinical study. We may not be able to obtain approval of supplemental IDEs or PMAs for product modifications, new indications for our product or new products. Delays in obtaining future clearances would adversely affect our ability to introduce new or enhanced products in a timely manner, which in turn would harm our commercialization efforts and future growth.

Physicians may not widely adopt our Maestro System and VBLOC therapy unless they determine, based on experience, long-term clinical data and published peer reviewed journal articles, that VBLOC therapy provides a safe and effective alternative to other existing treatments for obesity.

Physicians tend to be slow to change their medical treatment practices because of the time and skill required to learn a new procedure and the perceived liability risks arising from the use of new products and procedures, and the uncertainty of third-party coverage and reimbursement. Physicians may not widely adopt our Maestro System and VBLOC therapy unless they determine, based on experience, long-term clinical data and published peer reviewed journal articles, that the use of our VBLOC therapy provides a safe and effective alternative to other existing treatments for obesity, including pharmaceutical solutions and bariatric surgical procedures.

We cannot provide any assurance that the data collected from our current and planned clinical trials will be sufficient to demonstrate that our VBLOC therapy is an attractive alternative to other obesity treatment procedures. We rely on experienced and highly trained surgeons to perform the procedures in our clinical trials and both short- and long-term results reported in our clinical trials may be significantly more favorable than typical results of practicing physicians, which could negatively impact rates of adoption of our Maestro System and VBLOC therapy. We believe that published peer-reviewed journal articles and recommendations and support by influential physicians regarding our Maestro System and VBLOC therapy will be important for market acceptance and adoption, and we cannot assure you that we will receive these recommendations and support, or that supportive articles will be published.

If we fail to obtain adequate coding, coverage or payment levels for our product by governmental healthcare programs and other third-party payors, there may be no commercially viable markets for our Maestro System or other products we may develop or our target markets may be much smaller than expected.

Healthcare providers generally rely on third-party payors, including governmental payors, such as Medicare and Medicaid, and private healthcare insurers, to adequately cover and reimburse the cost of medical devices. Importantly, third-party payors are increasingly challenging the price of medical products and services and instituting cost containment measures to control or significantly influence the purchase of medical products and services. We expect that third-party payors will continue to attempt to contain or reduce the costs of healthcare by challenging the prices charged for healthcare products and services. If reimbursement for our Maestro System and the related surgery and facility costs is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, market acceptance of our Maestro System will be impaired and our future revenue, if any, would be adversely affected. As such, even if we obtain FDA clearance or approval for our Maestro System and begin to market it, the availability and level of third-party coverage and reimbursement could substantially affect our ability to commercialize our Maestro System and other products we may develop.

The efficacy, safety, ease of use and cost-effectiveness of our Maestro System and of any competing products will, in part, determine the availability and level of coverage and payment. In particular, we expect that securing coding, coverage and payment for our Maestro System will be more difficult if our EMPOWER trial does not demonstrate a percentage of excess weight loss from a pre-implementation baseline that healthcare providers and obese individuals consider clinically meaningful, whether or not

regulatory agencies consider the improvement of patients treated in clinical trials to have been clinically meaningful.

In some international markets, pricing of medical devices is subject to government control. In the United States and international markets, we expect that both government and third-party payors will continue to attempt to contain or reduce the costs of healthcare by challenging the prices charged for healthcare products and services. If payment for our Maestro System and the related surgery and facility costs is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, market acceptance of our Maestro System will be impaired and our future revenue, if any, would be adversely affected.

We cannot predict the likelihood or pace of any significant regulatory or legislative action in any of these areas, nor can we predict whether or in what form healthcare legislation being formulated by various governments will be passed. We also cannot predict with precision what effect such governmental measures would have if they were ultimately enacted into law. However, in general, we believe that such legislative activity will likely continue. If adopted, such measures can be expected to have an impact on our business.

Even if our Maestro System is approved by regulatory authorities, if we or our suppliers fail to comply with ongoing regulatory requirements, or if we experience unanticipated product problems, our Maestro System could be subject to restrictions or withdrawal from the market.

Completion of our clinical trials and commercialization of our Maestro System will require access to manufacturing facilities that meet applicable regulatory standards to manufacture a sufficient supply of our product. We rely solely on third parties to manufacture and assemble our Maestro System, and do not currently plan to manufacture or assemble our Maestro System ourselves in the future.

Any product for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data and promotional activities for such product, will be subject to continual review and periodic inspections by the FDA and other regulatory bodies. In particular we and our manufacturers and suppliers are required to comply with Good Manufacturing Practices (GMP), which for medical devices is called the Quality System Regulation (QSR), and other regulations which cover the methods and documentation of the design, testing, production, control, quality assurance, labeling, packaging, storage and shipping of any product for which we obtain marketing approval. The FDA enforces the QSR through unannounced inspections. We and our third-party manufacturers and suppliers have not yet been inspected by the FDA and will have to successfully complete such inspections before we receive regulatory approvals for our Maestro System. Failure by us or one of our manufacturers or suppliers to comply with statutes and regulations administered by the FDA and other regulatory bodies, or failure to adequately respond to any observations, could result in enforcement actions against us or our manufacturers or suppliers, including, restrictions on our product or manufacturing processes, withdrawal of the product from the market, voluntary or mandatory recall, fines, suspension of regulatory approvals, product seizures, injunctions or the imposition of civil or criminal penalties.

If any of these actions were to occur it would harm our reputation and cause our product sales to suffer. Furthermore, our key component suppliers may not currently be or may not continue to be in compliance with applicable regulatory requirements. If the FDA or any other regulatory body finds their compliance status to be unsatisfactory, our commercialization efforts could be delayed, which would harm our business and our results of operations.

Even if regulatory approval of a product is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed. If the FDA determines that our promotional

materials, training or other activities constitute promotion of an unapproved use, we could be subject to significant liability, the FDA could request that we cease, correct or modify our training or promotional materials or subject us to regulatory enforcement actions. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider our training or other promotional materials to constitute promotion of an unapproved use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement.

We are subject to medical device reporting (MDR) regulations that require us to report to the FDA or governmental authorities in other countries if our products cause or contribute to a death or serious injury or malfunction in a way that would be reasonably likely to contribute to death or serious injury if the malfunction were to recur. The FDA and similar governmental authorities in other countries have the authority to require the recall of our products in the event of material deficiencies or defects in design or manufacturing. A government mandated, or voluntary, recall by us could occur as a result of component failures, manufacturing errors or design defects, including defects in labeling. Any recall would divert managerial and financial resources and could harm our reputation with customers. There can be no assurance that there will not be product recalls in the future or that such recalls would not have a material adverse effect on our business. Furthermore, we may later discover previously unknown problems with our products, including medically serious device related events. For example, we do not have long-term data on the safety of the Maestro System. Thus, there is a risk that long-term use of our Maestro System could cause injuries or harm, including possible damage to the vagus nerve. Any discovery of previously unknown problems with our product, including medically serious device related events, may result in restrictions on such products, withdrawal of the products from the market, voluntary or mandatory recalls, fines, suspension of regulatory approvals, product seizures, injunctions or the imposition of civil or criminal penalties.

