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ENTREMED INC

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**4,495,828 Shares of Common Stock
Warrants to Purchase 2,309,162 Shares of Common Stock**

We are offering up to 4,495,828 shares of our common stock and warrants to purchase up to 2,309,162 shares of our common stock (and the shares of common stock issuable from time to time upon exercise of the warrants). The common stock and warrants (except the warrant we issue to our placement agent) will be sold in units, with each unit consisting of 1 share of common stock and a warrant to purchase 0.5 shares of common stock. The warrants contained in the units will be exercisable for three years, beginning 181 days from the date issuance, and have an exercise price of \$2.91 per share. Units will not be issued or certificated. The shares of common stock and the warrants are immediately separable and will be issued separately, but will be purchased together in this offering. We will also issue to our placement agent a warrant to purchase up to 61,250 shares of common stock at an exercise price of \$3.00 per share. The placement agent's warrant will be exercisable beginning 181 days after the date of issuance and will expire on October 9, 2017, the five-year anniversary of the effective date of the registration statement of which this prospectus supplement forms a part. There will be no public market for the units or the warrants.

Our common stock is listed on The NASDAQ Capital Market and traded under the symbol "ENMD". The consolidated closing bid price of our common stock on The NASDAQ Capital Market on February 28, 2013 was \$2.91 per share.

We have retained Burrill Securities LLC ("Burrill") as our exclusive placement agent to use its best efforts to solicit offers to purchase our securities in this offering. See "Plan of Distribution" beginning on page S-17 of this prospectus supplement for more information regarding these arrangements.

As of February 28, 2013, the aggregate market value of our outstanding common stock held by non-affiliates is \$63,646,882, based on 22,507,210 shares of outstanding common stock, of which 21,575,213 are held by non-affiliates, and a per share price of \$2.95 based on the closing sale price of our common stock on February 28, 2013. Excluding the shares sold in this transaction, we have not offered any securities pursuant to General Instruction I.B.6. of Form S-3 during the prior 12 calendar month period that ends on and includes the date of this prospectus supplement.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page S-4 of this prospectus supplement for a discussion of certain material factors that you should consider in connection with an investment in our securities.

	Per Unit	Total
Public offering price	\$ 2.40	\$10,790,000
Placement agent's fees (1)	\$ 0.07	\$ 294,000
Proceeds, before expenses, to EntreMed, Inc. (2)	\$ 2.33	\$10,496,000

(1) We will also issue to Burrill a warrant to purchase up to 61,250 shares of common stock at an exercise price of \$3.00 per share of common stock and reimburse the expenses of Burrill in an amount up to \$25,000. Burrill is not required to sell any specific number or dollar amount of units, shares of common stock or warrants but will use its best efforts to sell the securities offered. See "Plan of Distribution" on page S-17 for a further description of the compensation payable to Burrill and other estimated offering expenses incurred in connection with this offering.

(2) We estimate that the total expenses related to this offering will be approximately \$150,000.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

March 1, 2013

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About This Prospectus Supplement

This prospectus supplement supplements the accompanying prospectus filed with our registration statement on Form S-3 (File No. 333-184128) as part of a “shelf” registration process. Under the shelf registration process, we may offer to sell common stock, warrants and units, from time to time in one or more offerings up to a total dollar amount of \$30,000,000.

This prospectus supplement describes the specific terms of this offering and the accompanying prospectus gives more general information, some of which may not apply to this offering. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference therein, on the other hand, you should rely on the information contained in this prospectus supplement.

Unless otherwise mentioned or unless the context requires otherwise, all references in this prospectus supplement and the accompanying prospectus to “the Company,” “EntreMed,” “we,” “us,” “our,” or similar references mean EntreMed, Inc., a Delaware corporation.

We have not authorized any broker, dealer, salesperson or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. This prospectus supplement and the accompanying prospectus do not constitute an offer to sell, or the solicitation of an offer to buy, securities in any jurisdiction where, or to any person to whom, it is unlawful to make such offer or solicitation. You should not assume that the information contained in this prospectus supplement and the accompanying prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even if this prospectus supplement and any accompanying prospectus are delivered or any security is sold on a later date.

Prospectus Supplement Summary

This summary highlights selected information about us, this offering and information appearing elsewhere in this prospectus supplement, in the accompanying prospectus and in the documents we incorporate by reference. This summary is not complete and does not contain all the information you should consider before investing in our securities pursuant to this prospectus supplement and the accompanying prospectus. You should carefully read this entire prospectus supplement and the accompanying prospectus, including the information referred to under the heading "Risk Factors" in this prospectus supplement and the financial statements and other information that we incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision.

About EntreMed, Inc.

We are a clinical-stage pharmaceutical company employing a drug development strategy primarily in the United States and China to develop targeted therapeutics for the global market. Our current lead drug candidate is ENMD-2076, an Aurora A and angiogenic kinase inhibitor for the treatment of cancer. ENMD-2076 has completed Phase 1 studies in patients with advanced solid tumors, multiple myeloma and leukemia and is currently completing data for a multi-center Phase 2 study in patients with platinum resistant ovarian cancer.

ENMD-2076 is our only program currently under active clinical evaluation. However, we also own the intellectual property to other early-stage therapeutic candidates and intend to be proactive and opportunistic about other potential drug candidates. Our other product candidates have included MKC-1, ENMD-1198 and 2-methoxyestradiol (2ME2-) for treatment of rheumatoid arthritis. Clinical trial activities have previously been conducted with these candidates, but in an effort to focus on the development of ENMD-2076, no additional resources have been expended on these programs. The selection of ENMD-2076 as our lead product candidate allows us to direct the majority of our resources to advance its clinical development, and we are currently not devoting significant resources to other candidates or preclinical activities.

Our principal offices are located at 9620 Medical Center Drive, Suite 300, Rockville, Maryland 20850, and our telephone number is (240) 864-2600. Additional information concerning us can be found in our periodic filings with the Securities and Exchange Commission, or the SEC, which are available on our website at www.entremed.com and on the SEC's website at www.sec.gov. The information on our web site is not deemed to be part of this prospectus.

The Offering

Common stock offered by us	4,495,828 shares
Common stock to be outstanding upon completion of this offering	27,003,038 shares
Warrants	Warrants to purchase up to 2,309,162 shares of common stock will be offered in this offering. Each warrant, other than the warrant we issue to Burrill, may be exercised at any time during the three-year period beginning 181 days after the date of issuance, at an exercise price of \$2.91 per share of common stock. In connection with this offering, we will also issue to Burrill, our placement agent, a warrant to purchase up to 61,250 shares of common stock at an exercise price of \$3.00 share of common stock (the "Agent's Warrant"). The Agent's Warrant may be exercised at any time beginning 181 days after the date of issuance and will expire on October 9, 2017, the five year anniversary of the effective date of the registration statement of which this prospectus supplement forms a part. This prospectus also relates to the offering of the shares of common stock issuable upon exercise of the warrants. The Agent's Warrant and shares of common stock underlying the Agent's Warrant will be registered pursuant to this prospectus supplement.
Use of proceeds	We intend to use the net proceeds received from the sale of securities for further development of our lead clinical program and other general corporate purposes. See "Use of Proceeds" on page S-14.
Risk factors	See "Risk Factors" for a discussion of factors you should consider carefully before deciding to invest in our common stock and warrants to purchase our common stock.
NASDAQ Capital Market symbol for common stock	Our common stock is quoted and traded on The NASDAQ Capital Market under the symbol "ENMD." However, there is no established public trading market for the offered warrants or the units, and we do not expect a market to develop. In addition, we do not intend to apply to list the warrants or units on any securities exchange. The warrants are immediately separable from the shares of common stock being offered as part of the units.

The information above regarding outstanding shares of our common stock is based on 22,507,210 shares of common stock outstanding as of February 22, 2013 and excludes the following shares of common stock:

- 1,605,701 shares of common stock issuable upon the exercise of stock options outstanding as of February 22, 2013 with a weighted-average exercise price of \$4.96 per share;
- 2,049,794 shares of common stock issuable upon the exercise of warrants outstanding as of February 22, 2013 with a weighted-average exercise price of \$1.62 per share;
- 645,376 shares of common stock reserved for future awards under our 2011 Long-Term Incentive Plan, as of February 22, 2013;
- 2,247,912 shares of our common stock issuable upon the exercise of warrants to be issued in this offering at an exercise price of \$2.91 per share; and

- 61,250 shares of our common stock issuable upon the exercise of the warrant to be issued in this offering at an exercise price of \$3.00 per share.

Risk Factors

An investment in our securities involves significant risk. You should consider carefully the risks and uncertainties described below together with all other information in our filings with the SEC that are contained or incorporated by reference in this prospectus supplement and the accompanying prospectus before you decide to invest in our securities. The risk factors set forth below, in addition to all such other information that is contained or incorporated by reference in this prospectus supplement and the accompanying prospectus supersede the risk factors contained in our prior filings with the SEC. Prospective investors should review all of these risk factors before making an investment decision. If any of these risks or uncertainties actually occurs, our business, financial condition or results of operations could be materially adversely affected. Additional risks and uncertainties of which we are unaware or that we currently believe are immaterial could also materially adversely affect our business, financial condition or results of operations. In any case, the trading price of our common stock could decline, and you could lose all or part of your investment. See also "Special Note Regarding Forward-Looking Statements."

