

ALTEON INC /DE
Form 424B3
June 14, 2006

Table of Contents

**Filed Pursuant to Rule 424(b)(3)
Registration No. 333-134584**

**ALTEON INC.
21,920,800 SHARES OF COMMON STOCK**

We sold shares of our common stock and warrants to purchase our common stock for an aggregate purchase price of approximately \$2.6 million in a private placement which closed on April 21, 2006. This prospectus relates to the resale from time to time of up to a total of 21,920,800 shares of our common stock by the selling stockholders described in the section entitled Selling Stockholders on page 24 of this prospectus.

The selling stockholders will receive all of the proceeds from the disposition of the shares or interests therein and will pay all underwriting discounts and selling commissions relating thereto. We have agreed to pay the legal, accounting, printing and other expenses related to the registration of the shares.

Our common stock is listed on The American Stock Exchange under the symbol ALT. On June 13, 2006, the last reported sale price of our common stock was \$0.20 per share. Our principal executive offices are located at 6 Campus Drive, Parsippany, New Jersey 07054, and our telephone number is 201-934-5000.

You should consider carefully the risks that we have described in Risk Factors beginning on page 4 before deciding whether to invest in our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

THE DATE OF THIS PROSPECTUS IS June 14, 2006

TABLE OF CONTENTS

| | |
|--|-----------|
| <u>ABOUT THIS PROSPECTUS</u> | 2 |
| <u>OUR BUSINESS</u> | 2 |
| <u>RISK FACTORS</u> | 4 |
| <u>FORWARD-LOOKING STATEMENTS AND CAUTIONARY STATEMENTS</u> | 23 |
| <u>USE OF PROCEEDS</u> | 24 |
| <u>SELLING STOCKHOLDERS</u> | 24 |
| <u>PLAN OF DISTRIBUTION</u> | 27 |
| <u>LEGAL MATTERS</u> | 29 |
| <u>EXPERTS</u> | 29 |
| <u>MATERIAL CHANGES</u> | 29 |
| <u>WHERE YOU CAN FIND MORE INFORMATION</u> | 29 |
| <u>INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE</u> | 30 |

Table of Contents

ABOUT THIS PROSPECTUS

You should read this prospectus and the information and documents incorporated by reference carefully. Such documents contain important information you should consider when making your investment decision. See

Incorporation of Certain Documents by Reference on page 30. You should rely only on the information provided in this prospectus or documents incorporated by reference into this prospectus. We have not authorized anyone to provide you with different information. The selling stockholders are offering to sell and seeking offers to buy shares of our common stock only in jurisdictions in which offers and sales are permitted. 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 our common stock.

In this prospectus, we refer to Alteon Inc. as the Company or Alteon.

OUR BUSINESS

The following is only a summary. We urge you to read this entire prospectus, including the more detailed consolidated financial statements, notes to the consolidated financial statements and other information incorporated by reference from our other filings with the SEC. Investing in our common stock involves risks. Therefore, please carefully consider the information provided under the heading Risk Factors beginning on page 4.

Overview

We are a product-based biopharmaceutical company engaged in the development of small molecule drugs to treat and prevent cardiovascular diseases and other diseases associated with aging and diabetes. We have identified promising product candidates that we believe represent novel potential approaches to some of the largest pharmaceutical markets. We have advanced one of these products into Phase 2 clinical trials.

Our lead drug candidate, alagebrium chloride or alagebrium (formerly ALT-711), is a product of our drug discovery and development program. Alagebrium has demonstrated potential efficacy in two clinical trials in heart failure, as well as in animal models of heart failure and nephropathy, among others. It has been tested in approximately 1,000 patients in a number of Phase 1 and Phase 2 clinical trials. Our goal is to develop alagebrium to treat diastolic heart failure (DHF). This disease represents a rapidly growing market of unmet need, particularly common among diabetic patients, and alagebrium has demonstrated relevant clinical activity in two Phase 2 clinical trials.

In April 2006, we announced the signing of a definitive merger agreement with HaptoGuard, Inc., whereby the two companies will combine operations. The companies have complementary product platforms in cardiovascular diseases, diabetes and other inflammatory diseases. We have begun working with the HaptoGuard team in anticipation of the merger of the companies, and are preparing a Phase 2 protocol for alagebrium in heart failure in order to expand our clinical program in this therapeutic area. However, any continued development of alagebrium by us is contingent upon the successful completion of the merger and adequate funding for product development.

Following the merger, the combined company will have two products in Phase 2 clinical development:

Alagebrium chloride (formerly ALT-711), Alteon's lead compound, is an Advanced Glycation End-product Crosslink Breaker being developed for heart failure. Data presented from two Phase 2 clinical studies at the American Heart Association meeting in November 2005 demonstrated the ability of alagebrium to improve overall cardiac function, including measures of diastolic and endothelial function. In these studies, alagebrium also demonstrated the ability to significantly reduce left ventricular mass. The compound has been tested in approximately 1,000 patients, which represents a sizeable human safety database, in a number of Phase 2 clinical trials.

ALT-2074 (formerly BXT-51072), HaptoGuard's licensed lead compound, is a glutathione peroxidase mimetic in development for reduction of mortality in post-myocardial infarction patients with diabetes. The compound has shown the ability to reduce infarct size by approximately 85% in a mouse model of heart attack called ischemia reperfusion injury.

Table of Contents

Additionally, HaptoGuard owns a license to a proprietary genetic biomarker that has shown the potential to identify patients who are most responsive to the HaptoGuard compound.

The merger of the two companies will be structured as an acquisition by Alteon. Under the terms of the merger agreement, HaptoGuard shareholders will receive approximately 37.4 million shares of Alteon common stock (approximately 31% of total shares after completion of the merger.) As part of the merger, a portion of existing shares of Alteon preferred stock held by Genentech, Inc. will be converted into common stock, among other transactions. The merger and preferred stock restructuring transactions are subject to the approval of Alteon and HaptoGuard shareholders and are expected to close early in the third quarter of 2006.

In April 2006, we also announced the signing of definitive agreements for a private equity financing which resulted in gross proceeds to us of approximately \$2.6 million. The private equity financing includes new and existing institutional investors, in which we sold approximately 10.3 million Units, consisting of common stock and warrants, for net proceeds after expenses and fees of approximately \$2.5 million. Each Unit consists of one share of Alteon common stock and one warrant to purchase one share of Alteon common stock. The Units were sold at a price of \$0.25 per Unit and the warrants are exercisable, commencing six months from the date of issuance, for a period of five years at an exercise price of \$0.30 per share. The shares of common stock and warrants that were offered and sold in the financing were not registered under the Securities Act or state securities laws pursuant to an exemption from registration provided by Regulation D under the Securities Act. The Company has agreed to file this registration statement with the SEC for the resale of the shares of common stock and the shares of common stock underlying the warrants sold in the private equity financing. Rodman & Renshaw, LLC served as placement agent in the transaction and received a 6% placement fee which was paid in Units.

We were incorporated in Delaware in October 1986. Our headquarters are located at 6 Campus Drive, Parsippany, New Jersey 07054. We maintain a web site at www.alteon.com and our telephone number is (201) 934-5000. Our annual reports on Form 10-K, our quarterly reports on Form 10-Q, our current reports on Form 8-K, and all amendments to those reports, are available to you free of charge through the Investor Relations section of our website as soon as reasonably practicable after such materials have been electronically filed with, or furnished to, the Securities and Exchange Commission.

Table of Contents

RISK FACTORS

*The following factors should be considered carefully in evaluating whether to purchase shares of Alteon common stock. These factors should be considered in conjunction with any other information included or incorporated by reference herein, including in conjunction with forward-looking statements made herein. See *Where You Can Find More Information* on Page 29.*

RISKS RELATED TO OUR BUSINESS

As a result of a decrease in our available financial resources, we have significantly curtailed the research, product development, preclinical testing and clinical trials of our product candidates, and if we are unable to obtain sufficient additional funding in the near term, we may be forced to cease operations.

As of March 31, 2006, we had working capital of \$3,755,000, including \$4,469,000 of cash and cash equivalents. Our cash used in operating activities for the three months ended March 31, 2006 was \$1,912,000.

On April 19, 2006, we signed a definitive merger agreement with HaptoGuard, Inc., whereby the two companies will combine operations in a stock transaction valued at \$8.8 million. As part of the merger, a portion of our existing shares of preferred stock held by Genentech, Inc. will be converted into common stock. In addition, on April 21, 2006, we closed an equity financing that resulted in net proceeds to us of approximately \$2.5 million. Assuming completion of the merger between Alteon and HaptoGuard, we expect to utilize cash and cash equivalents to fund our operating activities, and to fund the future clinical development efforts of the combined companies, including the planned Phase 2 studies of our lead compound, alagebrium and HaptoGuard's lead compound ALT-2074.

While we intend to pursue development of alagebrium in high potential cardiovascular indications such as heart failure, any continued development of alagebrium by us is contingent upon our completion of the merger.

If we are unable to complete the merger and the preferred stock restructuring on reasonable terms, we will not have the ability to continue as a going concern after late 2006. As part of the merger, there are associated costs that will result in the Company being required to make payment of certain obligations in the amount of approximately \$2.0 million, including severance and other contractual and regulatory requirements. Even if we complete the merger, there can be no assurance that the products or technologies acquired in such transaction will result in revenues to the combined company or any meaningful return on investment to our stockholders.

The amount and timing of our future capital requirements will depend on numerous factors, including the timing of resuming our research and development programs, if at all, the timing of completion of the merger with HaptoGuard, the number and characteristics of product candidates that we pursue, the conduct of preclinical tests and clinical studies, the status and timelines of regulatory submissions, the costs associated with protecting patents and other proprietary rights, the ability to complete strategic collaborations and the availability of third-party funding, if any.

Selling securities to satisfy our short-term and long-term capital requirements may have the effect of materially diluting the current holders of our outstanding stock. We may also seek additional funding through corporate collaborations and other financing vehicles. If funds are obtained through arrangements with collaborative partners or others, we may be required to relinquish rights to our technologies or product candidates.

If we are unable to complete the merger and related stock conversion transaction with respect to our preferred stock, we may not be able to secure future equity financing or merge with a third party.