We depend on a limited number of manufacturers and suppliers of various critical components for our Maestro System. The loss of any of these manufacturer or supplier relationships could delay our clinical trials or prevent or delay commercialization of our Maestro System.

We rely entirely on third parties to manufacture our Maestro System and to supply us with all of the critical components of our Maestro System, including our leads, implantable batteries, neuroregulators and controllers. If any of our existing suppliers were unable or unwilling to meet our demand for product components, or if the components or finished products that they supply do not meet quality and other specifications, commercialization of our product could be delayed. Alternatively, if we have to switch to a replacement manufacturer or replacement supplier for any of our product components, we may face additional regulatory delays, and the manufacture and delivery of our Maestro System could be interrupted for an extended period of time, which could delay completion of our clinical trials or commercialization of our Maestro System. In addition, we may be required to obtain regulatory approval from the FDA to use different suppliers or components.

If our device manufacturers or our suppliers are unable to provide an adequate supply of our product following the start of commercialization, our growth could be limited and our business could be harmed.

In order to produce our Maestro System in the quantities that we anticipate will be required to meet anticipated market demand, we will need our manufacturers to increase, or scale-up, the production process by a significant factor over our current level of production. There are technical challenges to scaling-up manufacturing capacity and developing commercial-scale manufacturing facilities that may require the investment of substantial additional funds by our manufacturers and hiring and retaining additional management and technical personnel who have the necessary manufacturing experience. If our manufacturers are unable to do so, we may not be able to meet the requirements for the launch of the

product or to meet future demand, if at all. We may also represent only a small portion of our supplier's or manufacturer's business and if they become capacity constrained they may choose to allocate their available resources to other customers that represent a larger portion of their business. We currently anticipate that we will continue to rely on third-party manufacturers and suppliers for the production of the Maestro System following commercialization. If we develop and obtain regulatory approval for our product and are unable to obtain a sufficient supply of our product, our revenue, business and financial prospects would be adversely affected.

If we are unable to establish sales and marketing capabilities or enter into and maintain arrangements with third parties to market and sell our Maestro System, our business may be harmed.

We do not have a sales organization and have no experience as a company in sales, marketing and distribution of our product. To generate sales we will need to develop a sales and marketing infrastructure or contract with third parties to perform that function. Developing a sales force is expensive and time consuming and could delay or limit the success of any product launch. Even if we obtain approval from the FDA to market our Maestro System, we may be unable to develop an effective sales and marketing organization on a timely basis, if at all. If we develop our own sales and marketing capabilities, our sales force will be competing with the experienced and well-funded marketing and sales organizations of our more established competitors. If we are unable to establish our own sales and marketing capabilities, we will need to contract with third parties to market and sell our product. In this event, our profit margins would likely be lower than if we performed these functions ourselves. In addition, we would necessarily be relying on the skills and efforts of others for the successful marketing of our product. If we are unable to establish and maintain effective sales and marketing capabilities, independently or with others, we may not be able to generate product revenue and may not become profitable.

We may need substantial additional funding and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts.

Our operations have consumed substantial amounts of cash since inception. We expect to continue to spend substantial amounts on research and development, including conducting clinical trials for our Maestro System. Even before we receive regulatory approval to market our Maestro System, we expect to spend significant funds commercializing the product, including development of a direct sales force. In 2008, our cash used in operations was \$33.7 million. We expect cash used in operations to decrease in 2009 due to the completion of enrollment and implantation in our EMPOWER trial during 2008. In the years following 2009, we expect that our cash used in operations will be significant, and we may need additional funds to complete the development and commercialization of our Maestro System. After, and possibly prior to, such time we may need to raise substantial additional capital to: continue our research and development programs; commercialize our Maestro System, if approved by the FDA; and fund our operations in general.

Our future funding requirements will depend on many factors, including:

- the scope, rate of progress, results and cost of our clinical trials and other research and development activities;
- the cost and timing of regulatory approvals;
- the cost and timing of establishing sales, marketing and distribution capabilities;

- the cost of establishing clinical and commercial supplies of our Maestro System and any products that we may develop;
- the rate of market acceptance of our Maestro System and VBLOC therapy and any other product candidates;
- the cost of filing and prosecuting patent applications and defending and enforcing our patent and other intellectual property rights;
- the cost of defending, in litigation or otherwise, any claims that we infringe third-party patent or other intellectual property rights;
- the effect of competing products and market developments;
- · the cost of explanting clinical devices;
- the terms and timing of any collaborative, licensing or other arrangements that we may establish;
- · any revenue generated by sales of our future products; and
- the extent to which we acquire or invest in businesses, products and technologies, although we currently have no commitments or agreements relating to any of these types of transactions.

Until the time, if ever, when we can generate a sufficient amount of product revenue, we expect to finance our future cash needs through public or private equity offerings, debt financings or corporate collaboration, licensing arrangements and grants, as well as through interest income earned on cash balances.

Additional capital may not be available on terms favorable to us, or at all. If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Debt financing, if available, may involve restrictive covenants or additional security interests in our assets. Any additional debt or equity financing that we complete may contain terms that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or products, or grant licenses on terms that are not favorable to us. If we are unable to raise adequate funds, we may have to delay, reduce the scope of, or eliminate some or all of, our development programs or liquidate some or all of our assets.

We may be unable to attract and retain management and other personnel we need to succeed.

Our success depends on the services of our senior management and other key research and development employees. The loss of the services of one or more of our officers or key research and development employees could delay or prevent the successful completion of our clinical trials and the commercialization of our Maestro System. Upon receiving regulatory approval for our product, we expect to rapidly expand our operations and grow our research and development, product development and administrative operations. Our growth will require hiring a significant number of qualified clinical, scientific, commercial and administrative personnel. Accordingly, recruiting and retaining such personnel in the future will be critical to our success. There is intense competition from other companies and research and academic institutions for qualified personnel in the areas of our activities. If we fail to

identify, attract, retain and motivate these highly skilled personnel, we may be unable to continue our development and commercialization activities.

We may be unable to manage our growth effectively.

Our business strategy entails significant future growth. For example, we will have to expand existing operations in order to conduct additional clinical trials, increase our contract manufacturing capabilities, hire and train new personnel to handle the marketing and sales of our product, assist patients in obtaining reimbursement for the use of our product and create and develop new applications for our technology. This growth may place significant strain on our management and financial and operational resources. Successful growth is also dependent upon our ability to implement appropriate financial and management controls, systems and procedures. Our ability to effectively manage growth depends on our success in attracting and retaining highly qualified personnel, for which the competition may be intense. If we fail to manage these challenges effectively, our business could be harmed.

We face the risk of product liability claims that could be expensive, divert management's attention and harm our reputation and business. We may not be able to obtain adequate product liability insurance.

Our business exposes us to a risk of product liability claims that is inherent in the testing, manufacturing and marketing of medical devices. The medical device industry has historically been subject to extensive litigation over product liability claims. We may be subject to product liability claims if our Maestro System, or any other products we may sell, causes, or appears to have caused, an injury. Claims may be made by consumers, healthcare providers, third-party strategic collaborators or others selling our products.