Risks Related to Our Business, Our Financial Results and Our Need for Financing

We Plan To Conduct Research and Operations In China, Which Exposes Us To Risks Inherent In Doing Business In China

We expect to conduct research and development related activities in China in 2013. To be successful in China we will need to: establish facilities and clinical trials, attract and retain qualified personnel to operate our Chinese subsidiary, and attract and retain research and development employees. We cannot assure you that we will be able to do any of these. Employee turnover in China is high due to the intensely competitive and fluid market for skilled labor. Operations in China are subject to greater political, legal and economic risks than our operations in other countries. In particular, the political, legal and economic climate in China, both nationally and regionally, is fluid and unpredictable. Our ability to operate in China may be adversely affected by changes in Chinese laws and regulations such as those related to, among other things, taxation, import and export tariffs, environmental regulations, land use rights, intellectual property, employee benefits and other matters. In addition, we may not obtain or retain the requisite legal permits to operate in China, and costs or operational limitations may be imposed in connection with obtaining and complying with such permits. Any one of the factors cited above, or a combination of them, could result in unanticipated costs, which could materially and adversely affect our business and planned operations and development in China.

We Have a History of Losses and Anticipate Future Losses and May Never Become Profitable on a Sustained Basis

To date, we have been engaged primarily in research and development activities. Although we receive limited revenues on royalties from sales of Thalomid[®] and in the past have received license fees and research and development funding from a former collaborator and limited revenues from certain research grants, we have not derived significant revenues from operations.

We have experienced losses in each year since inception. Through September 30, 2012, we had an accumulated deficit of approximately \$392,971,000. We will seek to raise capital to continue our operations, and although we have been successfully funded to date through the sales of our equity securities and through limited royalty payments, there is no assurance that our capital-raising efforts will be able to attract the funding needed to sustain our operations. If we are unable to obtain additional funding for operations, we may not be able to continue operations as proposed, requiring us to modify our business plan, curtail various aspects of our operations or cease operations. In such event, investors may lose a portion or all of their investment.

Losses have continued since September 30, 2012. We expect that our ongoing clinical and corporate activities will result in operating losses for the foreseeable future before we commercialize any products, if ever. In addition, to the extent we rely on others to develop and commercialize our products, our ability to achieve profitability will depend upon the success of these other parties. To support our research and development of certain product candidates, we may seek and rely on cooperative agreements from governmental and other organizations as a source of support. If a cooperative agreement were to be reduced to any substantial extent, it may impair our ability to continue our research and development efforts. Even if we do achieve profitability, we may be unable to sustain or increase it.

We Rely Exclusively on the Royalty Payments Based upon Thalomid[®] Sales by a Third Party to Produce our Revenues, and 2013 Sales May Not Reach the Trigger for Royalty Payment; We Do Not Have Any Late Stage Product Candidates

We entered into a licensing agreement in 2001 regarding royalty payments for Thalomid[®], and in 2004, certain provisions of that agreement were satisfied, entitling us to share in royalty payments received by Royalty Pharma Finance Trust on annual Thalomid[®] sales above a certain threshold. Based on the licensing agreement royalty formula, annual royalty sharing with Royalty Pharma commences when net royalties received by Royalty Pharma exceeds \$15,375,000. During the year ended December 31, 2011, royalty payments from sales of Thalomid[®] by Celgene Corporation accounted for substantially all of our total revenues.

As expected, our royalty payment in 2012 experienced a decline as compared to 2011, and our total revenues earned in 2012 were significantly lower than 2011. Based on the trend of Thalomid[®] sales in the last few years, annual sales of Thalomid[®] in 2013 may decrease to below the trigger threshold, which would result in no payment of Thalomid[®] royalty to the Company. A wide variety of events may have contributed to the decline of Thalomid[®] sales in recent years, including for example, if a competing drug gains greater market share or wider acceptance, or if Celgene target its sales efforts to other proprietary drugs, or if a competitor to Celgene successfully introduces a generic pharmaceutical product equivalent to Thalomid[®] at a relatively lower price with the effect of reducing the market share and profitability of Thalomid[®].

Additionally, we do not have any late stage clinical programs, and ENMD 2076 is in a Phase 2 trial. There is no assurance that ENMD-2076 will progress to further Phase 2 trials or advance to a Phase 3 trial, or that we will be able to finance such clinical trials. Accordingly, we do not have any near-term prospects of generating revenues from the commercial sale of ENMD-2076 or any of our product candidates.

We are Uncertain Whether Additional Funding Will Be Available For Our Future Capital Needs and Commitments, and If We Cannot Raise Additional Funding, or Access the Credit Markets, We May Be Unable to Complete Development of Our Product Candidates

We will require substantial funds in addition to our existing working capital to develop our product candidates and otherwise to meet our business objectives. We have never generated sufficient revenue during any period since our inception to cover our expenses and have spent, and expect to continue to spend, substantial funds to continue our clinical development programs. Any one of the following factors, among others, could cause us to require additional funds or otherwise cause our cash requirements in the future to increase materially:

- progress of our clinical trials or correlative studies;
- results of clinical trials;
- changes in or terminations of our relationships with strategic partners;
- changes in the focus, direction, or costs of our research and development programs;
- competitive and technological advances;
- establishment of marketing and sales capabilities;
- manufacturing;
- the regulatory approval process;
- product launch; or
- significant declines in our royalty revenue

At September 30, 2012, we had cash and cash equivalents of \$8,812,133. Other than the strategic financing that was completed in February 2012 and this current offering, we currently have no commitments or arrangements for any financing. We may continue to seek additional capital through public or private financing, government-supported funding in China, or collaborative agreements later. Our operations require significant amounts of cash. We may be required to seek additional capital, whether from sales of equity or debt or additional borrowings, for the future growth and development of our business. We can give no assurance as to the availability of such additional capital or, if available, whether it would be on terms favorable or acceptable to us. In addition, we may continue to seek capital through the public or private sale of securities, if market conditions are favorable for doing so. If we are successful in raising additional funds through the issuance of equity securities, stockholders will likely experience substantial dilution, or the equity securities may have rights, preferences, or privileges senior to those of the holders of our common stock. If we raise funds through the issuance of debt securities, those securities would have rights, preferences, and privileges senior to those of our common stock. The current credit environment has negatively affected the economy, and we have considered how it might affect our business. If we are not successful

in obtaining sufficient capital because we are unable to access the capital markets on favorable terms, it could reduce our research and development efforts, curtail significantly our development of ENMD-2076 and may materially adversely affect our future growth, results of operations and financial results.

Risks Related To Development, Clinical Testing And Regulatory Approval Of Our Product Candidates

Development of Our Products is Uncertain

ENMD-2076 is in Phase 2 development and our other product candidates were in the early stage of clinical development and require significant, time-consuming and costly research and development, testing and regulatory clearances. In developing our products, we are subject to risks of failure that are inherent in the development of these product candidates. For example, it is possible that any or all of our proposed products will be ineffective or toxic, or otherwise will fail to receive necessary FDA clearances. There is a risk that the proposed products will be uneconomical to manufacture or market or will not achieve market acceptance. There is also a risk that third parties may hold proprietary rights that preclude us from marketing our proposed products or that others will market a superior or equivalent product. Further, our research and development activities might never result in commercially viable products.

A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials even after promising results in earlier trials. Since ENMD-2076 is our primary product candidate any significant clinical setback or an unfavorable outcome in our Phase 2 trials for ENMD 2076 may require us to delay, reduce the scope of, or eliminate this program and could have a material adverse effect on our company and the value of our common stock.

Once a clinical trial has begun, it may be delayed, suspended or terminated due to a number of factors, including:

- ongoing discussions with regulatory authorities regarding the scope or design of our clinical trials or requests by them for supplemental information with respect to our clinical trial results;
- failure to conduct clinical trials in accordance with regulatory requirements;
- lower than anticipated retention rate of patients in clinical trials;
- serious adverse events or side effects experienced by participants; and
- insufficient supply or deficient quality of product candidates or other materials necessary for the conduct of our clinical trials.

Many of these factors may also ultimately lead to denial of regulatory approval of a product candidate. If we experience delays, suspensions or terminations in a clinical trial, the commercial prospects for the related product candidate will be harmed, and our ability to generate product revenues will be delayed.

Although several of our other product candidates have demonstrated some promising results in early clinical (human) trials and preclinical (animal) studies, they may not prove to be effective in subsequent clinical trials. For example, testing on animals may occur under different conditions than testing in humans and therefore the results of animal studies may not accurately predict human experience. Likewise, early clinical studies may not be predictive of eventual safety or effectiveness results in larger-scale pivotal clinical trials. Our clinical development primary focus is on ENMD-2076 and as such we do not expect to internally pursue clinical investigation of our other product candidates.

There are many regulatory steps that must be taken before any of these product candidates will be eligible for regulatory approval and subsequent sale, including the completion of preclinical and clinical trials. We do not expect that these product candidates will be commercially available for several years, if ever.

Our Potential Products Are Subject to Government Regulatory Requirements and an Extensive Approval Process

Our research, development, preclinical and clinical trials, manufacturing, and marketing of most of our product candidates are subject to an extensive regulatory approval process by the FDA and other regulatory agencies in the United States and abroad, and once we commence operations in China, the State Food and Drug Administration (“SFDA”) in China. The process of obtaining FDA, SFDA and other required regulatory approvals for drug and biologic products, including required preclinical and clinical testing, is time consuming and expensive. Even after spending time and money, we may not receive regulatory approvals for clinical testing or for the manufacturing or marketing of any products. Our collaborators or we may encounter significant delays or costs in the effort to secure necessary approvals or licenses. Even if we obtain regulatory clearance for a product, that product will be subject to continuing review. Later discovery of previously unknown defects or failure to comply with the applicable regulatory requirements may result in restrictions on a product’s marketing or withdrawal of the product from the market, as well as possible civil or criminal penalties.