In December 1997, we entered into an agreement with Genentech relating to the development of pimagedine, an A.G.E. formation inhibitor, for the treatment of diabetic nephropathy. As part of this agreement, Genentech purchased shares of Alteon Series G Preferred Stock and Series H Preferred Stock, the proceeds of which were used to fund the pimagedine development program. Both the Series G Preferred Stock and Series H Preferred Stock have dividends which are payable quarterly in shares of preferred stock at a rate of 8.5% of the accumulated balance. The Series G and Series H Preferred Stock each carry a liquidation preference, which means that the value

Table of Contents

of that preferred stock would be required to be paid to the holders of the Series G and Series H Preferred Stock upon a sale or liquidation before any proceeds from such sale or liquidation are paid to any other holders of equity securities, including the common stock. As of March 31, 2006, holders of the outstanding shares of Series G and Series H Preferred Stock, including shares issued pursuant to the dividend obligation, were entitled to a liquidation preference of \$56,789,227. Our total market capitalization as of that date was \$12,759,276. As a result, unless we complete the merger, holders of our common stock will not realize any value upon our sale or liquidation at a valuation of less than \$56,789,227. The Series G and Series H Preferred Stock have no voting rights. Each share of Series G Preferred Stock and Series H Preferred Stock is convertible, upon 70 days prior written notice, into the number of shares of common stock determined by dividing \$10,000 by the average of the closing prices of our common stock, as reported on the American Stock Exchange, for the 20 business days immediately preceding the date of conversion. On March 31, 2006, the Series G and Series H Preferred Stock would have been convertible into 55,623,529 and 167,079,216 shares of common stock, respectively, representing, in aggregate, approximately 79.3% of our common stock outstanding on an as-converted basis as of that date.

While the terms of the Series G and Series H Preferred Stock generally restrict Genentech's ownership position in us upon conversion to 40% of our outstanding common stock, any conversion of shares of Series G and/or Series H Preferred Stock into common stock would represent a substantial dilution to existing common shareholders. Potential financing sources for us may be dissuaded from investing in us in light of the presence of a significant holder of securities having a sizable liquidation preference and/or voting position. This could also discourage any potential acquirer from pursuing a transaction with us at a valuation that does not result in sufficient proceeds to pay the full liquidation preference due to Genentech.

As noted above, on April 19, 2006, we entered into a definitive merger agreement with HaptoGuard, Inc., whereby the two companies will combine operations in a stock transaction valued at \$8.8 million. As part of the merger, a portion of existing shares of Alteon preferred stock held by Genentech, Inc. (a) will be converted into 13,492,349 shares of common stock and (b) a portion of such stock will be converted to common stock valued at \$3.5 million, or approximately 14,874,628 shares and will be transferred to HaptoGuard shareholders in exchange for certain negotiation and royalty rights for certain HaptoGuard products, and the remaining shares of Alteon preferred stock held by Genentech, Inc. will be cancelled. The merger and stock conversion transactions are subject to the approval of Alteon and HaptoGuard shareholders and are expected to close in the third quarter of 2006. There is no assurance the merger and related transactions will close.

We have received a going concern opinion from our independent registered public accounting firm, which could negatively affect our stock price and our ability to raise capital.

J.H. Cohn LLP, our independent registered public accounting firm, has included an explanatory paragraph in their report on our financial statements for the fiscal year ended December 31, 2005, which expresses substantial doubt about our ability to continue as a going concern. The inclusion of a going concern explanatory paragraph in J.H. Cohn LLP's report on our financial statements could have a detrimental effect on our stock price and our ability to raise additional capital.

Our financial statements have been prepared on the basis of a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. We have not made any adjustments to the financial statements as a result of the outcome of the uncertainty described above.

If we are unable to form the successful collaborative relationships that our business strategy requires, then our programs will suffer and we may not be able to develop products.

Our strategy for developing and deriving revenues from our products depends, in large part, upon entering into arrangements with research collaborators, corporate partners and others. The potential market, preclinical and clinical study results and safety profile of our product candidates may not be attractive to potential corporate partners. A two-year toxicity study found that male rats exposed to high doses of alagebrium over their natural lifetime developed dose-related increases in liver cell alterations including hepatocarcinomas, and that the alteration rate was slightly over the expected background rate in this gender and species of rat. Also, our Phase 2a EMERALD study in erectile dysfunction, the IND for which has since been withdrawn, was placed on clinical hold by the Reproductive and Urologic Division which may adversely affect our ability to enter into research and development

Table of Contents

collaborations with respect to alagebrium. We face significant competition in seeking appropriate collaborators and these collaborations are complex and time-consuming to negotiate and document. We may not be able to negotiate collaborations on acceptable terms, or at all. If that were to occur, we may have to curtail the development of a particular product candidate, reduce or delay our development program or one or more of our other development programs, delay our potential commercialization or reduce the scope of our sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms, or at all. If we do not have sufficient funds, we will not be able to bring our product candidates to market and generate product revenue.

If we are unable to attract and retain the key personnel on whom our success depends, our product development, marketing and commercialization plans could suffer.

We depend heavily on the principal members of our management and scientific staff to realize our strategic goals and operating objectives. Over the past few months, due to the reduction in our clinical trial activities, the number of our employees has decreased from 30 as of June 30, 2005 to 7 as of March 1, 2006. On February 1, 2006, we announced the resignation of our Chief Operating Officer, Judith S. Hedstrom. Mary Phelan has resigned from her position as our Director of Finance and Financial Reporting effective May 31, 2006. The loss of services in the near term of any of our other principal members of management and scientific staff could impede the achievement of our development priorities. Furthermore, recruiting and retaining qualified scientific personnel to perform research and development work in the future will also be critical to our success, and there is significant competition among companies in our industry for such personnel. We have established retention programs for our current key employees, and we may be required to provide additional retention and severance benefits to our employees as we curtail operations or prepare to effect a strategic transaction such as a sale or merger with another company. However, we cannot assure you that we will be able to attract and retain personnel on acceptable terms given the competition between pharmaceutical and healthcare companies, universities and non-profit research institutions for experienced managers and scientists, and given the recent clinical and regulatory setbacks that we have experienced. In addition, we rely on consultants to assist us in formulating our research and development strategy. All of our consultants are employed by other entities and may have commitments to or consulting or advisory contracts with those other entities that may limit their availability to us.

Clinical studies required for our product candidates are time-consuming, and their outcome is uncertain.

Before obtaining regulatory approvals for the commercial sale of any of our products under development, we must demonstrate through preclinical and clinical studies that the product is safe and effective for use in each target indication. Success in preclinical studies of a product candidate may not be predictive of similar results in humans during clinical trials. None of our products has been approved for commercialization in the United States or elsewhere. In December 2004, we announced that findings of a routine two-year rodent toxicity study indicated that male Sprague Dawley rats exposed to high doses of alagebrium over their natural lifetime developed dose-related increases in liver cell alterations and tumors, and that the liver tumor rate was slightly over the expected background rate in this gender and species of rat. In February 2005, based on the initial results from one of the follow-on preclinical toxicity experiments, we voluntarily and temporarily suspended enrollment of new subjects into each of the ongoing clinical studies pending receipt of additional preclinical data. We withdrew our IND for the EMERALD study in February 2006 in order to focus our resources on the development of alagebrium in cardiovascular indications.

In June 2005, our Phase 2b SPECTRA trial in systolic hypertension was discontinued after an interim analysis found that the data did not indicate a treatment effect of alagebrium and we have ceased development of alagebrium for this indication.

We cannot predict at this time when enrollment in any of our clinical studies, will resume, if ever. If we are unable to resume enrollment in our clinical studies in a timely manner, or at all, our business will be materially adversely affected.

If we do not prove in clinical trials that our product candidates are safe and effective, we will not obtain marketing approvals from the FDA and other applicable regulatory authorities. In particular, one or more of our

product candidates may not exhibit the expected medical benefits in humans, may cause harmful side effects, may

Table of Contents

not be effective in treating the targeted indication or may have other unexpected characteristics that preclude regulatory approval for any or all indications of use or limit commercial use if approved.

The length of time necessary to complete clinical trials varies significantly and is difficult to predict. Factors that can cause delay or termination of our clinical trials include:

slower than expected patient enrollment due to the nature of the protocol, the proximity of subjects to clinical sites, the eligibility criteria for the study, competition with clinical trials for other drug candidates or other factors;

adverse results in preclinical safety or toxicity studies;

lower than expected retention rates of subjects in a clinical trial;

inadequately trained or insufficient personnel at the study site to assist in overseeing and monitoring clinical trials;

delays in approvals from a study site's review board, or other required approvals;

longer treatment time required to demonstrate effectiveness or determine the appropriate product dose;

lack of sufficient supplies of the product candidate;

adverse medical events or side effects in treated subjects;

lack of effectiveness of the product candidate being tested; and

regulatory changes.

Even if we obtain positive results from preclinical or clinical studies for a particular product, we may not achieve the same success in future studies of that product. Data obtained from preclinical and clinical studies are susceptible to varying interpretations that could delay, limit or prevent regulatory approval. In addition, we may encounter delays or rejections based upon changes in FDA policy for drug approval during the period of product development and FDA regulatory review of each submitted new drug application. We may encounter similar delays in foreign countries. Moreover, regulatory approval may entail limitations on the indicated uses of the drug. Failure to obtain requisite governmental approvals or failure to obtain approvals of the scope requested will delay or preclude our licensees or marketing partners from marketing our products or limit the commercial use of such products and will have a material adverse effect on our business, financial condition and results of operations.

In addition, some or all of the clinical trials we undertake may not demonstrate sufficient safety and efficacy to obtain the requisite regulatory approvals, which could prevent or delay the creation of marketable products. Our product development costs will increase if we have delays in testing or approvals, if we need to perform more, larger or different clinical or preclinical trials than planned or if our trials are not successful. Delays in our clinical trials may harm our financial results and the commercial prospects for our products.

Before a clinical trial may commence in the United States, we must submit an IND, containing preclinical studies, chemistry, manufacturing, control and other information and a study protocol to the FDA. If the FDA does not object within 30 days after submission of the IND, then the trial may commence. If commenced, the FDA may delay, limit, suspend or terminate clinical trials at any time, or may delay, condition or reject approval of any of our product candidates, for many reasons. For example:

ongoing preclinical or clinical study results may indicate that the product candidate is not safe or effective;

the FDA may interpret our preclinical or clinical study results to indicate that the product candidate is not

Table of Contents

safe or effective, even if we interpret the results differently; or

the FDA may deem the processes and facilities that our collaborative partners, our third-party manufacturers or we propose to use in connection with the manufacture of the product candidate to be unacceptable.

If we do not successfully develop any products, or are unable to derive revenues from product sales, we will never be profitable.

Virtually all of our revenues to date have been generated from collaborative research agreements and investment income. We have not received any revenues from product sales. We may not realize product revenues on a timely basis, if at all, and there can be no assurance that we will ever be profitable.

At March 31, 2006, we had an accumulated deficit of \$225,610,000. We anticipate that we will incur substantial, potentially greater, losses in the future as we continue our research, development and clinical studies. We have not yet requested or received regulatory approval for any product from the FDA or any other regulatory body. All of our product candidates, including our lead candidate, alagebrium, are still in research, preclinical or clinical development. We may not succeed in the development and marketing of any therapeutic or diagnostic product. We do not have any product other than alagebrium in clinical development, and there can be no assurance that we will be able to bring any other compound into clinical development. Adverse results of any preclinical or clinical study could cause us to materially modify our clinical development programs, resulting in delays and increased expenditures, or cease development for all or part of our ongoing studies of alagebrium.