We have \$5 million of product liability insurance, which covers the use of our Maestro System and VBLOC therapy in our clinical trials, which amount we believe is appropriate. Our current product liability insurance may not continue to be available to us on acceptable terms, if at all, and, if available, the coverage may not be adequate to protect us against any future product liability claims. If we are unable to obtain insurance at an acceptable cost and on acceptable terms for an adequate coverage amount, or otherwise to protect against potential product liability claims, we could be exposed to significant liabilities, which may harm our business. A product liability claim, recall or other claim with respect to uninsured liabilities or for amounts in excess of insured liabilities could have a material adverse effect on our business, financial condition and results of operations. These liabilities could prevent or interfere with our product commercialization efforts. Defending a suit, regardless of merit, could be costly, could divert management attention and might result in adverse publicity, which could result in the withdrawal of, or inability to recruit, clinical trial volunteers or result in reduced acceptance of our Maestro System and VBLOC therapy in the market.

We may be subject to product liability claims even if it appears that the claimed injury is due to the actions of others. For example, we rely on the expertise of surgeons and other associated medical personnel to perform the medical procedure to implant and remove our Maestro System and to perform the related VBLOC therapy. If these medical personnel are not properly trained or are negligent, the therapeutic effect of our Maestro System and VBLOC therapy may be diminished or the patient may suffer critical injury, which may subject us to liability. In addition, an injury that is caused by the negligence of one of our suppliers in supplying us with a defective component that injures a patient could be the basis for a claim against us. A product liability claim, regardless of its merit or eventual outcome, could result in decreased demand for our products; injury to our reputation; diversion of management's attention; withdrawal of clinical trial participants; significant costs of related litigation; substantial monetary awards to patients; product recalls or market withdrawals; loss of revenue; and the inability to commercialize our products under development.

We may be subject, directly or indirectly, to federal and state healthcare fraud and abuse and false claims laws and regulations. Prosecutions under such laws have increased in recent years and we may become subject to such litigation. If we are unable to, or have not fully complied with such laws, we could face substantial penalties.

If we are successful in achieving regulatory approval to market our Maestro System, our operations will be directly, or indirectly through our customers, subject to various state and federal fraud and abuse laws, including, without limitation, the federal Anti-Kickback Statute and federal False Claims Act. These laws may impact, among other things, our proposed sales, marketing and education programs.

The federal Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual, or the furnishing or arranging for a good or service, for which payment may be made under a federal healthcare program such as the Medicare and Medicaid programs. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the statute has been violated. The Anti-Kickback Statute is broad and, despite a series of narrow safe harbors, prohibits many arrangements and practices that are lawful in businesses outside of the healthcare industry. Penalties for violations of the federal Anti-Kickback Statute include criminal penalties and civil sanctions such as fines, imprisonment and possible exclusion from Medicare, Medicaid and other federal healthcare programs. Many states have also adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare items or services reimbursed by any source, not only the Medicare and Medicaid programs.

The federal False Claims Act prohibits persons from knowingly filing, or causing to be filed, a false claim to, or the knowing use of false statements to obtain payment from the federal government. Suits filed under the False Claims Act, known as "qui tam" actions, can be brought by any individual on behalf of the government and such individuals, commonly known as "whistleblowers," may share in any amounts paid by the entity to the government in fines or settlement. The frequency of filing qui tam actions has increased significantly in recent years, causing greater numbers of medical device, pharmaceutical and healthcare companies to have to defend a False Claim Act action. When an entity is determined to have violated the federal False Claims Act, it may be required to pay up to three times the actual damages sustained by the government, plus civil penalties for each separate false claim. Various states have also enacted laws modeled after the federal False Claims Act.

We are unable to predict whether we could be subject to actions under any of these laws, or the impact of such actions. If we are found to be in violation of any of the laws described above and other applicable state and federal fraud and abuse laws, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from government healthcare reimbursement programs and the curtailment or restructuring of our operations.

We incur significant costs as a result of operating as a public company, and our management is required to devote substantial time to new compliance initiatives.

We completed our initial public offering in November 2007. As a public company, we incur significant expenses that we did not incur as a private company. The obligations of being a public company, including substantial public reporting and auditing obligations, require significant expenditures, place additional demands on our management and require the hiring of additional personnel. Section 404 of the Sarbanes-Oxley Act of 2002 and the SEC rules and regulations implementing such act require us to conduct an annual evaluation of our internal control over financial reporting. This process increases our legal and financial compliance costs, and makes some activities more difficult, time consuming or costly.

If we fail to have an effectively designed and operating system of internal control, we may be unable to comply with the requirements of Section 404 in a timely manner

The Sarbanes-Oxley Act of 2002 has required us to adopt new corporate governance, securities disclosure and compliance practices. In response to the requirements of that act, the SEC and the NASDAQ Stock Market have enacted new rules. Compliance with these new rules has increased our legal, financial and accounting costs, and we expect these increased costs to continue indefinitely. These laws and regulations may also make it more difficult for us to attract and retain qualified members of our board of directors or members of senior management.

We operate in a highly competitive industry that is subject to rapid change. If our competitors are able to develop and market products that are safer or more effective than our products, our commercial opportunities will be reduced or eliminated.

The health care industry is highly competitive, subject to rapid change and significantly affected by new product introductions and other market activities of industry participants. The obesity treatment market in which we operate has grown significantly in recent years and is expected to continue to expand as technology continues to evolve and awareness of the need to treat the obesity epidemic grows. Although we are not aware of any competitors in the neuroblocking market, we face potential competition from pharmaceutical and surgical obesity treatments. Many of our competitors in the obesity treatment field have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, clinical trials, obtaining regulatory approvals and marketing approved products than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly if they pursue competing solutions through collaborative arrangements with large and established companies, such as Allergan, Cyberonics, Johnson & Johnson, Medtronic or St. Jude Medical. Our competitors may develop and patent processes or products earlier than us, obtain regulatory approvals for competing products more rapidly than we are able to and develop more effective, safer and less expensive products or technologies that would render our products non-competitive or obsolete.

We may not be successful in our efforts to utilize our VBLOC therapy to treat co-morbidities associated with obesity and other gastrointestinal diseases and disorders.

As part of our long-term business strategy, we plan to research the application of our VBLOC therapy to treat co-morbidities associated with obesity and other gastrointestinal diseases and disorders. Research to identify new target applications requires substantial technical, financial and human resources, whether or not any new applications for our VBLOC therapy are ultimately identified. We may be unable to identify or pursue other applications of our technology. Even if we identify potential new applications for our VBLOC therapy, investigating the safety and efficacy of our therapy requires extensive clinical testing, which is expensive and time-consuming. If we terminate a clinical trial in which we have invested significant resources, our prospects will suffer, as we will have expended resources on a program that will not provide a return on our investment and missed the opportunity to allocate those resources to potentially more productive uses. We will also need to obtain regulatory approval for these new applications, as well as achieve market acceptance and an acceptable level of reimbursement.

Risks Related to Intellectual Property

If we are unable to obtain or maintain intellectual property rights relating to our technology and neuroblocking therapy, the commercial value of our technology and any future products will be adversely affected and our competitive position will be harmed.