We Must Show the Safety and Efficacy of Our Product Candidates Through Clinical Trials, the Results of Which Are Uncertain

Before obtaining regulatory approvals for the commercial sale of our products, we must demonstrate, through preclinical studies (animal testing) and clinical trials (human testing), that our proposed products are safe and effective for use in each target indication. Testing of our product candidates will be required, and failure can occur at any stage of testing. Clinical trials may not demonstrate sufficient safety and efficacy to obtain the required regulatory approvals or result in marketable products. The failure to adequately demonstrate the safety and efficacy of a product under development could delay or prevent regulatory approval of the potential product.

Clinical trials for the product candidates we are developing may be delayed by many factors, including that potential patients for testing are limited in number. The failure of any clinical trials to meet applicable regulatory standards could cause such trials to be delayed or terminated, which could further delay the commercialization of any of our product candidates. Newly emerging safety risks observed in animal or human studies also can result in delays of ongoing or proposed clinical trials. Any such delays will increase our product development costs. If such delays are significant, they could negatively affect our financial results and the commercial prospects for our products.

Potential Products May Subject Us to Product Liability for Which Insurance May Not Be Available

The use of our potential products in clinical trials and the marketing of any pharmaceutical products may expose us to product liability claims. We have obtained a level of liability insurance coverage that we believe is adequate in scope and coverage for our current stage of development. However, our present insurance coverage may not be adequate to protect us from liabilities we might incur. In addition, our existing coverage will not be adequate as we further develop products and, in the future, adequate insurance coverage and indemnification by collaborative partners may not be available in sufficient amounts or at a reasonable cost. If a product liability claim or series of claims are brought against us for uninsured liabilities, or in excess of our insurance coverage, the payment of such liabilities could have a negative effect on our business and financial condition.

Risks Related to Our Operations

We Depend on Patents and Other Proprietary Rights, Some of Which Are Uncertain

Our success will depend in part on our ability to obtain and maintain patents for ENMD-2076 and our other products, both in the United States and abroad. The patent position of biotechnology and pharmaceutical companies in general is highly uncertain and involves complex legal and factual questions. Risks that relate to patenting our products include the following:

- our failure to obtain additional patents;
- challenge, invalidation, or circumvention of patents already issued to us;
- failure of the rights granted under our patents to provide sufficient protection;
- independent development of similar products by third parties; or
- ability of third parties to design around patents issued to our collaborators or us.

Our potential products may conflict with composition, method, and use of patents that have been or may be granted to competitors, universities or others. As the biotechnology industry expands and more patents are issued, the risk increases that our potential products may give rise to claims that may infringe the patents of others. Such other persons could bring legal actions against us claiming damages and seeking to enjoin clinical testing, manufacturing and marketing of the affected products. Any such litigation could result in substantial cost to us and diversion of effort by our management and technical personnel. If any of these actions are successful, in addition to any potential liability for damages, we could be required to obtain a license in order to continue to manufacture or market the affected products. We may not prevail in any action and any license required under any needed patent might not be made available on acceptable terms, if at all.

We also rely on trade secret protection for our confidential and proprietary information. However, trade secrets are difficult to protect and others may independently develop substantially equivalent proprietary information and techniques and gain access to our trade secrets and disclose our technology. We may be unable to meaningfully protect our rights to unpatented trade secrets. We require our employees to complete confidentiality training that specifically addresses trade secrets. All employees, consultants, and advisors are required to execute a confidentiality agreement when beginning an employment or a consulting relationship with us. The agreements generally provide that all trade secrets and inventions conceived by the individual and all confidential information developed or made known to the individual during the term of the relationship automatically become our exclusive property. Employees and consultants must keep such information confidential and may not disclose such information to third parties except in specified circumstances. However, these agreements may not provide meaningful protection for our proprietary information in the event of unauthorized use or disclosure of such information.

To the extent that consultants, key employees, or other third parties apply technological information independently developed by them or by others to our proposed projects, disputes may arise as to the proprietary rights to such information. Any such disputes may not be resolved in our favor. Certain of our consultants are employed by or have consulting agreements with other companies and any inventions discovered by them generally will not become our property.

We May Engage in Strategic and Other Corporate Transactions, Which Could Negatively Affect Our Business and Financial Condition

In 2013, we may consider strategic and other corporate transactions as opportunities present themselves. There are risks associated with such activities. These risks include, among others, incorrectly assessing the quality of a prospective strategic partner, encountering greater than anticipated costs in integration, being unable to profitably deploy assets acquired in the transaction, such as drug candidates, possible dilution to our stockholders, and the loss of key employees due to changes in management. Further, strategic transactions may place additional constraints on our resources by diverting the attention of our management from our business operations. To the extent we issue securities in connection with additional transactions, these transactions and related issuances may have a dilutive effect on earnings per share and our ownership. Our earnings, financial condition, and prospects after an acquisition depend in part on our ability to successfully integrate the operations of the acquired business or technologies. We may be unable to integrate operations successfully or to achieve expected cost savings. Any cost savings which are realized may be offset by losses in revenues or other charges to earnings.

Developments By Competitors May Render Our Products Obsolete

If competitors were to develop superior drug candidates, our products could be rendered noncompetitive or obsolete, resulting in a material adverse effect to our business. Developments in the biotechnology and pharmaceutical industries are expected to continue at a rapid pace. Success depends upon achieving and maintaining a competitive position in the development of products and technologies. Competition from other biotechnology and pharmaceutical companies can be intense. Many competitors have substantially greater research and development capabilities, marketing, financial and managerial resources and experience in the industry. Even if a competitor creates a product that is not superior, we may not be able to compete.

The Success of Our Business Depends Upon the Members of Our Senior Management Team, Our Scientific Staff and Our Ability to Continue to Attract and Retain Qualified Scientific, Technical and Business Personnel

We are dependent on the principal members of our senior management team and scientific staff for our business success. The loss of any of these people could impede the achievement of our development and business objectives. We do not carry key man life insurance on the lives of any of our key personnel. There is intense competition for human resources, including management, in the scientific fields in which we operate and there can be no assurance that we will be able to attract and retain qualified personnel necessary for the successful development of ENMD-2076, and any expansion into areas and activities requiring additional expertise. In addition, there can be no assurance that such personnel or resources will be available when needed. In addition, we rely on a significant number of consultants to assist us in formulating our clinical strategy and other business activities. All of our consultants may have commitments to, or advisory or consulting agreements with, other entities that may limit their availability to us.

We May Need New Collaborative Partners to Further Develop and Commercialize Products, and if We Enter Into Such Arrangements, We May Give Up Control Over the Development and Approval Process and Decrease our Potential Revenue

We plan to develop and commercialize our product candidates both with and without corporate alliances and partners. Nonetheless, we intend to explore opportunities for new corporate alliances and partners to help us develop, commercialize and market our product candidates. We expect to grant to our partners certain rights to commercialize any products developed under these agreements, and we may rely on our partners to conduct research and development efforts and clinical trials on, obtain regulatory approvals for, and manufacture and market any products licensed to them. Each individual partner will seek to control the amount and timing of resources devoted to these activities generally. We anticipate obtaining revenues from our strategic partners under such relationships in the form of research and development payments and payments upon achievement of certain milestones. Since we generally expect to obtain a royalty for sales or a percentage of profits of products licensed to third parties, our revenues may be less than if we retained all commercialization rights and marketed products directly. In addition, there is a risk that our corporate partners will pursue alternative technologies or develop competitive products as a means for developing treatments for the diseases targeted by our programs.

We may not be successful in establishing any collaborative arrangements. Even if we do establish such collaborations, we may not successfully commercialize any products under or derive any revenues from these arrangements. There is a risk that we will be unable to manage simultaneous collaborations, if any, successfully. With respect to existing and potential future strategic alliances and collaborative arrangements, we will depend on the expertise and dedication of sufficient resources by these outside parties to develop, manufacture, or market products. If a strategic alliance or collaborative partner fails to develop or commercialize a product to which it has rights, we may not recognize any revenues on that particular product.

Risks Related To Our Dependence On Third Parties

The Independent Clinical Investigators and Contract Research Organizations That We Rely Upon to Assist in the Conduct of Our Clinical Trials May Not Be Diligent, Careful or Timely, and May Make Mistakes, in the Conduct of Our Trials

We depend on independent clinical investigators and contract research organizations, or CROs, to assist in the conduct of our clinical trials under their agreements with us. The investigators are not our employees, and we cannot control the amount or timing of resources that they devote to our programs. If independent investigators fail to devote sufficient time and resources to our drug development programs, or if their performance is substandard, it could delay the approval of our FDA applications and our introduction of new drugs. The CROs we contract with to assist with the execution of our clinical trials play a significant role in the conduct of the trials and the subsequent collection and analysis of data. Failure of the CROs to meet their obligations could adversely affect clinical development of our products.

We Have No Current Manufacturing or Marketing Capacity and Rely on Only One Supplier For Some of Our Products

We do not expect to manufacture or market products in the near term, but we may try to do so in certain cases. We do not currently have the capacity to manufacture or market products and we have limited experience in these activities. The manufacturing processes for all of the small molecules we are developing have not yet been tested at commercial levels, and it may not be possible to manufacture these materials in a cost-effective manner. If we elect to perform these functions, we will be required to either develop these capacities, or contract with others to perform some or all of these tasks. We may be dependent to a significant extent on corporate partners, licensees, or other entities for manufacturing and marketing of products. If we engage directly in manufacturing or marketing, we will require substantial additional funds and personnel and will be required to comply with extensive regulations. We may be unable to develop or contract for these capacities when required to do so in connection with our business.