In February 2006, the EMERALD study of alagebrium in ED was discontinued in order to focus our resources on development of alagebrium for cardiovascular indications.

In June 2005, our SPECTRA Phase 2b trial in systolic hypertension, was discontinued after an interim analysis found that the data did not indicate a treatment effect of alagebrium and we have ceased development of alagebrium for this indication.

To achieve profitable operations, we must, alone or with others, successfully identify, develop, introduce and market proprietary products. Such products will require significant additional investment, development and preclinical and clinical testing prior to potential regulatory approval and commercialization. The development of new pharmaceutical products is highly uncertain and expensive and subject to a number of significant risks. Potential products that appear to be promising at early stages of development may not reach the market for a number of reasons. Potential products may be found ineffective or cause harmful side effects during preclinical testing or clinical studies, fail to receive necessary regulatory approvals, be difficult to manufacture on a large scale, be uneconomical, fail to achieve market acceptance or be precluded from commercialization by proprietary rights of third parties. We may not be able to undertake additional clinical studies. In addition, our product development efforts may not be successfully completed, we may not have the funds to complete any ongoing clinical trials, we may not obtain regulatory approvals, and our products, if introduced, may not be successfully marketed or achieve customer acceptance. We do not expect any of our products, including alagebrium, to be commercially available for a number of years, if at all.

Failure to remediate the material weaknesses in our internal controls and to achieve and maintain effective internal controls in accordance with Section 404 of the Sarbanes-Oxley Act of 2002 could have a material adverse effect on our business and stock price.

During the audit of our financial statements for the year ended December 31, 2005, our independent registered public accounting firm identified a material weakness, as of December 31, 2005, regarding our internal controls over the identification of and the accounting for non-routine transactions including certain costs related to potential strategic transactions, severance benefits and the financial statement recording and disclosures of stock options that we have granted to non-employee consultants in accordance with Emerging Issues Task Force (EITF) Issue No. 96-18. As defined by the Public Company Accounting Oversight Board Auditing Standard No. 2, a material weakness is a significant control deficiency or a combination of significant control deficiencies, that results

Table of Contents

in there being more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. This material weakness did not result in the restatement of any previously reported financial statements or any other related financial disclosure. Management is in the process of implementing remedial controls to address these matters. In addition, the changes that would have resulted in the financial statements for the year ended December 31, 2005, as a consequence of the material weakness, were deemed by the Company to be immaterial but were nevertheless recorded by the Company.

On April 22, 2005, we filed an amendment to our Annual Report on Form 10-K for the fiscal year ended December 31, 2004 (the 10-K Amendment), in which we reported that, as of December 31, 2004, and as required by Section 404 of the Sarbanes-Oxley Act of 2002, management, with the participation of our principal executive officer and principal financial officer, had assessed the effectiveness of our internal control over financial reporting based on the framework established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management’s assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of our internal control over financial reporting. Management reviewed the results of its assessment with the Audit Committee of our Board of Directors, and based on this assessment, management determined that as of December 31, 2004, there were three material weaknesses in our internal control over financial reporting. In light of these material weaknesses, management concluded that, as of December 31, 2004, we did not maintain effective internal control over financial reporting.

The three material weaknesses identified were in the areas of audit committee oversight of the internal control review process, information technology controls and process controls, and control over cash disbursements. With respect to each of these matters, as set forth in the Form 10-K Amendment, management has implemented remedial measures or procedures to address these matters. However, we cannot currently assure that the remedial measures that are currently being implemented will be sufficient to result in a conclusion that our internal controls no longer contain any material weaknesses, and that our internal controls are effective. In addition, we cannot assure you that, even if we are able to achieve effective internal control over financial reporting, our internal controls will remain effective for any period of time.

If we are able to form collaborative relationships, but are unable to maintain them, our product development may be delayed and disputes over rights to technology may result.

We may form collaborative relationships that, in some cases, will make us dependent upon outside partners to conduct preclinical testing and clinical studies and to provide adequate funding for our development programs. In general, collaborations involving our product candidates pose the following risks to us:

- collaborators may fail to adequately perform the scientific and preclinical studies called for under our agreements with them;

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;

- collaborators may not pursue further development and commercialization of our product candidates or may elect not to continue or renew research and development programs based on preclinical or clinical study results, changes in their strategic focus or available funding or external factors, such as an acquisition that diverts resources or creates competing priorities;

- collaborators may delay clinical trials, provide insufficient funding for a clinical program, stop a clinical study or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;

- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically

Table of Contents

attractive; collaborators with marketing and distribution rights to one or more products may not commit enough resources to their marketing and distribution;

collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation;

disputes may arise between us and the collaborators that result in the delay or termination of the research, development or commercialization of our product candidates or that result in costly litigation or arbitration that diverts management attention and resources; and

collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development of the applicable product candidates.

In addition, there have been a significant number of business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators. If a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development program could be delayed, diminished or terminated.

Our product candidates will remain subject to ongoing regulatory review even if they receive marketing approval. If we fail to comply with continuing regulations, we could lose these approvals and the sale of our products could be suspended.

Even if we receive regulatory approval to market a particular product candidate, the approval could be granted with the condition that we conduct additional costly post-approval studies or that we limit the indicated uses included in our labeling. Moreover, the product may later cause adverse effects that limit or prevent its widespread use, force us to withdraw it from the market or impede or delay our ability to obtain regulatory approvals in additional countries. In addition, the manufacturer of the product and its facilities will continue to be subject to FDA review and periodic inspections to ensure adherence to applicable regulations. After receiving marketing approval, the manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion and record keeping related to the product will remain subject to extensive regulatory requirements. We may be slow to adapt, or we may never adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements.

If we fail to comply with the regulatory requirements of the FDA and other applicable United States and foreign regulatory authorities or if previously unknown problems with our products, manufacturers or manufacturing processes are discovered, we could be subject to administrative or judicially imposed sanctions, including:

restrictions on the products, manufacturers or manufacturing processes;

warning letters;

civil or criminal penalties;

finances;

injunctions;

product seizures or detentions;

import bans;

voluntary or mandatory product recalls and publicity requirements;

suspension or withdrawal of regulatory approvals;

Table of Contents

total or partial suspension of production; and

refusal to approve pending applications for marketing approval of new drugs or supplements to approved applications.

If we cannot successfully form and maintain suitable arrangements with third parties for the manufacturing of the products we may develop, our ability to develop or deliver products may be impaired.

We have no experience in manufacturing products and do not have manufacturing facilities. Consequently, we will depend on contract manufacturers for the production of any products for development and commercial purposes. The manufacture of our products for clinical trials and commercial purposes is subject to current cGMP, regulations promulgated by the FDA. In the event that we are unable to obtain or retain third-party manufacturing capabilities for our products, we will not be able to commercialize our products as planned. Our reliance on third-party manufacturers will expose us to risks that could delay or prevent the initiation or completion of our clinical trials, the submission of applications for regulatory approvals, the approval of our products by the FDA or the commercialization of our products or result in higher costs or lost product revenues. In particular, contract manufacturers:

could encounter difficulties in achieving volume production, quality control and quality assurance and suffer shortages of qualified personnel, which could result in their inability to manufacture sufficient quantities of drugs to meet our clinical schedules or to commercialize our product candidates;

could terminate or choose not to renew the manufacturing agreement, based on their own business priorities, at a time that is costly or inconvenient for us;

could fail to establish and follow FDA-mandated cGMPs, as required for FDA approval of our product candidates, or fail to document their adherence to cGMPs, either of which could lead to significant delays in the availability of material for clinical study and delay or prevent filing or approval of marketing applications for our product candidates; and

could breach, or fail to perform as agreed, under the manufacturing agreement.

Changing any manufacturer that we engage for a particular product or product candidate may be difficult, as the number of potential manufacturers is limited, and we will have to compete with third parties for access to those manufacturing facilities. cGMP processes and procedures typically must be reviewed and approved by the FDA, and changing manufacturers may require re-validation of any new facility for cGMP compliance, which would likely be costly and time-consuming. We may not be able to engage replacement manufacturers on acceptable terms quickly or at all. In addition, contract manufacturers located in foreign countries may be subject to import limitations or bans. As a result, if any of our contract manufacturers is unable, for whatever reason, to supply the contracted amounts of our products that we successfully bring to market, a shortage would result which would have a negative impact on our revenues.

Drug manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the U.S. Drug Enforcement Agency and corresponding state and foreign agencies to ensure strict compliance with cGMPs, other government regulations and corresponding foreign standards. While we are obligated to audit the performance of third-party contractors, we do not have control over our third-party manufacturers' compliance with these regulations and standards. Failure by our third-party manufacturers or us to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of the government to grant pre-market approval of drugs, delays, suspension or withdrawal of approvals, seizures or recalls of product, operating restrictions and criminal prosecutions. Our dependence upon others for the manufacture of any products that we develop may adversely affect our profit margin, if any, on the sale of any future products and our ability to develop and deliver such products on a timely and competitive basis.

Table of Contents

If we are not able to protect the proprietary rights that are critical to our success, the development and any possible sales of our product candidates could suffer and competitors could force our products completely out of the market.

Our success will depend on our ability to obtain patent protection for our products, preserve our trade secrets, prevent third parties from infringing upon our proprietary rights and operate without infringing upon the proprietary rights of others, both in the United States and abroad.

The degree of patent protection afforded to pharmaceutical inventions is uncertain and our potential products are subject to this uncertainty. Competitors may develop competitive products outside the protection that may be afforded by the claims of our patents. We are aware that other parties have been issued patents and have filed patent applications in the United States and foreign countries with respect to other agents that have an effect on A.G.E.s., or the formation of A.G.E. crosslinks. In addition, although we have several patent applications pending to protect proprietary technology and potential products, these patents may not be issued, and the claims of any patents that do issue, may not provide significant protection of our technology or products. In addition, we may not enjoy any patent protection beyond the expiration dates of our currently issued patents.

We also rely upon unpatented trade secrets and improvements, unpatented know-how and continuing technological innovation to maintain, develop and expand our competitive position, which we seek to protect, in part, by confidentiality agreements with our corporate partners, collaborators, employees and consultants. We also have invention or patent assignment agreements with our employees and certain, but not all, corporate partners and consultants. Relevant inventions may be developed by a person not bound by an invention assignment agreement. Binding agreements may be breached, and we may not have adequate remedies for such breach. In addition, our trade secrets may become known to or be independently discovered by competitors.

The effect of accounting rules relating to our equity compensation arrangements may have an adverse effect on our stock price and financial condition.