Our commercial success depends in part on our ability to obtain protection in the United States and other countries for our Maestro System and VBLOC therapy by establishing and maintaining intellectual property rights relating to or incorporated into our technology and products. As of March 12, 2009, we had six issued U.S. patents, two of which pertain to treating gastrointestinal disorders, 23 U.S. patent applications (including two provisional applications), four pending international patent applications (PCT) and seven national stage patent applications, including four European applications, in foreign jurisdictions. In addition, we are the exclusive licensee to two U.S. patent applications owned by Mayo Foundation for Medical Education and Research, which are unrelated to our VBLOC therapy. Our pending and future patent applications may not issue as patents or, if issued, may not issue in a form that will provide us any competitive advantage. We expect to incur substantial costs in obtaining patents and, if necessary, defending our proprietary rights. The patent positions of medical device companies, including ours, can be highly uncertain and involve complex and evolving legal and factual questions. We do not know whether we will obtain the patent protection we seek, or that the protection we do obtain will be found valid and enforceable if challenged. If we fail to obtain adequate protection of our intellectual property, or if any protection we obtain is reduced or eliminated, others could use our intellectual property without compensating us, resulting in harm to our business. We may also determine that it is in our best interests to voluntarily challenge a third party's products or patents in litigation or administrative proceedings, including patent interferences or re-examinations. In the event that we seek to enforce any of our owned or exclusively licensed patents against an infringing party, it is likely that the party defending the claim will seek to invalidate the patents we assert, which, if successful could result in the loss of the entire patent or the relevant portion of our patent, which would not be limited to any particular party. Any litigation to enforce or defend our patent rights, even if we were to prevail, could be costly and time-consuming and could divert the attention of our management and key personnel from our business operations. Even if we were to prevail in any litigation, we cannot assure you that we can obtain an injunction that prevents our competitors from practicing our patented technology. Our competitors may independently develop similar or alternative technologies or products without infringing any of our patent or other intellectual property rights, or may design around our proprietary technologies.

We cannot assure you that we will obtain any patent protection that we seek, that any protection we do obtain will be found valid and enforceable if challenged or that it will confer any significant commercial advantage. U.S. patents and patent applications may also be subject to interference proceedings and U.S. patents may be subject to re-examination proceedings in the U.S. Patent and Trademark Office (USPTO) and foreign patents may be subject to opposition or comparable proceedings in the corresponding foreign patent offices, which proceedings could result in either loss of the patent or denial of the patent application, or loss or reduction in the scope of one or more of the claims of, the patent or patent application. In addition, such interference, re-examination and opposition proceedings may be costly. Moreover, the U.S. patent laws may change, possibly making it easier to challenge patents. Some of our technology was, and continues to be, developed in conjunction with third parties, and thus there is a risk that such third parties may claim rights in our intellectual property. Thus, any patents that we own or license from others may provide limited or no protection against competitors. Our pending patent applications, those we may file in the future, or those we may license from third parties, may not result in patents being issued. If issued, they may not provide us with proprietary protection or competitive advantages against competitors with similar technology.

Non-payment or delay in payment of patent fees or annuities, whether intentional or unintentional, may result in loss of patents or patent rights important to our business. Many countries, including certain countries in Europe, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of the patent. In addition, the laws

of some foreign countries do not protect intellectual property rights to the same extent as do the laws of the United States, particularly in the field of medical products and procedures.

Many of our competitors have significant resources and incentives to apply for and obtain intellectual property rights that could limit or prevent our ability to commercialize our current or future products in the United States or abroad.

Many of our competitors who have significant resources and have made substantial investments in competing technologies may seek to apply for and obtain patents that will prevent, limit or interfere with our ability to make, use or sell our products either in the United States or in international markets. Our current or future U.S. or foreign patents may be challenged, circumvented by competitors or others or may be found to be invalid, unenforceable or insufficient. Since patent applications are confidential until patents are issued in the United States, or in most cases, until after 18 months from filing of the application, or corresponding applications are published in other countries, and since publication of discoveries in the scientific or patent literature often lags behind actual discoveries, we cannot be certain that we were the first to make the inventions covered by each of our pending patent applications, or that we were the first to file patent applications for such inventions.

If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.

In addition to patented technology, we rely on our unpatented proprietary technology, trade secrets, processes and know-how. We generally seek to protect this information by confidentiality agreements with our employees, consultants, scientific advisors and third parties. These agreements may be breached, and we may not have adequate remedies for any such breach. In addition, our trade secrets may otherwise become known or be independently developed by competitors. To the extent that our employees, consultants or contractors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Intellectual property litigation is a common tactic in the medical device industry to gain competitive advantage. If we become subject to a lawsuit, we may be required to expend significant financial and other resources and our management's attention may be diverted from our business.

There has been a history of frequent and extensive litigation regarding patent and other intellectual property rights in the medical device industry, and companies in the medical device industry have employed intellectual property litigation to gain a competitive advantage. Accordingly, we may become subject to patent infringement claims or litigation in a court of law, or interference proceedings declared by the USPTO to determine the priority of inventions or an opposition to a patent grant in a foreign jurisdiction. We may also become subject to claims or litigation seeking payment of royalties based on sales of our product in connection with licensing or similar joint development arrangements with third parties or in connection with claims of patent infringement. The defense and prosecution of intellectual property suits, USPTO interference or opposition proceedings and related legal and administrative proceedings, are both costly and time consuming and could result in substantial uncertainty to us. Litigation or regulatory proceedings may also be necessary to enforce patent or other intellectual property rights of ours or to determine the scope and validity of other parties' proprietary rights. Any litigation, opposition or interference proceedings, with or without merit, may result in substantial expense to us, cause significant strain on our financial resources, divert the attention of our technical and management personnel and harm our reputation. We may not have the financial resources to defend our patents from infringement or claims of invalidity. An adverse determination in any litigation could subject us to significant liabilities to third parties, require us to seek licenses from or pay royalties to third parties or prevent us from manufacturing, selling or using our proposed products, any of which could have a

material adverse effect on our business and prospects. We are not currently a party to any patent or other litigation.

Our VBLOC therapy or Maestro System may infringe or be claimed to infringe patents that we do not own or license, including patents that may issue in the future based on patent applications of which we are currently aware, as well as applications of which we are unaware. For example, we are aware of other companies that are investigating neurostimulation, including neuroblocking, and of patents and published patent applications held by companies in those fields. While we believe that none of such patents and patent applications are applicable to our products and technologies under development, third parties who own or control these patents and patent applications in the United States and abroad could bring claims against us that would cause us to incur substantial expenses and, if such claims are successfully asserted against us, they could cause us to pay substantial damages, could result in an injunction preventing us from selling, manufacturing or using our proposed products and would divert management's attention. Because patent applications in many countries such as the United States are maintained under conditions of confidentiality and can take many years to issue, there may be applications now pending of which we are unaware and which may later result in issued patents that our products infringe. If a patent infringement suit were brought against us, we could be forced to stop our ongoing or planned clinical trials, or delay or abandon commercialization of the product that is subject of the suit.

As a result of patent infringement claims, or to avoid potential claims, we may choose or be required to seek a license from a third party and be required to pay license fees or royalties, or both. A license may not be available at all or on commercially reasonable terms, and we may not be able to redesign our products to avoid infringement. Modification of our products or development of new products could require us to conduct additional clinical trials and to revise our filings with the FDA and other regulatory bodies, which would be time-consuming and expensive. Even if we were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be forced to cease some aspect of our business operations if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms. This could harm our business significantly.