We depend on our third-party manufacturers to perform their obligations effectively and on a timely basis. These third parties may not meet their obligations and any such non-performance may delay clinical development or submission of products for regulatory approval, or otherwise impair our competitive position. Any significant problem experienced by one of our suppliers could result in a delay or interruption in the supply of materials to us until such supplier resolves the problem or an alternative source of supply is located. Any delay or interruption would likely lead to a delay or interruption of manufacturing operations, which could negatively affect our operations. Although we have identified alternative suppliers for our product candidates, we have not entered into contractual or other arrangements with them. If we needed to use an alternate supplier for any product, we would experience delays while we negotiated an agreement with them for the manufacture of such product. In addition, we may be unable to negotiate manufacturing terms with a new supplier as favorable as the terms we have with our current suppliers.

Problems with any manufacturing processes could result in product defects, which could require us to delay shipment of products or recall products previously shipped. In addition, any prolonged interruption in the operations of the manufacturing facilities of one of our sole-source suppliers could result in the cancellation of shipments. A number of factors could cause interruptions, including equipment malfunctions or failures, or damage to a facility due to natural disasters or otherwise. Because our manufacturing processes are or are expected to be highly complex and subject to a lengthy regulatory approval process, alternative qualified production capacity may not be available on a timely basis or at all. Difficulties or delays in our manufacturing could increase our costs and damage our reputation.

The manufacture of pharmaceutical products can be an expensive, time consuming, and complex process. Manufacturers often encounter difficulties in scaling-up production of new products, including quality control and assurance and shortages of personnel. Delays in formulation and scale-up to commercial quantities could result in additional expense and delays in our clinical trials, regulatory submissions, and commercialization.

Failure of Manufacturing Facilities Producing Our Product Candidates to Maintain Regulatory Approval Could Delay or Otherwise Hinder Our Ability to Market Our Product Candidates

Any manufacturer of our product candidates will be subject to applicable Good Manufacturing Practices (GMP) prescribed by the FDA or other rules and regulations prescribed by foreign regulatory authorities. We and any of our collaborators may be unable to enter into or maintain relationships either domestically or abroad with manufacturers whose facilities and procedures comply or will continue to comply with GMP and who are able to produce our small molecules in accordance with applicable regulatory standards. Failure by a manufacturer of our products to comply with GMP could result in significant time delays or our inability to obtain marketing approval or, should we have market approval, for such approval to continue. Changes in our manufacturers could require new product testing and facility compliance inspections. In the United States, failure to comply with GMP or other applicable legal requirements can lead to federal seizure of violated products, injunctive actions brought by the federal government, inability to export product, and potential criminal and civil liability on the part of a company and its officers and employees.

Risks Related to our Common Stock and the Offering

IDG And its Affiliates Are Our Largest Holders Of Common Stock And May Have Different Interests Than Our Other Stockholders.

IDG-Accel China Growth Fund III L.P. and its affiliated entities (“IDG”) is the largest holder of our outstanding shares of our common stock (excluding the shares issuable under the warrants held by IDG) and the shares issued in this offering, and IDG is permitted to have representation on the Board of Directors. IDG may have interests that are different from the interests of the other stockholders. We cannot assure that IDG will not seek to influence our business in a manner that is contrary to our goals or strategies or the interests of other stockholders.

Our Common Stock May be Delisted From The NASDAQ Capital Market, Which Could Negatively Impact the Price of Our Common Stock and Our Ability to Access Capital Markets

If we are not able to comply with the listing standards of the Nasdaq Capital Market, our common stock will be delisted from Nasdaq and an associated decrease in liquidity in the market for our common stock will occur. In addition, the delisting of our common stock could materially adversely affect our access to the capital markets, and any limitation on liquidity or reduction in the price of our common stock could materially adversely affect our ability to raise capital on terms acceptable to us or at all. Delisting from The NASDAQ Capital Market could also result in other negative implications, including the potential loss of confidence by our research partners and suppliers, the loss of institutional investor interest and fewer business development opportunities.

The Price Of Our Common Stock Has Been and Is Likely To Continue To Be Volatile, and Your Investment Could Suffer A Decline In Value

Market prices for our common stock and the securities of certain other biotechnology and biopharmaceutical companies have been highly volatile and may continue to be highly volatile in the future. Our common stock has been, and is likely to be, highly volatile and could be subject to wide fluctuations in price in response to various factors, many of which are beyond our control, including:

- the timing and the results of our clinical trial programs;
- FDA or other federal or state regulatory actions;
- failure of any of our product candidates, if approved, to achieve commercial success;
- announcements of clinical trial results or new product introductions by our competitors;
- market conditions in the pharmaceutical, biopharmaceutical and biotechnology sectors;
- developments concerning our or our competitors’ intellectual property rights;
- litigation or public concern about the safety of our product candidates;
- deviations in our business and the trading price of our common stock from the estimates of securities analysts; and
- additions or departures of key personnel.

Moreover, the stock market in general may experience extreme price and volume fluctuations that are unrelated and disproportionate to the operating performance of companies. As a result of such volatility, you could lose all or part of your investment. Class action litigation has often been instituted against companies whose securities have experienced periods of volatility in market price. Any such litigation brought against us could result in substantial costs and a diversion of management's attention and resources, which could hurt our business, operating results and financial condition.

Investors in This Offering will Experience Immediate and Substantial Dilution

The public offering price of our common stock is substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will incur immediate and substantial dilution in the pro forma net tangible book value per share of common stock from the price per share that you pay for the common stock. See "Dilution."

We May Require Additional Capital in the Future, Which May Not be Available to Us on Favorable Terms. Issuances of our Equity Securities to Provide This Capital May Dilute Your Ownership in Us

We may need to raise additional funds through public or private debt or equity financings in order to:

- take advantage of expansion opportunities;
- acquire complementary businesses or technologies;
- develop new services and products; or
- respond to competitive pressures.

Any additional capital raised through the issuance of our equity securities may dilute your percentage ownership interest in us. Furthermore, any additional financing we may need may not be available on terms favorable to us or at all. The unavailability of needed financing could adversely affect our ability to execute our growth strategy.

Sales of Substantial Amounts of our Common Stock or the Perception That Such Sales May Occur Could Cause the Market Price of Our Common Stock to Drop Significantly, Even if Our Business is Performing Well

The market price of our common stock could decline as a result of sales by, or the perceived possibility of sales by, our existing stockholders of shares of our common stock in the market after this offering. These sales might also make it more difficult for us to sell equity securities at a time and price that we deem appropriate, or at all. In addition, we have filed resale shelf registration statements to register shares of our common stock that may be sold by certain of our stockholders, which may increase the likelihood of sales, or the perception of an increased likelihood of sales, by our existing stockholders of shares of our common stock.

We Will have Broad Discretion in How We Use the Proceeds of This Offering, and We May Not Use These Proceeds Effectively, Which Could Affect Our Results of Operations and Cause our Stock Price to Decline

We will have considerable discretion in the application of the net proceeds of this offering. We currently intend to use the net proceeds of this offering to fund our research and development programs and their related costs, including conducting clinical trials of our product candidates, as well as possibly preparing for commercial launch. However, our management has broad discretion over how these proceeds are used and could spend the proceeds in ways with which you may not agree. We may not invest the proceeds of this offering effectively or in a manner that yields a favorable or any return, and consequently, this could result in financial losses that could have a material and adverse effect on our business, cause the price of our common stock to decline or delay the development of our product candidates.

There is No Public Market for the Warrants to Purchase Common Stock in this Offering.

There is no established public trading market for the warrants being sold in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the warrants on any securities exchange. Without an active market, the liquidity of the warrants will be limited.

The Market Price of Our Common Stock May Be Highly Volatile or May Decline Regardless of Our Operating Performance

Our common stock price has fluctuated from year-to-year and quarter-to-quarter and will likely continue to be volatile. During 2012, our stock price ranged from \$1.00 to \$2.95. We expect that the trading price of our common stock is likely to be highly volatile in response to factors that are beyond our control. The valuations of many biotechnology companies without consistent product revenues and earnings are extraordinarily high based on conventional valuation standards, such as price to earnings and price to sales ratios. These trading prices and valuations may not be sustained. In the future, our operating results in a particular period may not meet the expectations of any securities analysts whose attention we may attract, or those of our investors, which may result in a decline in the market price of our common stock. Any negative change in the public's perception of the prospects of biotechnology companies could depress our stock price regardless of our results of operations. These factors may materially and adversely affect the market price of our common stock.

Because We Do Not Expect to Pay Dividends in the Foreseeable Future, You Must Rely on the Possibility of Stock Appreciation for any Return on Your Investment

We have paid no cash dividends on any of our capital stock to date, and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. As a result, we do not expect to pay any cash dividends in the foreseeable future, and payment of cash dividends, if any, will also depend on our financial condition, results of operations, capital requirements and other factors and will be at the discretion of our board of directors. Furthermore, we are subject to various laws and regulations that may restrict our ability to pay dividends and we may in the future become subject to contractual restrictions on, or prohibitions against, the payment of dividends. Accordingly, the success of your investment in our common stock will likely depend entirely upon any future appreciation. There is no guarantee that our common stock will appreciate in value after the offering or even maintain the price at which you purchased your shares, therefore, you may not realize a return on your investment in our common stock and you may lose your entire investment in our common stock.