In December 2004, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 123 (revised 2004), Share-Based Payment (SFAS 123R), which replaces Accounting for Stock-Based Compensation, (SFAS 123) and supersedes Accounting Principles Board (APB) Opinion No. 25, Accounting for Stock Issued to Employees. SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the financial statements based on their fair values effective for the Company January 1, 2006. Under SFAS 123R, the pro forma disclosures previously permitted under SFAS 123 are no longer an alternative to financial statement recognition.

The Company accounts for employee stock-based compensation, awards issued to non-employee directors, and stock options issued to consultants and contractors in accordance with SFAS 123R and Emerging Issues Task Force Issue No. 96-18, Accounting for Equity Instruments that are Issued to Other Than Employees for Acquiring or in Conjunction with Selling Goods or Services.

The Company has adopted the new standard, SFAS 123R, effective January 1, 2006 and has selected the Black-Scholes method of valuation for share-based compensation. The Company has adopted the modified prospective transition method which requires that compensation cost be recorded, as earned, for all unvested stock options and restricted stock outstanding at the beginning of the first quarter of adoption of SFAS 123R, and that such costs be recognized over the remaining service period after the adoption date based on the options' original estimate of fair value.

On December 15, 2005, the Compensation Committee of the Board of Directors of the Company approved the acceleration of the vesting date of all previously issued, outstanding and unvested options, effective December 31, 2005. The acceleration and the fact that no options were issued in the three months ended March 31, 2006, resulted in the Company not being required to recognize aggregate compensation expense under SFAS 123R for the three months ended March 31, 2006.

Prior to adoption of SFAS 123R, the Company applied the intrinsic-value method under APB Opinion No.

Table of Contents

25, Accounting for Stock Issued to Employees, and related interpretations, under which no compensation cost (excluding those options granted below fair market value) had been recognized. SFAS 123 established accounting and disclosure requirements using a fair-value based method of accounting for stock-based employee compensation plans. As permitted by SFAS 123, the Company elected to continue to apply the intrinsic-value based method of accounting described above, and adopted only the disclosure requirements of SFAS 123, as amended.

If we are not able to compete successfully with other companies in the development and marketing of cures and therapies for cardiovascular diseases, diabetes, and the other conditions for which we seek to develop products, we may not be able to continue our operations.

We are engaged in pharmaceutical fields characterized by extensive research efforts and rapid technological progress. Many established pharmaceutical and biotechnology companies with financial, technical and human resources greater than ours are attempting to develop, or have developed, products that would be competitive with our products. Many of these companies have extensive experience in preclinical and human clinical studies. Other companies may succeed in developing products that are safer, more efficacious or less costly than any we may develop and may also be more successful than us in production and marketing. Rapid technological development by others may result in our products becoming obsolete before we recover a significant portion of the research, development or commercialization expenses incurred with respect to those products.

Certain technologies under development by other pharmaceutical companies could result in better treatments for cardiovascular disease, and diabetes and its related complications. Several large companies have initiated or expanded research, development and licensing efforts to build pharmaceutical franchises focusing on these medical conditions, and some companies already have products approved and available for commercial sale to treat these indications. It is possible that one or more of these initiatives may reduce or eliminate the market for some of our products. In addition, other companies have initiated research in the inhibition or crosslink breaking of A.G.E.s.

If governments and third-party payers continue their efforts to contain or decrease the costs of healthcare, we may not be able to commercialize our products successfully.

In certain foreign markets, pricing and/or profitability of prescription pharmaceuticals are subject to government control. In the United States, we expect that there will continue to be federal and state initiatives to control and/or reduce pharmaceutical expenditures. In addition, increasing emphasis on managed care in the United States will continue to put pressure on pharmaceutical pricing. Cost control initiatives could decrease the price that we receive for any products for which we may receive regulatory approval to develop and sell in the future and could have a material adverse effect on our business, financial condition and results of operations. Further, to the extent that cost control initiatives have a material adverse effect on our corporate partners, our ability to commercialize our products may be adversely affected. Our ability to commercialize pharmaceutical products may depend, in part, on the extent to which reimbursement for the products will be available from government health administration authorities, private health insurers and other third-party payers. Significant uncertainty exists as to the reimbursement status of newly approved healthcare products, and third-party payers, including Medicare, frequently challenge the prices charged for medical products and services. In addition, third-party insurance coverage may not be available to subjects for any products developed by us. Government and other third-party payers are attempting to contain healthcare costs by limiting both coverage and the level of reimbursement for new therapeutic products and by refusing in some cases to provide coverage for uses of approved products for disease indications for which the FDA has not granted labeling approval. If government and other third-party payers for our products do not provide adequate coverage and reimbursement levels, the market acceptance of these products would be adversely affected.

If the users of the products that we are developing claim that our products have harmed them, we may be subject to costly and damaging product liability litigation, which could have a material adverse effect on our business, financial condition and results of operations.

The use of any of our potential products in clinical studies and the sale of any approved products, including the testing and commercialization of alagebrium or other compounds, may expose us to liability claims resulting from the use of products or product candidates. Claims could be made directly by participants in our clinical studies, consumers, pharmaceutical companies or others. We maintain product liability insurance coverage for claims arising

Table of Contents

from the use of our products in clinical studies. However, coverage is becoming increasingly expensive, and we may not be able to maintain or acquire insurance at a reasonable cost or in sufficient amounts to protect us against losses due to liability that could have a material adverse effect on our business, financial condition and results of operations. We may not be able to obtain commercially reasonable product liability insurance for any product approved for marketing in the future, and insurance coverage and our resources may not be sufficient to satisfy any liability resulting from product liability claims. A successful product liability claim or series of claims brought against us could have a material adverse effect on our business, financial condition and results of operations.

Risks Relating to the Merger***Alteon's ability to continue as a going concern is dependent on future financing.***

J.H. Cohn LLP, our independent registered public accounting firm, has included an explanatory paragraph in its report on our financial statements for the fiscal year ended December 31, 2005, which expresses substantial doubt about our ability to continue as a going concern. The inclusion of a going concern explanatory paragraph in J.H. Cohn LLP's report on our financial statements could have a detrimental effect on our stock price and our ability to raise additional capital, either alone or as a combined company.

Our financial statements have been prepared on the basis of a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. We have not made any adjustments to the financial statements as a result of the outcome of the uncertainty described above. Accordingly, the value of the combined company in liquidation may be different from the values set forth in our financial statements.

If the merger is not completed, the liquidation preference associated with the shares of Alteon preferred stock owned by Genentech and the substantial common stock ownership represented by these preferred shares, on an as-converted basis, will make it unlikely that the combined company will be able to obtain additional funding. The continued success of the combined company will depend on its ability to continue to raise capital in order to fund the development and commercialization of its products.

Failure to raise additional capital may result in substantial adverse circumstances, including delisting of our common stock shares from the American Stock Exchange, which could substantially decrease the liquidity and value of such shares, or ultimately result in the liquidation of the combined company.

Alteon and HaptoGuard have each historically incurred operating losses and these losses will continue after the merger.

Alteon and HaptoGuard have each historically incurred substantial operating losses due to their research and development activities and expect these losses to continue after the merger for the foreseeable future. As of December 31, 2005, Alteon and HaptoGuard had an accumulated deficit of approximately \$222,813,445 and \$2,425,258, respectively. Alteon's fiscal year 2005, 2004 and 2003 net losses were \$12,614,459, \$13,958,646, and \$14,452,418, respectively. HaptoGuard's fiscal year 2005 and 2004 net losses were \$1,654,695 and \$770,563, respectively. Alteon's fiscal year 2005, 2004 and 2003 net losses applicable to common stockholders were \$17,100,795, \$18,093,791 and \$18,243,265, respectively. The combined company currently expects to continue its research and development activities at the same or at a more rapid pace than prior periods. After the merger, the combined company will expend significant amounts on research and development programs for alagebrium and ALT-2074. These activities will take time and expense, both to identify appropriate partners, to reach agreement on basic terms, and to negotiate and sign definitive agreements. We will actively seek new financing from time to time to provide financial support for our research and development activities. Any partnering agreements would require significant time and effort to identify potential partners, to reach agreement on basic terms and to negotiate and sign definitive agreements.

The combined company will need additional capital in the future, but its access to such capital is uncertain.

At this time we are not able to assess the probability of success in our fundraising efforts or the terms, if any, under which we may secure financial support from strategic partners or other investors. It is expected that we will continue to incur operating losses for the foreseeable future. Alteon's current resources are insufficient to fund its own commercialization efforts as well as the combined company's commercialization efforts. As of March 31, 2006, Alteon had cash on hand of \$4,469,170. As described elsewhere in this prospectus, in April, 2006 we closed

Table of Contents

on approximately \$2.6 million in financing. Prior to the financing, Alteon was expending approximately \$450,000 in cash per month. Following the merger, including HaptoGuard's cash spending rate of approximately \$110,000 in cash per month, the combined company expects to spend approximately \$560,000 in cash per month. Our capital needs beyond the second quarter of 2006 will depend on many factors, including our research and development activities and the success thereof, the scope of our clinical trial program, the timing of regulatory approval for our products under development and the successful commercialization of our products. Our needs may also depend on the magnitude and scope of these activities, the progress and the level of success in our clinical trials, the costs of preparing, filing, prosecuting, maintaining and enforcing patent claims and other intellectual property rights, competing technological and market developments, changes in or terminations of existing collaboration and licensing arrangements, the establishment of new collaboration and licensing arrangements and the cost of manufacturing scale-up and development of marketing activities, if undertaken by the combined company. Other than the recently completed financing described in this prospectus, we do not have committed external sources of funding and may not be able to secure additional funding on any terms or on terms that are favourable to us. If we raise additional funds by issuing additional stock, further dilution to our existing stockholders will result, and new investors may negotiate for rights superior to existing stockholders. If adequate funds are not available, the combined company may be required to:

delay, reduce the scope of or eliminate one or more of its development programs;

obtain funds through arrangements with collaboration partners or others that may require it to relinquish rights to some or all of its technologies, product candidates or products that it would otherwise seek to develop or commercialize itself;

license rights to technologies, product candidates or products on terms that are less favorable to it than might otherwise be available; or

seek a buyer for all or a portion of its business, or wind down its operations and liquidate its assets on terms not favorable to it.

The success of the combined company will also depend on the products and systems under development by HaptoGuard, including ALT-2074, and we cannot assure you that the efforts to commercialize ALT-2074 will succeed.

ALT-2074, HaptoGuard's lead compound, is in development for the treatment of heart complications in patients with diabetes. It has demonstrated efficacy in mouse models.

ALT-2074 is still in early clinical trials and any success to date should not be seen as indicative of the probability of any future success. The failure to complete clinical development and commercialize ALT-2074 for any reason or due to a combination of reasons will have a material adverse impact on the combined company.