Risks Related to Ownership of our Common Stock

The trading price of our common stock has been volatile and is likely to be volatile in the future.

The trading price of our common stock has been highly volatile. Further, our common stock has a limited trading history. Since our public offering in November 2007 through February 27, 2009 our stock price has fluctuated from a low of \$0.83 to a high of \$10.77. The market price for our common stock will be affected by a number of factors, including:

- the denial or delay of regulatory clearances or approvals of our product or receipt of regulatory approval of competing products;
- our ability to accomplish clinical, regulatory and other product development milestones and to do so in accordance with the timing estimates we have publicly announced;
- · changes in policies affecting third-party coverage and reimbursement in the United States and other countries;
- changes in government regulations and standards affecting the medical device industry and our product;

- ability of our product, if it receives regulatory approval, to achieve market success;
- the performance of third-party contract manufacturers and component suppliers;
- our ability to develop sales and marketing capabilities;
- actual or anticipated variations in our results of operations or those of our competitors;
- · announcements of new products, technological innovations or product advancements by us or our competitors;
- developments with respect to patents and other intellectual property rights;
- sales of common stock or other securities by us or our stockholders in the future;
- additions or departures of key scientific or management personnel;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- trading volume of our common stock;
- changes in earnings estimates or recommendations by securities analysts, failure to obtain analyst coverage of our common stock or our failure to achieve analyst earnings estimates;
- public statements by analysts or clinicians regarding their perceptions of our clinical results or the effectiveness of our products;
- · decreases in market valuations of medical device companies; and
- general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors.

The stock prices of many companies in the medical device industry have experienced wide fluctuations that have often been unrelated to the operating performance of these companies. Following periods of volatility in the market price of a company's securities, securities class action litigation often has been initiated against a company. If class action litigation is initiated against us, we may incur substantial costs and our management's attention may be diverted from our operations, which could significantly harm our business.

Our directors and executive officers hold substantial control over us and could limit your ability to influence the outcome of key transactions, including changes of control.

Our executive officers and directors and entities affiliated with them beneficially own, in the aggregate, approximately 61.8% of our outstanding common stock as of February 27, 2009. Our executive officers, directors and affiliated entities, if acting together, would be able to control or influence significantly all matters requiring approval by our stockholders, including the election of directors and the approval of mergers or other significant corporate transactions. The concentration of ownership of our common stock may have the effect of delaying, preventing or deterring a change of control of our company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and may affect the market price of our common stock. This significant

concentration of stock ownership may adversely affect the trading price of our common stock due to investors' perception that conflicts of interest may exist or arise.

Sales of a substantial number of shares of our common stock in the public market by existing stockholders, or the perception that they may occur, could cause our stock price to decline.

Sales of substantial amounts of our common stock by us or by our stockholders, announcements of the proposed sales of substantial amounts of our common stock or the perception that substantial sales may be made, could cause the market price of our common stock to decline. We may issue additional shares of our common stock in follow-on offerings to raise additional capital or in connection with acquisitions or corporate alliances and we plan to issue additional shares to our employees, directors or consultants in connection with their services to us. All of the currently outstanding shares of our common stock are freely tradable under federal and state securities laws, except for shares held by our directors, officers and certain greater than five percent stockholders, which may be subject to volume limitations, and shares issued in connection with our recent private placement offering. Due to these factors, sales of a substantial number of shares of our common stock in the public market could occur at any time and could reduce the market price of our common stock.

In addition, as of December 31, 2008 certain holders of an aggregate of 10,997,940 shares of our common stock and warrants to purchase our common stock have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to include in a company-initiated registration statement shares held by those holders pursuant to the exercise of their registration rights, the sale of those shares could impair our ability to raise needed capital by depressing the price at which we could sell our common stock.

Our organizational documents and Delaware law make a takeover of our company more difficult, which may prevent certain changes in control and limit the market price of our common stock.

Our certificate of incorporation and bylaws and Section 203 of the Delaware General Corporation Law contain provisions that may have the effect of deterring or delaying attempts by our stockholders to remove or replace management, engage in proxy contests and effect changes in control. These provisions include:

- our board of directors will be authorized, without prior stockholder approval, to create and issue preferred stock which could be used to implement anti-takeover devices;
- advance notice will be required for director nominations or for proposals that can be acted upon at stockholder meetings;
- our board of directors will be classified such that not all members of our board are elected at one time, which may make it more difficult for a person who acquires control of a majority of our outstanding voting stock to replace all or a majority of our directors;
- stockholder action by written consent will be prohibited;
- special meetings of the stockholders will be permitted to be called only by the chairman of our board of directors or by a majority of our board of directors; and
- stockholders will not be permitted to accumulate their votes for the election of directors; and stockholders will be permitted to amend our bylaws only upon receiving a majority of the

votes entitled to be cast by holders of all outstanding shares then entitled to vote generally in the election of directors, voting together as a single class.

In addition, as a Delaware corporation, we are subject to Delaware law, including Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder unless certain specific requirements are met as set forth in Section 203. These provisions, alone or together, could have the effect of deterring or delaying changes in incumbent management, proxy contests or changes in control.

These provisions also could discourage proxy contests and make it more difficult for you and other stockholders to elect directors and take other corporate actions. The existence of these provisions could limit the price that investors might be willing to pay in the future for shares of our common stock. Some provisions in our certificate of incorporation and bylaws may deter third parties from acquiring us, which may limit the market price of our common stock.

We have not paid dividends in the past and do not expect to pay dividends in the future, and any return on investment may be limited to the value of our common stock.

We have never paid dividends on our common stock and do not anticipate paying dividends on our common stock in the foreseeable future. The payment of dividends on our common stock will depend on our earnings, financial condition and other business and economic factors affecting us at such time as our board of directors may consider relevant. If we do not pay dividends, our common stock may be less valuable because a return on your investment will only occur if our stock price appreciates.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference may contain forward-looking statements with respect to the financial condition, results of operations, plans, objectives, future performance and business of EnteroMedics. Statements preceded by, followed by or that include the words such as "may," "will," "expect," "anticipate," "continue," "estimate," "project," "believes" or similar expressions are intended to identify some of the forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and are included, along with this statement, for purposes of complying with the safe harbor provisions of that Act. These forward-looking statements involve risks and uncertainties. Actual results may differ materially from those contemplated by the forward-looking statements due to, among others, the risks and uncertainties described in this prospectus, including under "Risk Factors," and the documents incorporated by reference in this prospectus. Any forward-looking statement contained in this prospectus and the documents incorporated by reference speaks only as of the date on which the statement is made, and EnteroMedics undertakes no obligation to update any forward-looking statement or statements to reflect events or circumstances that occur after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for EnteroMedics to predict all of the factors, nor can EnteroMedics assess the effect of each factor on its business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the shares by any of the selling stockholders.

SELLING STOCKHOLDERS

We are registering the shares of common stock covered by this prospectus on behalf of the selling stockholders named in the table below. Selling stockholders, including their transferees, pledgees or donees or their successors (all of whom may be selling stockholders), may from time to time offer and sell pursuant to this prospectus any or all of the shares. When we refer to "selling stockholders" in this prospectus, we mean those persons listed in the table below, as well as their transferees, pledgees or donees or their successors.