Special Note Regarding Forward-Looking Statements

This prospectus supplement contains and incorporates by reference certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements that are not descriptions of historical facts are forward-looking statements. These statements can generally be identified by the use of forward-looking terminology such as “believes,” “expects,” “intends,” “may,” “will,” “should,” or “anticipates” or similar terminology. These forward-looking statements include, among others, statements regarding the timing of our clinical trials, our cash position and future expenses, and our future revenues.

Forward-looking statements are subject to numerous assumptions, risks and uncertainties, which change over time. Forward-looking statements speak only as of the date they are made, and we assume no duty to update forward-looking statements. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our 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 statements.

Actual results could differ materially from those currently anticipated due to a number of factors, including those set forth in this prospectus supplement under the heading “Risk Factors”; the risk that we may be unable to continue as a going concern as a result of our inability to raise sufficient capital for our operational needs; the possibility that we may be delisted from trading on the Nasdaq Capital Market; the volatility of our common stock; the difficulty of executing our business strategy in China; our inability to enter into strategic partnerships for the development, commercialization, manufacturing and distribution of our proposed product candidate; risks relating to the need for additional capital and the uncertainty of securing additional funding on favorable terms; the failure to consummate a transaction to monetize our Thalomid® royalty stream for any reason, including our inability to obtain the required third-party consents; declines in actual sales of Thalomid® resulting in reduced royalty payments; risks associated with our product candidates; the early-stage products under development; results in preclinical models are not necessarily indicative of clinical results; uncertainties relating to preclinical and clinical trials, including delays to the commencement of such trials; the lack of success in the clinical development of any of our products; dependence on third parties; and risks relating to the commercialization, if any, of our proposed products (such as marketing, safety, regulatory, patent, product liability, supply, competition and other risks). Such factors, among others, could have a material adverse effect upon our business, results of operations and financial condition. We caution readers not to place undue reliance on any forward-looking statements, which only speak as of the date made. Additional information about the factors and risks that could affect our business, financial condition and results of operations, are contained in our filings with the SEC, which are available at www.sec.gov.

You are encouraged to review the Risk Factors included in this prospectus supplement.

Use of Proceeds

We estimate that the net proceeds we will receive from this offering will be approximately \$10,346,000 after deducting the placement agent’s fees and other estimated offering related expenses.

We will retain broad discretion over the use of the net proceeds from the sale of our common stock offered hereby. We currently anticipate using the net proceeds from this offering for the clinical development of our lead product candidate, ENMD-2076, and for general corporate purposes.

The timing and amount of our actual expenditures will be based on many factors, including progress in, and the costs of, our clinical trials and research and development programs, our ability to identify collaborators for our product candidates, our ability to negotiate and enter into definitive agreements with any such collaborators and the amount and timing of revenues, if any, from future collaborations. We therefore cannot estimate the amount of net proceeds to be used for all of the purposes described above. Until we use the net proceeds of this offering for the above purposes, we intend to invest the funds in short-term, investment grade, interest-bearing securities. We cannot predict whether the proceeds invested will yield a favorable return.

Dilution

Our net tangible book value on September 30, 2012 was approximately \$8,364,000, or approximately \$0.37 per share of common stock. Net tangible book value per share as of any date is determined by dividing our net tangible book value, which consists of tangible assets less total liabilities, by the number of shares of common stock outstanding on that date. Without taking into account any other changes in our net tangible book value after September 30, 2012, other than to give effect to our receipt of the estimated net proceeds (after payment of the placement agent fees and our estimated offering expenses) from the sale by us of the Agent's Warrant and 4,495,828 units consisting of 4,495,828 shares of common stock and warrants to purchase 2,247,912 shares of common stock at an offering price of \$2.40 per unit (and excluding any shares of common stock issued and any proceeds received upon exercise of the warrants), our net tangible book value as of September 30, 2012, after giving effect to the items above, would have been approximately \$18,710,000, or \$0.69 per share of common stock. This represents an immediate increase in net tangible book value of \$0.32 per share of common stock to our existing stockholders and an immediate dilution in net tangible book value of \$1.71 per share of common stock to purchasers of units in this offering.

The following table illustrates this calculation in a per share basis:

Public offering price per unit		\$	2.40
Net tangible book value per share as of September 30, 2012	\$	0.37	
Increase in net tangible book value per share attributable to this offering	\$	0.32	
Pro forma net tangible book value per share as of September 30, 2012, after giving effect to this offering	\$	0.69	
Dilution per share to investors in this offering	\$	1.71	

The above table is based on 22,503,393 shares of our common stock outstanding as of September 30, 2012 (as adjusted for 4,495,828 shares of common stock to be issued in this offering) and excludes, as of September 30, 2012:

- 2,049,794 shares of common stock issuable upon the exercise of warrants outstanding prior to this offering;
- 2,309,162 shares of common stock issuable upon the exercise of warrants to be issued pursuant to this offering;
- 1,647,253 shares of common stock issuable upon the exercise of stock options outstanding prior to this offering under our equity incentive plans; and
- 637,000 shares of common stock available for future grants under our 2011 Long-Term Incentive Plan.

To the extent that any of these options or warrants are exercised, new options are issued under our equity incentive plans or we otherwise issue additional shares of common stock in the future, there will be further dilution to the new investors.

Description of Securities We Are Offering

Common Stock

The material terms and provisions of our common stock are described under the caption “Description of Common Stock” starting on page 6 of the accompanying prospectus.

Warrants in Units

The material terms and provisions of the warrants included in the units being offered pursuant to this prospectus supplement are summarized below. The form of warrant will be provided to each purchaser in this offering and will be included as an exhibit to a Current Report on filed Form 8-K with the SEC in connection with this offering.

Form. The warrants included in the units, none of which have been issued as of the date of this prospectus supplement, will be issued as individual warrant agreements to the investors.

Exercisability. The warrants included in the units are exercisable beginning 181 days after their issuance, expected to be September 3, 2013, and at any time up to the date that is three years after the warrants become exercisable, expected to be September 3, 2016. The warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise. No fractional shares of common stock will be issued in connection with the exercise of a warrant. In lieu of fractional shares, we will pay the holder either a cash adjustment in respect of such fraction in an amount equal to the fraction multiplied by the exercise price of the warrant, or round up to the nearest whole share. Under certain conditions, the warrants will be exercisable on a cashless “net” basis. If, as of the date of this prospectus supplement, a holder does not beneficially own more than 9.99% of the total number of issued and outstanding shares, then the number of warrant shares that may be acquired by any holder upon any exercise of the warrant will be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of common stock then beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with the holder’s for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, does not exceed 4.99% (or 9.99% in the case of certain holders) of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise), or beneficial ownership limitation. The holder may elect to change this beneficial ownership limitation from 4.99% to 9.99% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise) upon 61 days’ prior written notice.

Exercise Price. Each warrant included in the units represents the right to purchase of shares of common stock at an exercise price equal to \$2.91 per share, subject to adjustment as described below. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock.

Transferability. Subject to applicable laws, the warrants may be offered for sale, sold, transferred or assigned without our consent.

Exchange Listing. There is no established public trading market for the warrants, and we do not expect a market to develop. We do not intend to apply to list the warrants on any securities exchange. Without an active market, the liquidity of the warrants will be limited. In addition, in the event our common stock price does not exceed the per share exercise price of the warrants during the period when the warrants are exercisable, the warrants will not have any value.

Rights as a Stockholder. Except as otherwise provided in the warrants or by virtue of such holder’s ownership of shares of our common stock, the holder of a warrant does not have the rights or privileges of a holder of our common stock, including any voting rights, until the holder exercises the warrant.

Authorization of Shares upon Exercise. The shares of common stock issuable on exercise of the warrants will be, when issued in accordance with the warrants, duly and validly authorized, issued and fully paid and non-assessable. We will authorize and reserve at least that number of shares of common stock equal to the number of shares of common stock issuable upon exercise of all outstanding warrants.

Agent's Warrant

The material terms and provisions of the Agent's Warrant being offered pursuant to this prospectus supplement are summarized below. The Agent's Warrant will be provided to Burrill and included as an exhibit to a Current Report on Form 8-K filed with the SEC in connection with this offering.

The Agent's Warrant will be issued on substantially the same terms as the warrants issued to purchasers of the units, except the Agents Warrant will:

- have an exercise price equal to \$3.00 per share;
- be exercisable on a cashless "net" basis;
- expire on October 9, 2017, the five-year anniversary of the effective date of the registration statement of which this prospectus supplement forms a part;
- not have anti-dilution provisions; and
- contain certain restrictions required by the Financial Industry Regulatory Authority ("FINRA"), as described under "Plan of Distribution" below.

Plan of Distribution

Pursuant to a placement agent agreement, dated as of December 11, 2012, by and between the Company and Burrill, as amended by the first amendment thereto, dated as of February 27, 2013, by and between the Company and Burrill (the "Placement Agent Agreement"), we have engaged Burrill to act as our exclusive placement agent in connection with our offering of units, consisting of shares of common stock and warrants, in a proposed takedown from our shelf registration statement pursuant to this prospectus supplement and the accompanying prospectus. The Placement Agent Agreement does not give rise to any commitment by Burrill to purchase any of our shares of common stock or warrants, and Burrill will have no authority to bind us to sell securities by virtue of the agreement. Further, Burrill does not guarantee that it will be able to raise new capital in any prospective offering.

We have entered into a securities purchase agreement directly with each purchaser in connection with this offering. Our obligation to issue and sell units to the purchasers is subject to the conditions set forth in the purchase agreement, which may be waived by us at our discretion. A purchaser's obligation to purchase units is subject to the conditions set forth in its, his or her purchase agreement as well, which may also be waived.