We are dependent on the successful outcome of clinical trials and will not be able to successfully develop and commercialize products if clinical trials are not successful.

HaptoGuard received approval from Israel's Ministry of Health to conduct Phase 2 trials in diabetic patients recovering from a recent myocardial infarction or acute coronary syndrome. The purpose of the study is to evaluate the biological effects on cardiac tissue in patients treated with ALT-2074. HaptoGuard has received Institutional Review Board approval for 3 sites in Israel. HaptoGuard recently withdrew its submission to request approval to conduct Phase 2 clinical trials in the Czech Republic in order to have the time to generate a response to the Czech Republic's request for additional data on drug stability. The failure of either Alteon or HaptoGuard to obtain approvals to conduct clinical trials would adversely affect the combined company's business.

None of Alteon's or HaptoGuard's product candidates are currently approved for sale by the FDA or by any other regulatory agency in the world, and may never receive approval for sale or become commercially viable. Before obtaining regulatory approval for sale, each of the combined company's product candidates will be subjected to extensive preclinical and clinical testing to demonstrate safety and efficacy for a particular indication for humans

Table of Contents

in addition to meeting other regulatory standards. The combined company's success will depend on the successful outcome of clinical trials for one or more product candidates.

There are a number of difficulties and risks associated with clinical trials. The possibility exists that: we may discover that a product candidate may cause, alone or in combination with another therapy, harmful side effects;

we may discover that a product candidate, alone or in combination with another therapy, does not exhibit the expected therapeutic results in humans;

results from early trials may not be statistically significant or predictive of results that may be obtained from large-scale, advanced clinical trials;

we, the FDA, other similar foreign regulatory agencies or an institutional review board may suspend clinical trials for any reason whatsoever;

patient recruitment may be slower than expected;

patients may drop out of our clinical trials; and

we may be unable to produce sufficient supplies of products in a timely fashion for clinical trials.

Given the uncertainty surrounding the regulatory and clinical trial process, we may not be able to develop safety, efficacy or manufacturing data necessary for approval for any product candidate. In addition, even if we receive approval, such approval may be limited in scope and hurt the commercial viability of such product. If the combined company is unable to successfully obtain approval of and commercialize a product, this would materially harm the business, impair our ability to generate revenues and adversely impact our stock price.

The combined company is subject to significant government regulation and failure to achieve regulatory approval of our drug candidates would harm our business.

The FDA regulates the development, testing, manufacture, distribution, labeling and promotion of pharmaceutical products in the United States pursuant to the Federal Food, Drug, and Cosmetic Act and related regulations. We must receive pre-market approval by the FDA prior to any commercial sale of any drug candidates. Before receiving such approval, we must provide preclinical data and proof in human clinical trials of the safety and efficacy of our drug candidates, which trials can take several years. In addition, we must show that we can produce any drug candidates consistently at quality levels sufficient for administration in humans. Pre-market approval is a lengthy and expensive process. We may not be able to obtain FDA approval for any commercial sale of any drug candidate. By statute and regulation, the FDA has 180 days to review an application for approval to market a drug candidate; however, the FDA frequently exceeds the 180-day time period, at times taking up to 18 months. In addition, based on its review, the FDA or other regulatory bodies may determine that additional clinical trials or preclinical data are required. Except for any potential licensing or marketing arrangements with other pharmaceutical or biotechnology companies, we will not generate any revenues in connection with any of our other drug candidates unless and until we obtain FDA approval to sell such products in commercial quantities for human application.

Even if the combined company's products receive approval for commercial sale, their manufacture, storage, marketing and distribution are and will be subject to extensive and continuing regulation in the United States by the federal government, especially the FDA, and state and local governments. The failure to comply with these regulatory requirements could result in enforcement action, including, without limitation, withdrawal of approval, which would have a material adverse effect on the combined company's business. Later discovery of problems with the combined company's products may result in additional restrictions on the product, including withdrawal of the product from the market. Regulatory authorities may also require post-marketing testing, which can involve significant unanticipated expense. Additionally, governments may impose new regulations, which

Table of Contents

could further delay or preclude regulatory approval of the combined company's products or result in significantly increased compliance costs.

In similar fashion to the FDA, foreign regulatory authorities require demonstration of product quality, safety and efficacy prior to granting authorization for product registration which allows for distribution of the product for commercial sale. International organizations, such as the World Health Organization, and foreign government agencies including those for the Americas, Middle East, Europe, and Asia and the Pacific, have laws, regulations and guidelines for reporting and evaluating the data on safety, quality and efficacy of new drug products. Although most of these laws, regulations and guidelines are very similar, each of the individual nations reviews all of the information available on the new drug product and makes an independent determination for product registration. A finding of product quality, safety or efficacy in one jurisdiction does not guarantee approval in any other jurisdiction, even if the other jurisdiction has similar laws, regulations and guidelines.

Failure to integrate the companies' operations successfully could result in delays and increased expenses in the companies' clinical trial programs.

Alteon and HaptoGuard have entered into the merger agreement with the expectation that the merger will result in beneficial synergies, including:

improved ability to raise new capital through access to new classes of investors focused on public companies engaged in small molecule drug development;

shared expertise in developing innovative small molecule drug technologies and the potential for technology collaboration;

a broader pipeline of products;

greater ability to attract commercial partners;

larger combined commercial opportunities; and

a broader portfolio of patents and trademarks.

Achieving these anticipated synergies and the potential benefits underlying the two companies' reasons for the merger will depend on a number of factors, some of which include:

retention of scientific staff;

significant litigation, if any, adverse to Alteon and HaptoGuard, including, particularly, product liability litigation and patent and trademark litigation; and

the ability of the combined company to continue development of Alteon and HaptoGuard product candidates;

success of our research and development efforts;

increased capital expenditures;

general market conditions relating to small cap biotech investments; and

competition from other drug development companies.

Achieving the benefits of the merger will depend in part on the successful integration of Alteon and HaptoGuard in a timely and efficient manner. The integration will require significant time and efforts from each

Table of Contents

company, including the coordination of research, development, regulatory, manufacturing, commercial, administrative and general functions. Integration may be difficult and unpredictable because of possible cultural conflicts and different opinions on scientific and regulatory matters. Delays in successfully integrating and managing employee benefits could lead to dissatisfaction and employee turnover. The combination of Alteon's and HaptoGuard's organizations may result in greater competition for resources and elimination of research and development programs that might otherwise be successfully completed. If we cannot successfully integrate our operations and personnel, we may not recognize the expected benefits of the merger.

Even if the two companies are able to integrate their operations, there can be no assurance that these anticipated synergies will be achieved. The failure to achieve such synergies could have a material adverse effect on the business, results of operations and financial condition of the combined company.

Integrating Alteon and HaptoGuard may divert management's attention away from our core research and development activities.

Successful integration of our operations, products and personnel may place a significant burden on our management and our internal resources. The diversion of management's attention and any difficulties encountered in the transition and integration process could result in delays in the companies' clinical trial programs and could otherwise significantly harm our business, financial condition and operating results.

We expect to incur significant costs integrating our operations, product candidates and personnel, which cannot be estimated accurately at this time. These costs include:

severance;

conversion of information systems;

combining research, development, regulatory, manufacturing and commercial teams and processes;

reorganization of facilities; and

relocation or disposition of excess equipment.

We expect that Alteon and HaptoGuard will incur aggregate direct transaction costs of approximately \$800,000 associated with the merger. If the total costs of the merger exceed our estimates or benefits of the merger do not exceed the total costs of the merger, the financial results of our combined company could be adversely affected.

Completion of, or the failure to complete, the merger could adversely affect Alteon's stock price and Alteon's and HaptoGuard's future business and operations.

The merger is subject to the satisfaction of various closing conditions, including the approval by both Alteon and HaptoGuard stockholders, and there can be no assurance that the merger will be successfully completed. In the event that the merger is not consummated, Alteon and HaptoGuard will be subject to many risks, including the costs related to the merger, such as legal, accounting and advisory fees, which must be paid even if the merger is not completed, or the payment of a termination fee under certain circumstances. If the merger is not consummated for any reason, the market price of Alteon common stock could decline.

The shares of the combined company are publicly traded and we cannot predict how the market will react to the merger of Alteon and HaptoGuard. Even the successful completion of the merger may negatively affect the stock price of the combined company, if the market were to come to the view that Alteon would be in a better position absent completion of the merger.

Table of Contents***The combined company will remain dependent on third parties for research and development and manufacturing activities necessary to commercialize certain of our patents.***

We utilize the services of several scientific and technical consultants to oversee various aspects of our protocol design, clinical trial oversight and other research and development functions. Alteon and HaptoGuard both contract out most of our research and development operations, utilize third-party contract manufacturers for drug inventory and shipping services and third-party contract research organizations in connection with preclinical and/or clinical studies in accordance with our designed protocols, as well as conducting research at medical and academic centers.

Because we rely on third parties for much our research and development work and manufacturing, we have less direct control over our research and development and manufacturing. We face risks that these third parties may not be appropriately responsive to our time frames and development needs and could devote resources to other customers. In addition, certain of these third parties may have to comply with FDA regulations or other regulatory requirements in the conduct of this research and development work, which they may fail to do.

If the combined company does not successfully distinguish and commercialize its technology, it may be unable to compete successfully or to generate significant revenues.

The biotechnology industry, including the field of small molecule drugs to treat and prevent cardiovascular disease and diabetes, is highly competitive and subject to significant and rapid technological change. Accordingly, the combined company's success will depend, in part, on its ability to respond quickly to such change through the development and introduction of new products and systems.

The combined company will have substantial competition, including competitors with substantially greater resources.

Many of the combined company's competitors or potential competitors have substantially greater financial and other resources than Alteon has and may also have greater experience in conducting pre-clinical studies, clinical trials and other regulatory approval procedures as well as in marketing their products. Major competitors in the market for our potential products include large, publicly-traded pharmaceutical companies, public development stage companies and private development stage companies. If the combined company or its corporate partners commence commercial product sales, the combined company or its corporate partners will be competing against companies with greater marketing and manufacturing capabilities.

The combined company's ability to compete successfully against currently existing and future alternatives to its product candidates and systems, and competitors who compete directly with it in the small molecule drug industry will depend, in part, on its ability to:

- attract and retain skilled scientific and research personnel;
- develop technologically superior products;
- develop competitively priced products;
- obtain patent or other required regulatory approvals for the combined company's products;
- be early entrants to the market; and

manufacture, market and sell its products, independently or through collaborations.

The success of the combined company is dependent on the extent of third-party reimbursement for its products.

Third-party reimbursement policies may also adversely affect the combined company's ability to commercialize and sell its products. The combined company's ability to successfully commercialize its products depends in part on the extent to which appropriate levels of reimbursement for its products and related treatments are obtained from government authorities, private health insurers, third party payers, and other organizations, such

Table of Contents

as managed care organizations, or MCOs. Any failure by doctors, hospitals and other users of the combined company's products or systems to obtain appropriate levels of reimbursement could adversely affect the combined company's ability to sell these products and systems.