We issued the shares to the selling stockholders pursuant to Securities Purchase Agreements entered into on February 19, 2009 (the Securities Purchase Agreements) in a private placement transaction with several accredited investors (the Private Placement). The purchase price per share was \$1.15, which equaled the consolidated closing bid price of our common stock as reported by the NASDAQ Stock Market on February 19, 2009. All of the shares were "restricted securities" under the Securities Act of 1933, as amended (the Securities Act) prior to this registration.

The following table sets forth certain information provided to us by the selling stockholders. Except as set forth in the table below, none of the selling stockholders has had a material relationship with us within the past three years. The number of shares in the column "Number of Shares Registered for Sale Hereby" represents all of the shares that each selling stockholder may offer under this prospectus. The information is based on information provided to us by or on behalf of the selling stockholders in a selling stockholder questionnaire. The selling stockholders may sell some, all or none of their shares. In addition, the selling stockholders may have sold, transferred or otherwise disposed of all or a portion of their shares since the date on which they provided the information regarding their shares in transactions exempt from the registration requirements of the Securities Act. For purposes of the table below, we have assumed that the selling stockholders will sell all of their shares offered pursuant to this prospectus and that any other shares of our common stock beneficially owned by the selling stockholders will continue to be beneficially owned.

Selling Stockholders(1)	Number of Shares Beneficially Owned Prior to Offering	Number of Shares Registered for Sale Hereby	Number of Shares to be Owned after Completion of the Offering(2)	Percent of Outstanding Shares to be Owned after Completion of the Offering(3)
Kirby Bartlett(4)	16,495	9,553	6,942	*
Ross Bersot(5)	8,247	4,776	3,471	*
Leslie Bottorff, Trustee of the Leslie Bottorff Living Trust Dated June 9, 2003(6)	41,237	23,881	17,356	*
Camber Capital Fund II LP(7)	40,206	23,284	16,922	*
Camber Capital Master Fund, L.P.(8)	414,433	240,005	174,428	*
Arthur J. Remillard, Jr.(9)	163,918	94,928	68,990	*
Granite Point Capital LP(10)	292,430	169,351	123,079	*
Granite Point Capital Offshore Fund LTD(11)	37,467	21,698	15,769	*
Hare & Co. FBO the Jennison Health Sciences Fund(12)	2,959,049	1,576,156	1,382,893	4.6%
Raman Khanna(13)	20,619	11,941	8,678	*
Judy Koh(14)	16,495	9,553	6,942	*
Kuhling-Wilcox 1990 Trust U/A June 1, 1990(15)	82,474	47,762	34,712	*

Michael Masterson(16)	74,227	42,986	31,241	*
Mayo Clinic(17)	661,282	125,376	535,906	1.8%
RA Capital Healthcare Fund, LP(18)	814,020	471,414	342,606	1.1%
RA Capital Healthcare Fund II, LP(19)	10,722	6,209	4,513	*
T. Rowe Price Health Sciences Portfolio, Inc.(20)(21)	19,900	11,524	8,376	*
TD Mutual Funds – TD Health Sciences Fund(20)(22)	143,400	83,046	60,354	*
AIG Retirement Company I – Health Sciences Fund(20)(23)	164,400	95,207	69,193	*
John Hancock Trust – Health Sciences Trust(20)(24)	192,400	111,422	80,978	*
T. Rowe Price Health Sciences Fund, Inc.(20)(25)	2,000,000	1,158,236	841,764	2.8%
Total	8,173,421	4,338,308	3,835,113	12.8%

- Less than one percent.
- Information regarding the selling stockholders may change from time to time. Any such changed information will be set forth in supplements to this
 prospectus if required.
- (2) We do not know when or in what amounts the selling stockholders will offer shares for sale, if at all. The selling stockholders may sell any or all of the shares included in and offered by this prospectus. Because the selling stockholders may offer all or some of the shares pursuant to this offering, we cannot estimate the number of shares that will be held by the selling stockholders after completion of the offering. However, for purposes of this table, we have assumed that after completion of the offering, none of the shares included in and covered by this prospectus will be held by the selling stockholders.
- (3) Based on 30,023,295 shares of common stock outstanding as of March 20, 2009.
- (4) Excludes warrants to purchase 8,247 shares of common stock owned by the selling stockholder. Mr. Bartlett is an employee of Bay City Capital (BCC). BCC is the manager of Bay City Management IV LLC (Management IV), which is the general partner of Bay City Capital Fund IV, L.P. (Fund IV) and Bay City Capital IV Co-Investment Fund, L.P. (Co-Investment IV). BCC is also an advisor to Fund IV and Co-Investment IV. Fund IV and Co-Investment IV collectively and directly hold 4,485,532 shares, or approximately 14.9% of our common stock, with each fund having shared voting power and shared dispositive power. Management IV and BCC do not hold shares of common stock or warrants directly but each has sole voting and dispositive power, and are deemed to have beneficial ownership of the common stock and warrants owned by Fund IV and Co-Investment IV because of their roles as general partner and manager, respectively. In addition, Carl Goldfischer, one of our directors, is a Managing Director of BCC.
- (5) Excludes warrants to purchase 4,124 shares of common stock owned by the selling stockholder. Mr. Bersot is an employee of Bay City Capital (BCC). BCC is the manager of Bay City Management IV LLC (Management IV), which is the general partner of Bay City Capital Fund IV, L.P. (Fund IV) and Bay City Capital IV Co-Investment Fund, L.P. (Co-Investment IV). BCC is also an advisor to Fund IV and Co-Investment IV. Fund IV and Co-Investment IV collectively and directly hold 4,485,532 shares, or approximately 14.9% of our common stock, with each fund having shared voting power and shared dispositive power. Management IV and BCC do not hold shares of common stock or warrants directly but each has sole voting and dispositive power, and are deemed to have beneficial ownership of the common stock and warrants owned by Fund IV and Co-Investment IV because of their roles as general partner and manager, respectively. In addition, Carl Goldfischer, one of our directors, is a Managing Director of BCC.
- (6) Excludes warrants to purchase 20,619 shares of common stock owned by the selling stockholder. Ms. Bottorff is a Managing Director of Onset V, L.P., which beneficially owned more than 5% of our common stock prior to the closing of the Private Placement on February 24, 2009 and currently beneficially owns approximately