We will deliver the shares of common stock being issued to each purchaser electronically, or if requested, by physical stock certificate, upon receipt of purchaser funds for the purchase of the shares of our common stock offered pursuant to this prospectus supplement. We expect that our transfer agent will deliver the shares of our common stock being offered pursuant to this prospectus supplement beginning on or about March 5, 2013 as investors' funds are received.

We have agreed to pay Burrill a fee equal to 6% of the gross proceeds from the sale of the units in this offering, excluding any investment made by any investors based in China (unless such investment was identified and facilitated by Burrill with our approval), or approximately \$294,000. In addition, we will issue to Burrill the Agent's Warrant, a warrant to purchase the number of shares equal to 3% of the shares of our common stock sold pursuant to this prospectus supplement, excluding any investment made by any investors based in China (unless such investment was identified and facilitated by Burrill with our approval), with an exercise price equal to \$3.00 per share. The Agent's Warrant will be exercisable on a cashless "net" basis and will be exercisable beginning 181 days after the date of issuance and will expire on October 9, 2017, the five-year anniversary of the effective date of the registration statement of which this prospectus supplement forms a part, and will not have anti-dilution protection. Pursuant to FINRA Rule 5110(g)(1), neither the Agent's Warrant nor any shares of common stock issued upon exercise of the Agent's Warrant may be sold, transferred, assigned, pledged, or hypothecated, or be subject to any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of such securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of this offering, except the transfer of any security: (i) by operation of law or by reason of reorganization, (ii) to any FINRA member firm participating in the offering and the officers and partners thereof, if all securities so transferred remain subject to the lock-up restriction described above for the remainder of the time period, (iii) if the aggregate amount of our securities held by Burrill or

related person does not exceed 1% of the securities being offered, (iv) that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund, and participating members in the aggregate do not own more than 10% of the equity in the fund, or (v) the exercise or conversion of any security, if all securities received remain subject to the lock-up restriction set forth above for the remainder of the time period. We have also agreed to reimburse Burrill for reasonable expenses incurred by it in connection with this offering in an amount not greater than \$25,000 (unless we provide prior written authorization for expenses in excess of this amount), subject to compliance with FINRA Rule 5110(f)(2)(D).

Under no circumstances will the fee, commission or discount received by Burrill or any member of FINRA or any independent broker-dealer exceed 8% of the gross proceeds to us in this offering.

We have agreed to indemnify Burrill against certain civil liabilities, including certain liabilities under the Securities Act of 1933, as amended (the "Securities Act"), and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and to contribute to payments that Burrill may be required to make in respect of such liabilities.

The Placement Agent Agreement will be included as an exhibit to the Current Report on Form 8-K that we will file with the SEC and will be incorporated by reference into the registration statement of which this prospectus supplement forms a part.

Burrill may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by it might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, Burrill would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 415(a)(4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares of common stock and warrants by Burrill acting as principal. Under these rules and regulations, Burrill:

- may not engage in any stabilization activity in connection with our securities; and
- may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

The estimated offering expenses payable by us, in addition to the fee of \$294,000 due to Burrill, are approximately \$150,000, which includes our legal, accounting and filing costs, and various other fees associated with registering the securities and listing the common stock. After deducting certain fees due to Burrill and our estimated offering expenses, we expect the net proceeds from this offering to be approximately \$10,346,000 (excluding any shares of common stock issued and any proceeds received upon exercise of the warrants).

The foregoing does not purport to be a complete statement of the terms and conditions of the securities purchase agreement or warrants. A copy of the Agent's Warrant, the form of securities purchase agreement with the investors and the form of warrant will be included as exhibits to our current report on Form 8-K that will be filed with the SEC and incorporated by reference into the Registration Statement of which this prospectus supplement forms a part.

The transfer agent for our common stock is American Stock Transfer & Trust Company.

Our common stock is traded on The NASDAQ Capital Market under the symbol "ENMD."

The purchase price per share was determined based on negotiations with investors and discussions with Burrill.

Legal Matters

The validity of the issuance of the securities offered hereby has been passed upon by Arnold & Porter LLP, Washington, D.C.

Experts

Reznick Group, P.C. ("Reznick"), independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2011, as set forth in their report, which is incorporated by reference herein. Our financial statements are incorporated by reference in reliance on Reznick's report, given on their authority as experts in accounting and auditing.

Where You Can Find More Information

We have filed with the SEC a registration statement under the Securities Act that registers the distribution of the securities offered under this prospectus supplement. The registration statement, including the attached exhibits and schedules and the information incorporated by reference, contains additional relevant information about us and the securities. The rules and regulations of the SEC allow us to omit from this prospectus supplement certain information included in the registration statement.

In addition, we file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy this information and the registration statement at the SEC public reference room located at Public Reference Room of the SEC at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room.

In addition, the SEC maintains an Internet site that contains reports, proxy statements and other information about issuers of securities, like us, who file such material electronically with the SEC. The address of that web site is <http://www.sec.gov>. We also maintain a web site at <http://www.entremed.com>, which provides additional information about our company. The material on our website is not a part of this prospectus supplement or the accompanying prospectus.

Incorporation of Certain Information by Reference

The SEC allows us to incorporate by reference the information that we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement. These documents may include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as Proxy Statements. Any documents that we subsequently file with the SEC will automatically update and replace the information previously filed with the SEC. Thus, for example, in the case of a conflict or inconsistency between information set forth in this prospectus supplement and information incorporated by reference into this prospectus supplement, you should rely on the information contained in the document that was filed later.

This prospectus supplement incorporates by reference the documents listed below that we previously have filed with the SEC and any additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus supplement and the termination of the offering of the securities. These documents contain important information about us.

1. Our Annual Report on Form 10-K for the fiscal year ended December 31, 2011, filed with the SEC on March 9, 2012;
2. Our Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2012, June 30, 2012 and September 30, 2012, filed with the SEC on May 5, 2012, August 14, 2012 and November 14, 2012, respectively;
3. Our Current Reports on Form 8-K, filed with the SEC on January 6, 2012, January 26, 2012, February 6, 2012, February 23, 2012, March 7, 2012, April 3, 2012, May 4, 2012, May 23, 2012, September 20, 2012 and November 1, 2012;
4. Our Definitive Proxy Statement on Schedule 14A filed with the SEC on March 22, 2012; and

- The description of the Company's common stock contained in the Company's Registration Statement on Form 8-A filed with the SEC under the Exchange Act on May 14, 1996, including any amendment or report filed for the purpose of updating such description.
- 5.

You can obtain a copy of any or all of the documents incorporated by reference in this prospectus supplement (other than an exhibit to a document unless that exhibit is specifically incorporated by reference into that document) from the SEC on its web site at <http://www.sec.gov>. You also can obtain these documents from us without charge by visiting our web site at <http://www.entremed.com> or by requesting them in writing, by email or by telephone at the following address:

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(240) 864-2600
investorrelations@entremed.com

We have authorized no one to provide you with any information that differs from that contained in this prospectus supplement or the accompanying prospectus. Accordingly, you should not rely on any information that is not contained in this prospectus supplement or the accompanying prospectus.



PROSPECTUS

ENTREMED, INC.

\$30,000,000

Common Stock

Warrants to Purchase Common Stock

Units

We may offer and sell from time to time shares of common stock or warrants to purchase shares of common stock either individually or in units. We may also offer common stock upon exercise of warrants. We may sell any combination of the above described securities, either individually or in units, in one or more offerings in amounts, at prices and on terms determined at the time of the offering. We refer to the shares of common stock, warrants to purchase shares of common stock and units collectively as the “securities.”

This prospectus provides you with a general description of the securities that we may offer. This prospectus may not be used to consummate sales of securities unless accompanied by a prospectus supplement. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add information or update information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with the documents incorporated by reference and described under the heading “Where You Can Find More Information” before you make your investment decision.

An investment in the securities offered under this prospectus involves a high degree of risk. You should carefully consider the risk factors described in the applicable prospectus supplement and certain of our filings with the Securities and Exchange Commission, as described under “Risk Factors ” on page 3.

The aggregate market value of our outstanding common stock held by non-affiliates is \$40,554,226, based on 22,503,393 shares of outstanding common stock, of which 21,571,397 are held by non-affiliates, and a per share price of \$1.88 based on the closing sale price of our common stock on September 25, 2012. We have not offered any securities pursuant to General Instruction I.B.6. of Form S-3 during the prior 12 calendar month period that ends on and includes the date of this prospectus.

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 October 9, 2012.

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About This Prospectus

This prospectus is part of a “shelf” registration statement we filed with the Securities and Exchange Commission, or the SEC. By using a shelf registration statement, we may offer to sell any one or more or a combination of the securities described in this prospectus from time to time for an aggregate offering price of up to \$30,000,000.

You should rely only on the information contained in or specifically incorporated by reference into this prospectus or a prospectus supplement. No dealer, sales person, agent or other individual has been authorized to give any information or to make any representations not contained in this prospectus. If given or made, such information or representations must not be relied upon as having been authorized by us.

This prospectus does not constitute an offer to sell, or a solicitation of an offer to buy, the securities offered hereby in any jurisdiction where, or to any person to whom, it is unlawful to make such offer or solicitation.

We may sell securities to underwriters who will sell the securities to the public on terms fixed at the time of sale. In addition, the securities may be sold by us directly or through dealers or agents designated from time to time. If we, directly or through agents, solicit offers to purchase the securities, we reserve the sole right to accept and, together with any agents, to reject, in whole or in part, any of those offers.