Federal legislation, enacted in December 2003, has altered the way in which physician-administered drug programs covered by Medicare are reimbursed, generally leading to lower reimbursement levels. The new legislation has also added an outpatient prescription drug benefit to Medicare, effective January 2006. In the interim, the U.S. Congress has established a discount drug card program for Medicare beneficiaries. Both benefits will be provided through private entities, which will attempt to negotiate price concessions from pharmaceutical manufacturers. These negotiations may increase pressures to lower prices. On the other hand, the drug benefit may increase the volume of pharmaceutical drug purchases, offsetting at least in part these potential price discounts. While the new law specifically prohibits the U.S. government from interfering in price negotiations between manufacturers and Medicare drug plan sponsors, some members of Congress are pursuing legislation that would permit de facto price controls on prescription drugs. In addition, the law triggers, for congressional consideration, cost containment measures for Medicare in the event Medicare cost increases exceed a certain level. These cost containment measures could include limitations on prescription drug prices. This legislation could adversely impact the combined company's ability to commercialize any of its products successfully.

Significant uncertainty exists about the reimbursement status of newly approved medical products and services. Reimbursement in the United States or foreign countries may not be available for any of the combined company's products, reimbursement granted may not be maintained, and limits on reimbursement available from third-party payers may reduce the demand for, or negatively affect the price of, the combined company's products. Alteon anticipates that the combined company will need to work with a variety of organizations to lobby government agencies for improved reimbursement policies for its products. However, Alteon cannot guarantee that such lobbying efforts will take place or that they will ultimately be successful.

Internationally, where national healthcare systems are prevalent, little if any funding may be available for new products, and cost containment and cost reduction efforts can be more pronounced than in the United States.

If the combined company is unable to protect its intellectual property, it may not be able to operate its business profitably.

The combined company's success will depend on its ability to develop proprietary products and technologies, to obtain and maintain patents, to protect trade secrets, and to prevent others from infringing on its proprietary rights. The combined company has exclusive patents, licenses to patents or patent applications covering critical components of its technologies, including certain jointly owned patents. We also seek to protect our proprietary technology and processes, in part, by confidentiality agreements with our employees and certain contractors. Patents, pending patent applications and licensed technologies may not afford adequate protection against competitors, and any pending patent applications now or hereafter filed by or licensed to us may not result in patents being issued. In addition, certain of the combined company's technology relies on patented inventions developed using university resources. Universities may have certain rights, as defined by law or applicable agreements, in such patents, and may choose to exercise such rights. To the extent that employees, consultants or contractors of the combined company use intellectual property owned by others, disputes may arise as to the rights related to or resulting from the know-how and inventions. In addition, the laws of certain non-U.S. countries do not protect intellectual property rights to the same extent as do the laws of the United States. Medical technology patents involve complex legal and factual questions and, therefore, the combined company cannot predict with certainty their enforceability.

The combined company is a party to various license agreements that give it exclusive and partial exclusive rights to use specified technologies applicable to research, development and commercialization of its products, including alagebrium and ALT-2074. The agreements pursuant to which such technology is used permit the licensors to terminate agreements in the event that certain conditions are not met. If these conditions are not met and the agreements are terminated, the combined company's product development, research and commercialization efforts may be altered or delayed.

Table of Contents

Patents or patent applications, if issued, may be challenged, invalidated or circumvented, or may not provide protection or competitive advantages against competitors with similar technology. Furthermore, competitors of the combined company may obtain patent protection or other intellectual property rights for technology similar to the combined company's that could limit its ability to use its technology or commercialize products that it may develop.

Litigation may be necessary to assert claims of infringement, to enforce patents issued to the combined company, to protect trade secrets or know-how or to determine the scope and validity of the proprietary rights of others. Litigation or interference proceedings could result in substantial additional costs and diversion of management focus. If the combined company is ultimately unable to protect its technology, trade secrets or know-how, it may be unable to operate profitably. Although we have not been involved with any threats of litigation or negotiations regarding patent issues or other intellectual property, or other related court challenges or legal actions, it is possible that the combined company could be involved with such matters in the future.

If the combined company is unable to operate its business without infringing upon intellectual property rights of others, it may not be able to operate its business profitably.

The combined company's success depends on its ability to operate without infringing upon the proprietary rights of others. We are aware that patents have been applied for and/or issued to third parties claiming technologies for Advanced Glycation End-Products or glutathione peroxidase mimetics that may be similar to those needed by us. To the extent that planned or potential products are covered by patents or other intellectual property rights held by third parties, the combined company would need a license under such patents or other intellectual property rights to continue development and marketing of its products. Any required licenses may not be available on acceptable terms, if at all. If the combined company does not obtain such licenses or it may not be able to proceed with the development, manufacture or sale of its products.

Litigation may be necessary to defend against claims of infringement or to determine the scope and validity of the proprietary rights of others. Litigation or interference proceedings could result in substantial additional costs and diversion of management focus. If the combined company is ultimately unsuccessful in defending against claims of infringement, it may be unable to operate profitably.

HaptoGuard's ALT-2074 and other HaptoGuard compounds are licensed to HaptoGuard by third parties and if the combined company is unable to continue licensing this technology our future prospects may be materially adversely affected.

HaptoGuard licenses technology, including technology related to ALT-2074, from third parties. We anticipate that we will continue to license technology from third parties in the future. To maintain HaptoGuard's license to ALT-2074 from Oxis International, we are obligated to meet certain development and clinical trial milestones and to make certain payments. There can be no assurance that we will be able to meet any milestone or make any payment required under the license with Oxis International. While Oxis has not claimed a default under the license agreement, it has indicated that its view as to whether HaptoGuard satisfied the milestone to begin Phase 2 clinical trials by May 28, 2006 differs from HaptoGuard's view. If we fail to meet any milestone or make any payment, Oxis may terminate the license, and there can be no assurance that we may be able to negotiate any continuation or extension of the license agreement.

The technology HaptoGuard licenses from third parties would be difficult or impossible to replace and the loss of this technology would materially adversely affect our business, financial condition and any future prospects.

If the combined company loses or is unable to hire and retain qualified personnel, it may not be able to develop its products and technology.

The combined company is highly dependent on the members of its scientific and management staff. In particular, the combined company will depend on Dr. Noah Berkowitz as the combined company's Chief Executive Officer and Malcolm MacNab as the combined company's Vice-President of Clinical Development. We may not be able to attract and retain scientific and management personnel on acceptable terms, if at all, given the competition for such personnel among other companies and research and academic institutions. Mary Phelan has resigned from her position as our Director of Finance and Financial Reporting effective May 31, 2006. If the combined company loses an executive officer or certain key members of its clinical or research and development staff or is unable to hire and retain qualified management personnel, then its ability to develop and commercialize its products and technology

Table of Contents

and to raise capital and effect strategic opportunities may be hindered. We have not purchased and do not anticipate purchasing any key-man life insurance.

The combined company may face exposure to product liability claims.

The combined company may face exposure to product liability and other claims due to allegations that its products cause harm. These risks are inherent in the clinical trials for pharmaceutical products and in the testing, and future manufacturing and marketing of, the combined company's products. Although we currently maintain product liability insurance, such insurance may not be adequate and the combined company may not be able to obtain adequate insurance coverage in the future at a reasonable cost, if at all. If the combined company is unable to obtain product liability insurance in the future at an acceptable cost or to otherwise protect against potential product liability claims, it could be inhibited in the commercialization of its products which could have a material adverse effect on its business. We currently have a policy covering \$10 million of product liability for our clinical trials. We do not have sales of any products. The coverage will be maintained and limits reviewed from time to time as the combined company progresses to later stages of its clinical trials and as the length of the trials and the number of patients enrolled in the trials changes. The combined company intends to obtain a combined coverage policy that includes tail coverage in order to cover any claims that are made for any events that have occurred prior to the merger. Currently, our annual premium for product liability insurance is approximately \$219,000.

Risks Related to Owning Alteon's Common Stock

Our stock price is volatile and you may not be able to resell your shares at a profit.

We first publicly issued common stock on November 8, 1991 at \$15.00 per share in our initial public offering and it has been subject to fluctuations. For example, during 2005, the closing sale price of our common stock has ranged from a high of \$1.43 per share to a low of \$0.17 per share. The market price of our common stock could continue to fluctuate substantially due to a variety of factors, including:

quarterly fluctuations in results of operations;

the announcement of new products or services by the combined company or competitors;

sales of common stock by existing stockholders or the perception that these sales may occur;

adverse judgments or settlements obligating the combined company to pay damages;

negative publicity;

loss of key personnel;

developments concerning proprietary rights, including patents and litigation matters; and

clinical trial or regulatory developments in both the United States and foreign countries.

In addition, overall stock market volatility has often significantly affected the market prices of securities for reasons unrelated to a company's operating performance. In the past, securities class action litigation has been commenced against companies that have experienced periods of volatility in the price of their stock. Securities litigation initiated against the combined company could cause it to incur substantial costs and could lead to the diversion of management's attention and resources, which could have a material adverse effect on revenue and earnings.

We have a large number of authorized but unissued shares of common stock, which our Board of Directors may issue without further stockholder approval, thereby causing dilution of your holdings of our common stock.

After the closing of the merger and the financing, there are expected to be approximately 180,000,000

Table of Contents

shares of authorized but unissued shares of our common stock. Our management will continue to have broad discretion to issue shares of our common stock in a range of transactions, including capital-raising transactions, mergers, acquisitions, for anti-takeover purposes, and in other transactions, without obtaining stockholder approval, unless stockholder approval is required for a particular transaction under the rules of the American Stock Exchange, Delaware law, or other applicable laws. We currently have no specific plans to issue shares of our common stock for any purpose other than in connection with the merger. However, if our management determines to issue shares of our common stock from the large pool of such authorized but unissued shares for any purpose in the future without obtaining stockholder approval, your ownership position would be diluted without your further ability to vote on that transaction.

The sale of a substantial number of shares of our common stock could cause the market price of our common stock to decline and may impair the combined company's ability to raise capital through additional offerings.

We currently have outstanding warrants to purchase an aggregate of 12,591,455 shares of our common stock, including warrants to purchase 10,960,400 shares of our common stock issued together with 10,960,400 shares of common stock all of which such warrants and common stock we issued in connection with a private equity financing completed in April 2006. Under the terms of the financing we have agreed to register all of such shares for resale. The resale of these shares of common stock and the shares underlying the warrants may be effected at any time once the registration statement of which this Prospectus is a part is effective. The shares issued in the private equity financing, together with the shares underlying the warrants issued in such financing, represent approximately 37.8% of the total number of shares of our common stock outstanding immediately prior to the financing, and not including shares to be issued in the merger with HaptoGuard or shares to be issued upon conversion of preferred stock upon transfer to HaptoGuard.