- 958,734 shares of our common stock. Ms. Bottorff, as Trustee, has voting and dispositive power with respect to these shares.
- (7) Excludes warrants to purchase 20,103 shares of common stock owned by the selling stockholder. Stephen R. DuBois has voting and dispositive power with respect to these shares.
- (8) Excludes warrants to purchase 207,216 shares of common stock owned by the selling stockholder. Stephen R. DuBois has voting and dispositive power with respect to these shares.
- (9) Excludes warrants to purchase 81,959 shares of common stock owned by the selling stockholder. Stephen R. DuBois has voting and dispositive power with respect to these shares.
- (10) Excludes warrants to purchase 146,215 shares of common stock owned by the selling stockholder. Granite Point Capital LP is managed by Granite Point Capital, LLC, which is managed by Granite Point Capital Management, LP (GPCM). Warren Lammert is General Partner of GPCM and has voting and dispositive power with respect to these shares.
- (11) Excludes warrants to purchase 18,733 shares of common stock owned by the selling stockholder. Granite Point Capital Offshore Fund LTD is managed by Granite Point Capital, LLC, which is managed by Granite Point Capital Management, LP (GPCM). Warren Lammert is General Partner of GPCM and has voting and dispositive power with respect to these shares.
- (12) Excludes warrants to purchase 1,360,825 shares of common stock owned by the selling stockholder. Jennison Associates LLC (Jennison) furnishes investment advice to investment companies, insurance separate accounts, and institutional clients (Managed Portfolios). As a result of its role as investment adviser of the Managed Portfolios, Jennison may be deemed to be the indirect beneficial owner of the shares held by such Managed Portfolios. Prudential Financial, Inc. (Prudential) indirectly owns 100% of the equity interests of Jennison. Prudential may be deemed to have the power to exercise or to direct the exercise of such voting and/or dispositive power that Jennison may have with respect to the shares held by those Managed Portfolios which are proprietary to Prudential.
- (13) Excludes warrants to purchase 10,309 shares of common stock owned by the selling stockholder. Mr. Khanna is a Managing Director of Onset V, L.P., which beneficially owned more than 5% of our common stock prior to the closing of the Private Placement on February 24, 2009 and currently beneficially owns approximately 958,734 shares of our common stock.
- (14) Excludes warrants to purchase 8,247 shares of common stock owned by the selling stockholder. Ms. Koh is an employee of Bay City Capital (BCC). BCC is the manager of Bay City Management IV LLC (Management IV), which is the general partner of Bay City Capital Fund IV, L.P. (Fund IV) and Bay City Capital IV Co-Investment Fund, L.P. (Co-Investment IV). BCC is also an advisor to Fund IV and Co-Investment IV. Fund IV and Co-Investment IV collectively and directly hold 4,485,532 shares, or approximately 14.9% of our common stock, with each fund having shared voting power and shared dispositive power. Management IV and BCC do not hold shares of common stock or warrants directly but each has sole voting and dispositive power, and are deemed to have beneficial ownership of the common stock and warrants owned by Fund IV and Co-Investment IV because of their roles as general partner and manager, respectively. In addition, Carl Goldfischer, one of our directors, is a Managing Director of BCC.
- (15) Excludes warrants to purchase 41,237 shares of common stock owned by the selling stockholder. Mr. Kuhling is a Managing Director of Onset V, L.P., which beneficially owned more than 5% of our common stock prior to the closing of the Private Placement on February 24, 2009 and currently beneficially owns approximately 958,734 shares of our common stock. Robert F. Kuhling, Jr., as Co-Trustee has voting and dispositive power with respect to these shares.
- (16) Excludes warrants to purchase 37,113 shares of common stock owned by the selling stockholder. Mr. Masterson is an employee of Bay City Capital (BCC). BCC is the manager of Bay City Management IV LLC

(Management IV), which is the general partner of Bay City Capital Fund IV, L.P. (Fund IV) and Bay City Capital IV Co-Investment Fund, L.P. (Co-Investment IV). BCC is also an advisor to Fund IV and Co-Investment IV. Fund IV and Co-Investment IV collectively and directly hold 4,485,532 shares, or approximately 14.9% of our common stock, with each fund having shared voting power and shared dispositive power. Management IV and BCC do not hold shares of common stock or warrants directly but each has sole voting and dispositive power, and are deemed to have beneficial ownership of the common stock and warrants owned by Fund IV and Co-Investment IV because of their roles as general partner and manager, respectively. In addition, Carl Goldfischer, one of our directors, is a Managing Director of BCC.

- (17) Excludes warrants to purchase 108,247 shares of common stock owned by the selling stockholder. Mayo Clinic and/or its affiliates have existing license agreements and consultant agreements with the Company, under which they have received equity, royalties and/or other payments from the Company. In addition, consistent with Mayo conflict-of-interest policies and procedures, Mayo Clinic and/or its affiliates have participated in preclinical and clinic research activities sponsored by the Company. Harry N. Hoffman, III has voting and dispositive power with respect to these shares.
- (18) Excludes warrants to purchase 407,010 shares of common stock owned by the selling stockholder. Peter Kolchinsky has voting and dispositive power with respect to these shares.
- (19) Excludes warrants to purchase 5,361 shares of common stock owned by the selling stockholder. Peter Kolchinsky has voting and dispositive power with respect to these shares.
- (20) T. Rowe Price Associates, Inc. serves as investment adviser with power to direct investments and/or sole power to vote the shares owned by the funds and accounts listed in this registration statement, as well as shares owned by certain other individual and institutional investors. For purposes of reporting requirements of the Securities Exchange Act of 1934, T. Rowe Price Associates, Inc. may be deemed to be the beneficial owner of all of the shares listed above; however, T. Rowe Price Associates, Inc. expressly disclaims that it is, in fact the beneficial owner of such securities. T. Rowe Price Associates, Inc. is the wholly owned subsidiary of T. Rowe Price Group, Inc., which is a publicly traded financial services holding company. T. Rowe Price Investment Services, Inc. (TRPIS), a registered broker-dealer, is a subsidiary of T. Rowe Price Associates, Inc. TRPIS was formed primarily for the limited purpose of acting as the principal underwriter of shares of the T. Rowe Price family of funds. TRPIS does not engage in underwriting or market-making activities involving individual securities.
- (21) Excludes warrants to purchase 9,950 shares of common stock owned by the selling stockholder.
- (22) Excludes warrants to purchase 71,700 shares of common stock owned by the selling stockholder.
- (23) Excludes warrants to purchase 82,200 shares of common stock owned by the selling stockholder.
- (24) Excludes warrants to purchase 96,200 shares of common stock owned by the selling stockholder.
- (25) Excludes warrants to purchase 1,000,000 shares of common stock owned by the selling stockholder.

PLAN OF DISTRIBUTION

We are registering the shares covered by this prospectus to permit the selling stockholders to conduct public secondary trading of the shares from time to time after the date of this prospectus.

The selling stockholders and their successors, including their transferees, pledgees or donees or their successors (all of whom may be selling stockholders), may sell the shares directly to purchasers or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling stockholders or the purchasers of the shares. Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. The discounts, concessions or commissions as to any particular underwriter, broker-dealer or agent may be in excess of those customary in the types of transactions involved, except in the case of an agency transaction not in excess of a customary brokerage commission in compliance with NASDR Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with NASDR IM-2440. The selling stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Notwithstanding the foregoing, in no event will the method of distribution of the shares take the form of an underwritten offering of such shares without our prior written agreement.

The shares may be sold in one or more transactions at:

- fixed prices;
- prevailing market prices at the time of sale;
- · prices related to the prevailing market prices;
- varying prices determined at the time of sale; or
- negotiated prices.

These prices will be determined by the selling stockholders or by agreement between such selling stockholders and underwriters, broker-dealers or agents. The aggregate proceeds to the selling stockholders from the sale of the shares offered by them will be the purchase price of the shares less discounts and commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of shares to be made directly or through agents. We will not receive any of the proceeds from this offering.