Any prospectus supplement will contain the names of the underwriters, dealers or agents, if any, together with the terms of offering, the compensation of those underwriters and the net proceeds to us. Any underwriters, dealers or agents participating in the offering may be deemed "underwriters" within the meaning of the Securities Act of 1933, as amended (the "Securities Act").

We have not taken any action to permit a public offering of the shares of common stock outside the United States or to permit the possession or distribution of this prospectus outside the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about and observe any restrictions relating to the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of securities. Neither the delivery of this prospectus nor any sale made hereunder shall, under any circumstances, create an implication that there has not been any change in the facts set forth in this prospectus or in our affairs since the date of this prospectus.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains and incorporates certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Forward-looking statements also may be included in other statements that we make. All statements that are not descriptions of historical facts are forward-looking statements. These statements can generally be identified by the use of forward-looking terminology such as “believes,” “expects,” “intends,” “may,” “will,” “should,” or “anticipates” or similar terminology. These forward-looking statements include, among others, statements regarding the timing of our clinical trials, our cash position and future expenses, and our future revenues.

Our forward-looking statements are based on information available to us today, and we will not update these statements.

Actual results could differ materially from those currently anticipated due to a number of factors, including: the risk that we may be unable to continue as a going concern as a result of our inability to raise sufficient capital for our operational needs; the possibility that we may be delisted from trading on the Nasdaq Capital Market; the volatility of our common stock; the difficulty of executing our business strategy in China; our inability to enter into strategic partnerships for the development, commercialization, manufacturing and distribution of our proposed product candidate; risks relating to the need for additional capital and the uncertainty of securing additional funding on favorable terms; declines in actual sales of Thalomid[®] resulting in reduced royalty payments; risks associated with our product candidates; any early-stage products under development; results in preclinical models are not necessarily indicative of clinical results; uncertainties relating to preclinical and clinical trials, including delays to the commencement of such trials; the lack of success in the clinical development of any of our products; dependence on third parties; and risks relating to the commercialization, if any, of our proposed products (such as marketing, safety, regulatory, patent, product liability, supply, competition and other risks). Such factors, among others, could have a material adverse effect upon our business, results of operations and financial condition. We caution readers not to place undue reliance on any forward-looking statements, which only speak as of the date made. Additional information about the factors and risks that could affect our business, financial condition and results of operations, are contained in our filings with the U.S. Securities and Exchange Commission (“SEC”), which are available at www.sec.gov.

About EntreMed, Inc.

We are a clinical-stage pharmaceutical company employing a drug development strategy primarily in the United States and China to develop targeted therapeutics for the global market. Our current lead drug candidate is ENMD-2076, an Aurora A and angiogenic kinase inhibitor for the treatment of cancer. ENMD-2076 has completed Phase 1 studies in patients with advanced solid tumors, multiple myeloma and leukemia, is currently completing data for a multi-center Phase 2 study in patients with platinum resistant ovarian cancer, and is currently in Phase 2 trial in triple negative breast cancer.

Our principal offices are located at 9640 Medical Center Drive, Rockville, Maryland 20850, and our telephone number is (240) 864-2600. Additional information concerning us can be found in our periodic filings with the SEC, which are available on our website at www.entremed.com and on the SEC’s website at www.sec.gov. The information on our web site is not deemed to be part of this prospectus.

Risk Factors

An investment in our securities involves a high degree of risk. Before you decide whether to purchase any of our securities, in addition to the other information in this prospectus and the accompanying prospectus supplement, you should carefully consider the risk factors set forth under the heading “Risk Factors” in our most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q, which are incorporated by reference into this prospectus, as the same may be updated from time to time by our future filings under the Securities Exchange Act of 1934, as amended, or the Securities Exchange Act. For more information, see the section entitled “Incorporation by Reference.” The risks and uncertainties we have described are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently consider immaterial may also affect our business operations. To the extent that a particular offering implicates additional significant risks, we will include a discussion of those risks in the applicable prospectus supplement.

Use of Proceeds

Except as may be otherwise set forth in the prospectus supplement accompanying this prospectus, we will use the net proceeds we receive from sales of the securities offered hereby for general corporate purposes, including support for our continuing research and

development, commercialization activities, business development activities, and, if opportunities arise, acquisitions of businesses, products, technologies or licenses that are complementary to our business, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus.

Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends

We did not record earnings or pay any preferred stock dividends during the years ended December 31, 2009, 2010, 2011 and for the six months ended June 30, 2012. Accordingly, we are unable to disclose a ratio of earnings to combined fixed charges and preferred stock dividends. Effective May 1, 2012, the Company no longer has any issued and outstanding preferred stock. On September 14, 2012, the Company filed a Certificate of Elimination with the Secretary of State of Delaware to eliminate all references to the Company's previous outstanding Series A Preferred Stock.

Plan of Distribution

We may sell the securities offered through this prospectus in any one or more of the following ways:

- directly to investors or purchasers;
- to investors through agents;
- directly to agents;
- to or through brokers or dealers;
- to the public through underwriting syndicates led by one or more managing underwriters;
- to one or more underwriters acting alone for resale to investors or to the public;
- through a block trade in which the broker or dealer engaged to handle the block trade will attempt to sell the securities as agent, but may position and resell a portion of the block as principal to facilitate the transaction; and
- through a combination of any such methods of sale.

Securities may also be issued upon exercise of warrants. We reserve the right to sell securities directly to investors on our own behalf in those jurisdictions where we are authorized to do so.

The securities may be distributed at a fixed price or prices, which may be changed; market prices prevailing at the time of sale; prices related to the prevailing market prices; or negotiated prices.

The prospectus supplement will, where applicable:

- describe the terms of the offering;
- identify any underwriters, dealers or agents;
- identify any managing underwriter or underwriters;
- provide purchase price of the securities;
- The net proceeds from the sale of the securities;
- any delayed delivery arrangements;
- any underwriting discounts, commissions and other items constituting underwriters' compensation;
- any initial public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any commissions paid to agents.

Sale Through Underwriters or Dealers

If underwriters are used in the sale, the underwriters will acquire the securities for their own account, including through underwriting, purchase, security lending or repurchase agreements with us. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions. Underwriters may sell the securities in order to facilitate transactions in any of our other securities (described in this prospectus or otherwise), including other public or private transactions and short sales. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise indicated in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers.

If dealers are used in the sale of securities offered through this prospectus, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. The prospectus supplement will include the names of the dealers and the terms of the transaction.

Direct Sales and Sales Through Agents

We may sell the securities offered through this prospectus. In this case, no underwriters or agents would be involved. Such securities may also be sold through agents designated from time to time. The prospectus supplement will name any agent involved in the offer or sale of the offered securities and will describe any commissions payable to the agent. Unless otherwise indicated in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act of 1933, as amended (the "Securities Act") with respect to any sale of those securities. The terms of any such sales will be described in the prospectus supplement.

Delayed Delivery Contracts

If the prospectus supplement indicates, we may authorize agents, underwriters or dealers to solicit offers from certain types of institutions to purchase securities at the public offering price under delayed delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. Delayed delivery contracts will be subject only to those conditions set forth in each applicable prospectus supplement, and each prospectus supplement will set forth any commissions we pay for solicitation of these contracts.

"At the Market" Offerings

We may from time to time engage a firm to act as our agent for one or more offerings of our securities. We sometimes refer to this agent as our "offering agent." If we reach agreement with an offering agent with respect to a specific offering, including the number of securities and any minimum price below which sales may not be made, than the offering agent will try to sell such securities on the agreed terms. The offering agent could make sales in privately negotiated transactions or any other method permitted by law, including sales deemed to be an "at the market" offering as defined in Rule 415 promulgated under the Securities Act, including sales made directly on the The Nasdaq Capital Market, or sales made to or through a market maker other than on an exchange. The offering agent will be deemed to be an "underwriter" within the meaning of the Securities Act with respect to any sales effected through an "at the market" offering.

Market Making, Stabilization and Other Transactions

Unless the applicable prospectus supplement states otherwise, each series of offered securities will be a new issue and will have no established trading market. We may elect to list any series of offered securities on an exchange. Any underwriters that we use in the sale of offered securities may make a market in such securities, but may discontinue such market making at any time without notice. Therefore, we cannot assure you that the securities will have a liquid trading market.

To the extent permitted by and in accordance with Regulation M under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), in connection with an offering an underwriter may engage in over-allotments, stabilizing transactions, short covering transactions and penalty bids. Over-allotments involve sales in excess of the offering size, which creates a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would be otherwise. If commenced, the underwriters may discontinue any of the activities at any time.

To the extent permitted by and in accordance with Regulation M under the Exchange Act, any underwriters who are qualified market makers on the Nasdaq Capital Market may engage in passive market making transactions in the securities on the Nasdaq Capital Market during the business day prior to the pricing of an offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent

bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

Derivative Transactions and Hedging

We, the underwriters or other agents may engage in derivative transactions involving the securities. These derivatives may consist of short sale transactions and other hedging activities. The underwriters or agents may acquire a long or short position in the securities, hold or resell securities acquired and purchase options or futures on the securities and other derivative instruments with returns linked to or related to changes in the price of the securities. In order to facilitate these derivative transactions, we may enter into security lending or repurchase agreements with the underwriters or agents. The underwriters or agents may effect the derivative transactions through sales of the securities to the public, including short sales, or by lending the securities in order to facilitate short sale transactions by others. The underwriters or agents may also use the securities purchased or borrowed from us or others (or, in the case of derivatives, securities received from us in settlement of those derivatives) to directly or indirectly settle sales of the securities or close out any related open borrowings of the securities.