Sales of these shares in the public market, or the perception that future sales of these shares could occur, could have the effect of lowering the market price of our common stock below current levels and make it more difficult for us and our shareholders to sell our equity securities in the future.

Our executive officers, directors and holders of more than 5% of our common stock and collectively beneficially own approximately 13.7% of the outstanding common stock as of March 31, 2006. In addition, 6,403,464 shares of common stock issuable upon exercise of vested stock options could become available for immediate resale if such options were exercised.

Sale or the availability for sale, of shares of common stock by stockholders could cause the market price of our common stock to decline and could impair our ability to raise capital through an offering of additional equity securities.

Anti-takeover provisions may frustrate attempts to replace our current management and discourage investors from buying our common stock.

We have entered into a Stockholders' Rights Agreement pursuant to which each holder of a share of common stock is granted a Right to purchase our Series F Preferred Stock under certain circumstances if a person or group acquires, or commences a tender offer for, 20 percent of our outstanding common stock. We also have severance obligations to certain employees in the event of termination of their employment after or in connection with a change in control of the Company. In addition, the Board of Directors has the authority, without further action by the stockholders, to fix the rights and preferences of, and issue shares of, Preferred Stock. The staggered board terms, Fair Price Provision, Stockholders' Rights Agreement, severance arrangements, Preferred Stock provisions and other provisions of our charter and Delaware corporate law may discourage certain types of transactions involving an actual or potential change in control.

FORWARD-LOOKING STATEMENTS AND CAUTIONARY STATEMENTS

Statements in this prospectus and the documents incorporated by reference herein that are not statements or descriptions of historical facts are forward-looking statements under Section 27A of the Securities Act of 1933, Section 21E of the Securities Exchange Act of 1934, and the Private Securities Litigation Reform Act of 1995, and are subject to numerous risks and uncertainties. These forward-looking

Table of Contents

statements and other forward-looking statements made by us or our representatives are based on a number of assumptions. The words believe, expect, anticipate, intend, estimate or other expressions, which are predictions indicate future events and trends and which do not relate to historical matters, identify forward-looking statements. The forward-looking statements represent our judgments and expectations as of the date of this prospectus. We assume no obligation to update any such forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, as they involve risks and uncertainties, and actual results could differ materially from those currently anticipated due to a number of factors, including those set forth in this section and elsewhere in this prospectus. These factors include, but are not limited to, the risks set forth below. The forward-looking statements set forth in this document represent our judgment and expectations as of the date of this prospectus. We assume no obligation to update any such forward-looking statements.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the shares by the selling stockholders. The warrants that have been issued to the selling stockholders to purchase 10,960,400 shares of our common stock have an exercise price of \$0.30 per share and a term of five years commencing six months from the date of issue. The warrants are exercisable immediately for cash and via cashless exercise. If all of the warrants were exercised for cash, we would receive approximately \$3,288,120 in proceeds, which proceeds would be used for general corporate purposes.

SELLING STOCKHOLDERS

On April 21, 2006 we sold approximately \$2.6 million worth of our common stock and warrants in a private placement exempt from the registration requirements of the Securities Act. This prospectus relates to the resale from time to time of up to a total of 21,920,800 shares of our common stock by the selling stockholders, which shares are comprised of the following securities purchased in the private placement:

10,960,400 shares of common stock; and

10,960,400 shares of common stock issuable upon exercise of warrants at an exercise price of \$0.30 per share. Pursuant to the terms of the financing, we filed a Registration Statement on Form S-3, of which this prospectus constitutes a part, in order to permit the selling stockholders to resell to the public the shares of our common stock issued in connection with the private placement transaction. The selling stockholders have each represented to us that they have obtained the shares for their own account for investment only and not with a view to, or resale in connection with, a distribution of the shares, except through sales registered under the Securities Act or exemptions thereto. The following table, to our knowledge, sets forth information regarding the beneficial ownership of our common stock by the selling stockholders as of May 17, 2006 and the number of shares being offered hereby by each selling stockholder. For purposes of the following description, the term selling stockholder includes pledgees, donees, permitted transferees or other permitted successors-in-interest selling shares received after the date of this prospectus from the selling stockholders. The information is based in part on information provided by or on behalf of the selling stockholders. Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission, and includes voting or investment power with respect to shares, as well as any shares as to which the selling stockholder has the right to acquire beneficial ownership within sixty (60) days after May 17, 2006 through the exercise or conversion of any stock options, warrants, convertible debt or otherwise. The terms of the warrants provide that no selling stockholder may exercise the warrants for shares of common stock for at least six months from the date of issue. Notwithstanding the foregoing, all shares that are issuable to a selling stockholder upon exercise of the warrants are included in the number of shares being offered in the table below. Unless otherwise indicated below, each selling stockholder has sole voting and investment power with respect to its shares of common stock. The inclusion of any shares in this table does not constitute an admission of beneficial ownership by the selling stockholder. We will not receive any of the proceeds from the sale of our common stock by the selling stockholders.

Table of Contents

| SELLING STOCKHOLDER | SHARES BENEFICALLY OWNED BEFORE OFFERING(1) | | SHARES BEING OFFERED | SHARES BENEFICALLY OWNED AFTER OFFERING(2) | |
|---|--|---------|----------------------------|---|---------|
| | NUMBER | PERCENT | | NUMBER | PERCENT |
| AJW Offshore, Ltd.(3) | 472,400 | * | 944,800 | 0 | * |
| AJW Partners, LLC (4) | 88,800 | * | 177,600 | 0 | * |
| AJW Qualified Partners, LLC (5) | 228,000 | * | 456,000 | 0 | * |
| Bristol Investment Fund, Ltd. (6) | 2,889,781 | 4.19% | 3,200,000 | 1,289,781 | 1.87% |
| Cranshire Capital, L.P. (7) | 1,200,000 | 1.74% | 2,400,000 | 0 | * |
| Crescent International Ltd. (8) | 840,000 | 1.22% | 1,680,000 | 0 | * |
| Hudson Bay Fund LP (9) | 400,000 | * | 800,000 | 0 | * |
| Icon Capital Partners LP (10) | 400,000 | * | 800,000 | 0 | * |
| Iroquois Master Fund Ltd. (11) | 600,000 | * | 1,200,000 | 0 | * |
| New Millennium Capital Partners II, LLC (12) | 10,800 | * | 21,600 | 0 | * |
| Nite Capital LP (13) | 1,200,000 | 1.74% | 2,400,000 | 0 | * |
| Noam J. Rubinstein (14) | 100,000 | * | 200,000 | 0 | * |
| RAQ, LLC (15) | 500,000 | * | 1,000,000 | 0 | * |
| Rodman & Renshaw, LLC (16) | 1,172,284 | 1.69% | 1,240,800 | 551,884 | * |
| Smithfield Fiduciary LLC (17) | 1,000,000 | 1.45% | 2,000,000 | 0 | * |
| Spectra Capital Management LLC (18) | 800,000 | 1.16% | 1,600,000 | 0 | * |
| TCMP3 Partners L.P. (19) | 400,000 | * | 800,000 | 0 | * |
| Valesco Healthcare Overseas Fund Ltd (20) | 240,000 | * | 480,000 | 0 | * |
| Valesco Healthcare Partners I LP (21) | 75,000 | * | 150,000 | 0 | * |
| Valesco Healthcare Partners II LP (22) | 185,000 | * | 370,000 | 0 | * |

* Less than 1%

(1) Percentages prior to the offering are based on 68,957,111 shares of common stock that were issued and outstanding as of May 17, 2006. We deem shares of common stock that may be acquired by an

individual or group within 60 days of May 17, 2006 pursuant to the exercise of options or warrants to be outstanding for the purpose of computing the percentage ownership of such individual or group, but such shares are not deemed to be outstanding for the purpose of computing the percentage ownership of any other individual or entity shown in the table.

- (2) We do not know when or in what amounts the selling stockholders may offer for sale the shares of common stock pursuant to this offering. The selling stockholders may choose not to sell any of the shares offered by this prospectus. Because the selling stockholders may offer all or some of the shares of common stock

pursuant to this offering, and because there are currently no agreements, arrangements or undertakings with respect to the sale of any of the shares of common stock, we cannot estimate the number of shares of common stock that the selling stockholders will hold after completion of the offering. For purposes of this table, we have assumed that the selling stockholders will have sold all of the shares covered by this prospectus upon the completion of the offering.

- (3) The number of shares being offered consists of 472,400 shares of common stock and 472,400 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for

\$0.30 per share.
AJW Offshore,
Ltd., formerly
known as
AJW/New
Millennium
Offshore, Ltd.,
is a private
investment fund
that is owned by
its investors and
managed by
First Street
Manager II,
LLC. First
Street Manager
II, LLC, of
which Corey S.
Ribotsky is the
fund manager,
has voting and
investment
control over the
shares owned by
AJW Offshore,
Ltd.

- (4) The number of
shares being
offered consists
of 88,800 shares
of common
stock and
88,800 shares of
common stock
issuable upon
exercise of
warrants that are
exercisable
beginning six
months after
April 19, 2006
for a period of
five years for
\$0.30 per share.
AJW Partners,
LLC is a private
investment fund
that is owned by
its investors and
managed by

SMS Group, LLC. SMS Group, LLC, of which Mr. Corey S. Ribotsky is the fund manager, has voting and investment control over the shares listed owned by AJW Partners, LLC.

- (5) The number of shares being offered consists of 228,000 shares of common stock and 228,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share. AJW Qualified Partners, LLC, formerly known as Pegasus Capital Partners, LLC, is a private

Table of Contents

investment fund that is owned by its investors and managed by AJW Manager, LLC, of which Corey S. Ribotsky and Lloyd A. Groveman are the fund managers, have voting and investment control over the shares listed owned by AJW Qualified Partners, LLC.

- (6) The number of shares being offered consists of 1,600,000 shares of common stock and 1,600,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share. Bristol Capital Advisors, LLC (BCA) is the investment advisor to Bristol Investment Fund, Ltd. (Bristol). Paul Kessler is the

manager of
BCA and as
such has voting
and investment
control over the
securities held
by Bristol.
Mr. Kessler
disclaims
beneficial
ownership of
these securities.

- (7) The number of
shares being
offered consists
of 1,200,000
shares of
common stock
and 1,200,000
shares of
common stock
issuable upon
exercise of
warrants that are
exercisable
beginning six
months after
April 19, 2006
for a period of
five years for
\$0.30 per share.
Mitchell P.
Kopin,
President of
Downsview
Capital, Inc., the
general partner
of Cranshire
Capital, LP, has
sole voting
control and
dispositive
powers of the
securities held
by Cranshire
Capital, L.P.
Mr. Kopin
disclaims all
beneficial
ownership of

these securities.