The sales described in this prospectus may be effected in transactions:

- on any national securities exchange or quotation service on which the shares may be listed or quoted at the time of sale or in ordinary brokerage transactions in which the broker-dealer solicits purchasers;
- in the over-the-counter market;
- that are privately negotiated;
- that are a combination of any such methods of sale; or
- through any other method permitted by applicable law.

These transactions may include block trades in which the broker-dealer will attempt to sell the shares as an agent but may position and resell a portion of the block as a principal to facilitate the transaction. The transactions may also include crosses, which are transactions in which the same broker acts as an agent on both sides of the trade.

In connection with the sale of the shares or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares to close out their short positions, or loan or pledge the shares to broker-dealers which in turn may sell the shares. The selling stockholders may also sell shares of the common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

Our outstanding common stock is listed for trading on the NASDAQ Global Market.

In order to comply with the securities laws of some states, if applicable, the shares may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states, the shares may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the shares may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profits they earn on any resale of the shares may be deemed to be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act, including Rule 172 thereunder, and may be subject to statutory liabilities, including, but not limited to, liability under Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Securities Exchange Act of 1934, as amended (the Exchange Act). Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market-making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of the common stock by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders and have informed the selling stockholders of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

To our knowledge, there are currently no plans, arrangements or understandings between any selling stockholders and any underwriter, broker-dealer or agent regarding the sale of the shares. Selling stockholders may ultimately not sell all, and conceivably may not sell any, of the shares offered by them under this prospectus. In addition, we cannot assure you that a selling stockholder will not transfer, devise or gift the shares by other means not described in this prospectus. Furthermore, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 or Rule 144A of the Securities Act or any other available exemption may be sold under Rule 144 or Rule 144A or any other available exemption rather than pursuant to this prospectus.

To the extent required, the specific shares to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agent, dealer or underwriter and any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement to which this prospectus relates.

We originally issued the shares to the selling stockholders in a private placement transaction exempt from the registration requirements of the Securities Act. We entered into Securities Purchase Agreements including the requirement that we register the shares held by certain "eligible investors" under applicable federal and state securities laws under specific circumstances and at specific times. The Securities Purchase Agreements provide for cross-indemnification of the selling stockholders and us and our respective directors, officers and controlling persons against specific liabilities in connection with the offer and sale of the shares, including liabilities under the Securities Act. We have agreed, among other things, to pay all expenses of the registration statement to which this prospectus relates.

Under the registration rights provisions of the Securities Purchase Agreements, we are obligated to use our best efforts to keep the registration statement effective until the earlier of:

- (1) the first anniversary of the closing date, which was February 24, 2009;
- (2) the date on which the registrable securities may be sold pursuant to Rule 144 of the Securities Act without limitations on volume or manner of sales; or
- (3) such time as all registrable securities purchased by the selling stockholders in the offering have been sold pursuant to a registration statement or Rule 144 of the Securities Act.

We may suspend the use of this prospectus under certain circumstances relating to any request by the SEC or other federal or state governmental authority for amendments or supplements to the registration statement or for additional information, the issuance of any stop order suspending the effectiveness of the registration statement, the receipt of notice of the suspension of the qualification or exemption from qualification of the registrable securities for sale in any jurisdiction or any event which necessitates making changes to the registration statement, prospectus or any document incorporated or deemed to be incorporated by reference so that the registration statement or prospectus do not contain any untrue statement of a material fact or omit to state a material fact required to be stated necessary to make the statements contained therein not misleading. Such suspensions shall be considered "qualifying suspensions" provided the suspension period does not exceed 30 days individually, no more than two suspensions occur during any 12 month period and each suspension is separated by a period of at least 30 days. In the event a non-qualifying suspension occurs prior to the date when the selling stockholders may sell registrable securities pursuant to Rule 144 without limitations on volume or manner of sales, we are required to pay to the selling stockholders, beginning on the 10th business day after the effectiveness of the non-qualifying suspension and every 30th day thereafter that the non-qualifying suspension continues, a penalty amount equal to 1.5% of the purchase price paid by the selling stockholders for the registrable securities purchased and not previously sold; provided, however, that the aggregate penalty shall not exceed 5% of the purchase price paid by the selling stockholders for the registrable securities.

In the event that the SEC takes the position that some or all of the registrable securities may not be included in the registration statement because the inclusion of such registrable securities violates Rule 415 of the Securities Act or the instructions of Form S-3 and/or the registrable securities cannot be sold as an "at the market offering," we will remove from the registration statement the amount of shares necessary to comply with the requirements of Rule 415 and agree to any other restrictions or limitations on the

registration and resale of the registrable securities that the SEC may require. Any such required "cut back" of the registrable securities will be allocated among the selling stockholders on a pro rata basis.

LEGAL MATTERS

Dorsey & Whitney LLP will issue a legal opinion as to the validity of the issuance of the shares of common stock offered under this prospectus.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference from our Annual Report on Form 10-K have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report which is incorporated herein by reference (which report expresses an unqualified opinion and includes an explanatory paragraph relating to the January 1, 2006, adoption of the provisions of Financial Accounting Standards Board Statement No. 123(R), *Share-Based Payment*), and have been so incorporated in reliance upon that report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public through the Internet at the SEC's web site at *www.sec.gov*. You may also read and copy any document we file with the SEC at the SEC's public reference room at 100 F Street N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about its public reference facilities and their copy charges.

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered by this prospectus. When used in this prospectus, the term "registration statement" includes amendments to the registration statement as well as the exhibits, schedules, financial statements and notes filed as part of the registration statement. This prospectus, which constitutes a part of the registration statement, does not contain all of the information in the registration statement. This prospectus omits information contained in the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and the securities offered by this prospectus, reference is made to the registration statement. Statements herein concerning the contents of any contract or other document are not necessarily complete and in each instance reference is made to the copy of such contract or other document filed with the SEC as an exhibit to the registration statement, each such statement being qualified by and subject to such reference in all respects.

The SEC allows us to incorporate by reference the information we file with them. This allows us to disclose important information to you by referencing those filed documents. We have previously filed the following documents with the SEC and are incorporating them by reference into this prospectus:

- Annual Report on Form 10-K for the year ended December 31, 2008;
- Current Report on Form 8-K filed on April 3, 2009;
- Current Report on Form 8-K filed on April 29, 2009; and
- the description of our common shares contained in any registration statement on Form 8-A that we have filed, and any amendment or report filed for the purpose of updating this description.

We also are incorporating by reference any future filings made by us with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial filing of the registration statement of which this prospectus is a part and before the effective date of the registration statement and after the date of this prospectus until we sell all of the securities offered by this prospectus. The most recent information that we file with the SEC automatically updates and supersedes more dated information.

You can obtain a copy of any documents which are incorporated by reference in this prospectus or prospectus supplement, except for exhibits which are specifically incorporated by reference into those documents, at no cost, by writing or telephoning us at:

EnteroMedics Inc. 2800 Patton Road St. Paul, Minnesota 55113 Attention: Secretary (651) 634-3003



4,338,308 Shares of Common Stock

PROSPECTUS

April 30, 2009