General Information; Offering Limitations

Agents, underwriters, and dealers may be entitled, under agreements entered into with us, to indemnification by us against certain liabilities, including liabilities under the Securities Act. Our agents, underwriters, and dealers, or their affiliates, may be customers of, engage in transactions with or perform services for us, in the ordinary course of business. No securities may be sold under this prospectus without delivery, in paper format, in electronic format on the Internet, or both, of the applicable prospectus supplement describing the method and terms of the offering.

Pursuant to the SEC rules governing the primary offering of securities on Form S-3 and as a result of our current public float as of the date of this Registration Statement, provided that we otherwise eligible to use Form S-3, we are limited to issue and sell, pursuant to this Registration Statement, a number of shares equivalent to the value of one-third of our public float in the 12-month period immediately prior to, and including, any such sale. If our public float exceeds \$75 million at any time subsequent to the effective date of this Registration Statement, we will no longer be subject to the one-third limitation with respect to future sales.

Dilution

We will set forth in a prospectus supplement the following information regarding any material dilution of the equity interests of investors purchasing securities in an offering under this prospectus:

- the net tangible book value per share of our equity securities before and after the offering;
- the amount of the increase in such net tangible book value per share attributable to the cash payments made by purchasers in the offering; and
- the amount of the immediate dilution from the public offering price which will be absorbed by such purchasers.

The Securities We May Offer

The descriptions of the securities contained in this prospectus, together with the applicable prospectus supplement, summarize the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we so indicate in a prospectus supplement, the terms of the securities may revise, amend, modify or supersede the terms we have summarized below. We will also include in the prospectus supplement information, where applicable, about material United States federal income tax considerations relating to the securities, and the securities exchange or market, if any, on which the securities will be listed or quoted.

We may sell from time to time, in one or more offerings, one or more of the following securities:

- common stock
- warrants to purchase common stock; and
- units, comprised of shares of common stock and/or warrants to purchase shares of common stock.

These securities may be offered and sold from time to time for an aggregate offering price not to exceed \$30,000,000.

Description of Common Stock

The following summary of the terms of our common stock is subject to and qualified in its entirety by reference to our certificate of incorporation and by-laws, each as amended to date, copies of which are on file with the SEC as exhibits to previous SEC filings. Please see “Where You Can Find More Information” below for directions on obtaining these documents.

As of September 25, 2012, we had 170,000,000 shares of common stock authorized, of which 22,503,393 shares were outstanding. All of our outstanding common shares are fully paid and non-assessable. Any additional common shares that we issue will be fully paid and non-assessable.

General

Holders of our common stock are entitled to one vote per share on matters on which our stockholders vote. There are no cumulative voting rights. Holders of our common stock are entitled to receive proportionally any dividends declared by our board of directors, out of funds that we may legally use to pay dividends. In the event of our liquidation or dissolution, holders of our common stock are entitled to share ratably in all assets remaining after payment of all debts and other liabilities.

Since our initial public offering in 1996, we have not paid cash dividends on our common stock. We currently anticipate that any earnings will be retained for the continued development of our business and we do not anticipate paying any cash dividends on our common stock in the foreseeable future.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

Nasdaq Capital Market

Our common stock is listed for quotation on the Nasdaq Capital Market under the symbol "ENMD."

Description of Warrants

We may issue warrants to purchase shares of common stock. The warrants may be issued independently or together with any other securities and may be attached to or separate from the other securities. Further terms of the warrants will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement will describe the terms of the warrants in respect of which this prospectus is being delivered, including, where applicable, the following:

- the title of the warrants;
- the aggregate number of the warrants;
- the price or prices at which the warrants will be issued and the currency in which the price for the warrants may be paid;
- the designation, terms and number of shares of common stock purchasable upon exercise of such warrants;
- the designation and terms of the shares of common stock with which such warrants are issued and the number of such warrants issued with such shares;
- the date on and after which such warrants and the related common stock will be separately transferable, including any limitations on ownership and transfer of such warrants;
- provisions for changes to or adjustments in the exercise price of the warrants;
- the price at which each share of common stock purchasable upon exercise of such warrants may be purchased;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- the minimum or maximum amount of such warrants which may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- a discussion of certain material U.S. federal income tax consequences; and
- any other terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

Description of Units

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the units that we may offer under this prospectus and any related unit agreements and unit certificates. While the terms summarized below will apply generally to any units that we may offer, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any units offered under that prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, any form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of such unit agreements and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we may offer under this prospectus and the complete unit agreement and any supplemental agreements that contain the terms of the units.

We may issue units comprised of shares of our common stock and warrants to purchase common stock or any combination thereof. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

We may evidence units by unit certificates that we issue under a separate agreement. We may issue the units under a unit agreement between us and one or more unit agents. If we elect to enter into a unit agreement with a unit agent, the unit agent will act solely as our agent in connection with the units and will not assume any obligation or relationship of agency or trust for or with any registered holders of units or beneficial owners of units. We will indicate the name and address and other information regarding the unit agent in the applicable prospectus supplement relating to a particular series of units if we elect to use a unit agent.

We will describe in the applicable prospectus supplement the terms of the series of units being offered, including:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The other provisions regarding our common stock and warrants as described in this section will apply to each unit to the extent such unit consists of shares of our common stock and warrants to purchase our common stock.

Certain Provisions of Our Certificate of Incorporation, Our Bylaws and Delaware Law

The following paragraphs summarize certain provisions of the Delaware General Corporation Law and our Certificate of Incorporation and Bylaws. The summary does not purport to be complete and is subject to and qualified in its entirety by reference to the Delaware General Corporation Law and to our Certificate of Incorporation and Bylaws, copies of which are on file with the SEC.

Section 203 of the Delaware General Corporation Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, the statute prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. For purposes of Section 203, a “business combination” includes a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder, and an “interested stockholder” is a person who, together with affiliates and employees, owns or, within three years prior, did own 15% or more of the corporation’s voting stock.

Staggered Board of Directors

Our board of directors is divided into three classes, the members of each of which will serve for a staggered three-year term. Our shareholders may elect only one-third of the directors each year; therefore, it is more difficult for a third party to gain control of our board of directors than if our board was not staggered.

Stockholder Meetings

Our bylaws provide that a special meeting of stockholders may be called only by the chairman of the board after the receipt of a written request of a majority of our board of directors.

Voting Rights

Each of our outstanding common shares as of the applicable record date is entitled to one vote in each matter submitted to a vote at a meeting of stockholders and, in all elections for directors, every stockholder has the right to vote the number of shares owned by it for as many persons as there are directors to be elected, provided directors are elected according to our articles of incorporation and by-laws. Our stockholders may vote either in person or by proxy.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Amendment of Bylaws

Any amendment of our bylaws by our stockholders requires approval at a meeting at which a quorum is present by vote of a majority of the number of shares of stock entitled to vote present in person or by proxy at such meeting. Our bylaws may also be amended, changed, added to or repealed by our board of directors without the assent or vote of our stockholders.

LEGAL MATTERS

The validity of the shares of common stock offered hereby has been passed upon for us by Arnold & Porter LLP, Washington, D.C.

EXPERTS

Reznick Group, P.C. (“Reznick”), independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2011, as set forth in their report which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements as of December 31, 2011 are incorporated by reference in reliance on Reznick’s report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement under the Securities Act that registers the distribution of the securities offered under this prospectus. The registration statement, including the attached exhibits and schedules and the information incorporated by reference, contains additional relevant information about us and the securities. The rules and regulations of the SEC allow us to omit from this prospectus certain information included in the registration statement. You can obtain a copy of the registration statement from the SEC at the address listed below or from the SEC’s Internet site.

We file reports, proxy statements and other documents with the SEC. You may read and copy any document we file at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. You should call 1-800-SEC-0330 for more information on the public reference room. Our SEC filings are also available to you on the SEC's Internet site at <http://www.sec.gov>.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information that we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. These documents may include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as Proxy Statements. Any documents that we subsequently file with the SEC will automatically update and replace the information previously filed with the SEC. Thus, for example, in the case of a conflict or inconsistency between information set forth in this prospectus and information incorporated by reference into this prospectus, you should rely on the information contained in the document that was filed later.

This prospectus incorporates by reference the documents listed below that we previously have filed with the SEC and any additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the offering of the securities. These documents contain important information about us.

1. The Company's Annual Report on Form 10-K for the year ended December 31, 2011, filed with the SEC on March 9, 2012.
2. The Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, filed with the SEC on May 15, 2012.
3. The Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, filed with the SEC on August 14, 2012.
4. The Company's Definitive Proxy Statement on Schedule 14A for its 2012 Annual Stockholder's Meeting, filed with the SEC on March 22, 2012.
5. The Company's Current Reports on Form 8-K, filed on January 6, 2012; January 26, 2012; February 6, 2012; February 23, 2012; March 7, 2012; April 3, 2012; May 4, 2012; May 23, 2012, and September 20, 2012.
6. The description of the Company's common stock contained in the Company's Registration Statement on Form 8-A filed under the Exchange Act on May 14, 1996, including any amendment or report filed for the purpose of updating such description.

You can obtain a copy of any or all of the documents incorporated by reference in this prospectus (other than an exhibit to a document unless that exhibit is specifically incorporated by reference into that document) from the SEC on its web site at <http://www.sec.gov>. You also can obtain these documents from us without charge by visiting our web site at <http://www.entremed.com> or by requesting them in writing, by email or by telephone at the following address:

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Rockville, Maryland 20850
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investorrelations@entremed.com