- (8) The number of shares being offered consists of 840,000 shares of common stock and 840,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share. Maxi Brezzi and Bachir Taleb-Ibrahimi, in their capacity as managers of Cantara (Switzerland) SA, the investment advisor to Crescent International Ltd., have voting control and investment discretion over the shares owned by Crescent International Ltd. Messrs. Brezzi and Taleb-Ibrahimi disclaim beneficial ownership of such shares.

(9)

The number of shares being offered consists of 400,000 shares of common stock and 400,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

(10) The number of shares being offered consists of 400,000 shares of common stock and 400,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

(11) The number of shares being offered consists of 600,000 shares of common stock and 600,000 shares of common stock issuable upon exercise of

warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

- (12) The number of shares being offered consists of 10,800 shares of common stock and 10,800 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

New Millennium Capital Partners II, LLC, is a private investment fund that is owned by its investors and managed by First Street Manager II, LLC. First Street Manager II, LLC, of which Corey S. Ribotsky is the fund manager, has voting and investment control over the shares owned by New Millennium Capital Partners

II, LLC.

(13) The number of shares being offered consists of 1,200,000 shares of common stock and 1,200,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

(14) The number of shares being offered consists of 100,000 shares of common stock and 100,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

(15) The number of shares being offered consists of 500,000 shares of common stock and 500,000 shares of common stock

issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

- (16) The number of shares being offered consists of 620,400 shares of common stock and 620,400 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

- (17) The number of shares being offered consists of 1,000,000 shares of common stock and 1,000,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.
Highbridge

Capital Management, LLC is the trading manager of Smithfield Fiduciary LLC and has voting control and investment direction over securities held by Smithfield Fiduciary LLC. Glenn Dubin and Henry Swieca control Highbridge Capital Management, LLC. Each of Highbridge Capital Management, LLC, Glenn Dubin and Henry Swieca disclaim beneficial ownership of the securities held by Smithfield Fiduciary LLC.

Table of Contents

(18) The number of shares being offered consists of 800,000 shares of common stock and 800,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

(19) The number of shares being offered consists of 400,000 shares of common stock and 400,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

(20) The number of shares being offered consists of 240,000 shares of common stock and 240,000 shares of common stock

issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

- (21) The number of shares being offered consists of 75,000 shares of common stock and 75,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

- (22) The number of shares being offered consists of 185,000 shares of common stock and 185,000 shares of common stock issuable upon exercise of warrants that are exercisable beginning six months after April 19, 2006 for a period of five years for \$0.30 per share.

PLAN OF DISTRIBUTION

The shares covered by this prospectus may be offered and sold from time to time by the selling stockholders. The term "selling stockholder" includes pledgees, donees, transferees or other successors in interest selling shares received after the date of this prospectus from each selling stockholder as a pledge, gift, partnership distribution or other non-sale related transfer. The number of shares beneficially owned by a selling stockholder will decrease as and when it effects any such transfers. The plan of distribution for the selling stockholders' shares sold hereunder will otherwise remain unchanged, except that the transferees, pledgees, donees or other successors will be selling stockholders hereunder. To the extent required, we may amend and supplement this prospectus from time to time to describe a specific plan of distribution.

The selling stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. The selling stockholders may make these sales at prices and under terms then prevailing or at prices related to the then current market price. The selling stockholders may also make sales in negotiated transactions. The selling stockholders may offer their shares from time to time pursuant to one or more of the following methods:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

- one or more block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

- an exchange distribution in accordance with the rules of the applicable exchange;

- privately negotiated transactions;

- on the American Stock Exchange (or through the facilities of any national securities exchange or U.S. inter-dealer quotation system of a registered national securities association, on which the shares are then listed, admitted to unlisted trading privileges or included for quotation);

- through underwriters, brokers or dealers (who may act as agents or principals) or directly to one or more purchasers;

Table of Contents

settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;

broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;

through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;

a combination of any such methods of sale; and

any other method permitted pursuant to applicable law.

In addition to the foregoing methods, the selling stockholders may offer their shares from time to time in transactions involving principals or brokers not otherwise contemplated above, in a combination of such methods or described above or any other lawful methods. The selling stockholders may also transfer, donate or assign their shares to lenders, family members and others and each of such persons will be deemed to be a selling stockholder for purposes of this prospectus. The selling stockholders or their successors in interest may from time to time pledge or grant a security interest in some or all of the shares of common stock, and if the selling stockholders default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time under this prospectus; provided however in the event of a pledge or then default on a secured obligation by the selling stockholder, in order for the shares to be sold under this registration statement, unless permitted by law, we must distribute a prospectus supplement and/or amendment to this registration statement amending the list of selling stockholders to include the pledgee, secured party or other successors in interest of the selling stockholder under this prospectus.

The selling stockholders may also sell their shares pursuant to Rule 144 under the Securities Act, which permits limited resale of shares purchased in a private placement subject to the satisfaction of certain conditions, including, among other things, the availability of certain current public information concerning the issuer, the resale occurring following the required holding period under Rule 144 and the number of shares being sold during any three-month period not exceeding certain limitations.

Sales through brokers may be made by any method of trading authorized by any stock exchange or market on which the shares may be listed or quoted, including block trading in negotiated transactions. Without limiting the foregoing, such brokers may act as dealers by purchasing any or all of the shares covered by this prospectus, either as agents for others or as principals for their own accounts, and reselling such shares pursuant to this prospectus. The selling stockholders may effect such transactions directly, or indirectly through underwriters, broker-dealers or agents acting on their behalf. In effecting sales, broker-dealers or agents engaged by the selling stockholders may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the selling stockholders, in amounts to be negotiated immediately prior to the sale (which compensation as to a particular broker-dealer might be in excess of customary commissions for routine market transactions).

In offering the shares covered by this prospectus, the selling stockholders, and any broker-dealers and any other participating broker-dealers who execute sales for the selling stockholders, may be deemed to be underwriters within the meaning of the Securities Act in connection with these sales. Any profits realized by the selling stockholders and the compensation of such broker-dealers may be deemed to be underwriting discounts and commissions.

We are required to pay all fees and expenses incident to the registration of the shares.

We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Table of Contents

LEGAL MATTERS

The validity of the common stock offered in this prospectus will be passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts.

EXPERTS

The financial statements of Alteon as of December 31, 2005 and 2004, and for each of the years then ended, have been incorporated by reference herein in reliance upon the report of J.H. Cohn LLP, independent registered public accounting firm, and upon the authority of that firm as experts in accounting and auditing.

J.H. Cohn LLP has included an explanatory paragraph in its report on our financial statements for the fiscal year ended December 31, 2005, which expresses substantial doubt about our ability to continue as a going concern.

The statements of operations, stockholders' equity and cash flows of Alteon for the year ended December 31, 2003, have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

MATERIAL CHANGES

On May 15, 2006, we announced that Kenneth I. Moch, our President and Chief Executive Officer, was going to participate in the Rodman & Renshaw 3rd Annual Global Healthcare Conference in Monaco on Monday, May 15, 2006 at 5:35 pm local time (11:35 am, ET), as previously announced on May 3, 2006. In addition, Noah Berkowitz, M.D., Ph.D., President and Chief Executive Officer of HaptoGuard, who is expected to become our President and CEO upon the closing of the previously-announced merger between the two companies, will review our and HaptoGuard's clinical programs. The previously-announced merger is subject to approval of our and HaptoGuard's stockholders and is expected to close in the third quarter of 2006.

Also on May 15, 2006, we issued a press release to report our financial results for the first quarter ended March 31, 2006.

WHERE YOU CAN FIND MORE INFORMATION

We are a public company and file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any document we file at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room. Our SEC filings are also available to the public at the SEC's web site at <http://www.sec.gov>, or at our web site at www.alteon.com. In addition, our common stock is listed for trading on The American Stock Exchange under the symbol ALT.

This prospectus is only part of a Registration Statement on Form S-3 that we have filed with the SEC under the Securities Act of 1933 and therefore omits certain information contained in the Registration Statement. We have also filed exhibits and schedules with the Registration Statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may:

inspect a copy of the Registration Statement, including the exhibits and schedules, without charge at the public reference room,

obtain a copy from the SEC upon payment of the fees prescribed by the SEC, or

obtain a copy from the SEC web site.

Table of Contents

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference information from other documents that we file with them, which means that we can disclose important information in this prospectus by referring to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference the documents listed below and any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934. The documents we are incorporating by reference as of their respective dates of filing are:

Our Annual Report on Form 10-K for the year ended December 31, 2005, filed on March 30, 2006 (File No. 001-16043);

Our Current Report on Form 8-K (Rule 425 Communication), filed on April 19, 2006 (File No. 001-16043);

Our Current Report on Form 8-K, filed on April 19, 2006 (File No. 001-16043);

Our Current Report on Form 8-K, filed on April 21, 2006 (File No. 001-16043);

Our Current Report on Form 8-K (Rule 425 Communication), filed on May 3, 2006 (File No. 001-16043);

Our Current Report on Form 8-K, filed on May 3, 2006 (File No. 001-16043);

Our Current Report on Form 8-K, filed on May 9, 2006 (File No. 001-16043);

Our Current Report on Form 8-K (Rule 425 Communication), filed on May 9, 2006 (File No. 001-16043);

Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2006, filed on May 15, 2006 (File No. 001-16043);

Our Current Report on Form 8-K, filed on May 16, 2006 (File No. 001-16043);

Our Current Report on Form 8-K (Rule 425 Communication), filed on May 16, 2006 (File No. 001-16043);

Our Current Report on Form 8-K, filed on May 16, 2006 (File No. 001-16043);

Our Current Report on Form 8-K (Rule 425 Communication), filed on May 16, 2006 (File No. 001-16043);

Our Preliminary Proxy Statement on Schedule 14A, filed on June 8, 2006 (File No. 001-16043); and

The description of our common stock, \$.01 par value, which is contained in our Registration Statement on Form 8-A, filed November 1, 1991, including any amendments or reports filed for the purpose of updating such description.

You may request, orally or in writing, a copy of these filings, which will be provided to you at no cost, by contacting Investor Relations c/o Nancy Regan, at our principal executive offices, which are located at 6 Campus Drive, Parsippany, New Jersey; 07054, (201) 934-5000.

To the extent that any statements contained in a document incorporated by reference are modified or superseded by any statements contained in this prospectus, such statements shall not be deemed incorporated in this prospectus except as so modified or superseded.

All documents subsequently filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act and prior to the termination of this offering are incorporated by reference and become a part of this prospectus from the date such

documents are filed. Any statement contained in this prospectus or in a document incorporated by reference is modified or superseded for purposes of this prospectus to the extent that a statement contained in any subsequent filed document modifies or supersedes such statement.