ADVANCED MAGNETICS INC Form S-3 July 31, 2003

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As filed with the Securities and Exchange Commission on July 31, 2003

Registration No. 333-

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

ADVANCED MAGNETICS, INC.

(Exact name of registrant as specified in its charter)

Delaware

04-2742593

(State or other jurisdiction of incorporation or organization)

(IRS Employer Identification No.)

61 Mooney Street Cambridge, MA 02138 (617) 497-2070

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Jerome Goldstein
President, Chief Executive Officer and Treasurer
Advanced Magnetics, Inc.
61 Mooney Street
Cambridge, MA 02138
(617) 497-2070

(Name, address, including zip code, and telephone number, including area code, of agent for service)

With a copy to:

Lawrence S. Wittenberg, Esq. Testa, Hurwitz & Thibeault, LLP 125 High Street Boston, MA 02110 (617) 248-7000

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. o

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. ý

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. o

CALCULATION OF REGISTRATION FEE

| Title of each class of securities to be registered | Amount to be registered(1) | Proposed maximum offering price per share(2) | Proposed maximum aggregate offering price | Amount of registration fee(3) |
|----------------------------------------------------|----------------------------|----------------------------------------------------|-------------------------------------------------|-------------------------------|
| Common Stock (\$.01 par value) | 1,308,900 shares | \$9.15 | \$11,976,435 | \$969 |

- Pursuant to Rule 416, this registration statement also registers such additional shares of the registrant's common stock as may become issuable to prevent dilution as a result of stock splits, stock dividends or similar transactions pursuant to the provisions of the underlying convertible securities.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee and computed pursuant to Rule 457 under the Securities Act of 1933, as amended.
- Pursuant to Rule 457(c) under the Securities Act of 1933, as amended, the registration fee has been calculated based upon the average of the high and low prices reported on July 28, 2003, as reported by the American Stock Exchange.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

PROSPECTUS

The information in this prospectus is not complete and may be changed. The selling stockholders named in this prospectus may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and the selling stockholders are not soliciting an offer or offers to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION: DATED JULY 31, 2003

ADVANCED MAGNETICS, INC. 1,308,900 shares of Common Stock

Advanced Magnetics, Inc. is registering the resale of up to 1,308,900 shares of our common stock by the selling stockholders identified in the "Selling Stockholders" section of this prospectus. Each selling stockholder may sell its shares at market prices prevailing at the time of sale, at prices related to prevailing market prices at the time of sale or at prices otherwise negotiated. Of the 1,308,900 shares of common stock, 1,047,120 have already been issued to the selling stockholders and 261,780 shares are issuable to such stockholders upon the exercise of warrants with an exercise price of \$15.50 per share.

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

Our common stock is traded on the American Stock Exchange under the symbol "AVM."

Investing in Advanced Magnetics common stock involves a high degree of risk. See "Risk Factors" beginning on page 3 of this prospectus for information that should be considered before investing.

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

The date of this prospectus is August , 2003

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement. No one has been authorized to provide you with different information. 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 the common stock.

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Advanced Magnetics, Inc. 1,308,900 shares of Common Stock Prospectus

SUMMARY

On July 2, 2003, we sold 1,047,120 shares of our common stock and warrants to purchase 261,780 shares of our common stock in a private placement under a securities purchase agreement by and among Advanced Magnetics and the selling stockholders. As part of this private placement, we entered into a registration rights agreement with the selling stockholders under which we agreed to register the shares issued and issuable to the selling stockholders in the transaction. We are filing this registration statement to register for public sale the 1,308,900 shares of common stock issued and issuable to the selling stockholders to permit them to offer such shares for resale from time to time. The total consideration received by Advanced Magnetics in the transaction was \$10,000,000, before transaction costs.

Advanced Magnetics, Inc.

This business overview highlights information contained in certain documents incorporated by reference into this prospectus. This business overview does not contain all of the information that you should consider before investing in the common stock. You should read the entire prospectus carefully, including the "Risk Factors" section and the financial statements and the notes to those statements incorporated herein by reference, before making an investment decision.

Advanced Magnetics, Inc., a Delaware corporation, is dedicated to the development and commercialization of therapeutic iron compounds for treating anemia as well as novel contrast agents for use in magnetic resonance imaging to aid in the diagnosis of cancer and cardiovascular disease. Ferumoxytol (Code 7228), the next-generation product in our development pipeline, is currently in Phase II clinical studies for use as an iron replacement therapeutic in chronic kidney disease patients receiving erythropoietin. Ferumoxytol is also in Phase II clinical studies for use as a contrast agent in magnetic resonance angiography, also known as MRA. In June 2000, we received an approvable letter, subject to certain conditions, from the U.S. Food and Drug Administration, the FDA, for Combidex®, our contrast agent to aid in the diagnosis of metastatic lymph nodes. We are currently discussing the outstanding issues from the approvable letter with the FDA in an effort to bring *Combidex* to market. Our liver contrast agent, Feridex I.V.®, is approved and marketed in Europe, Japan, the United States, Argentina, South Korea and Israel. Our oral contrast agent, GastroMARK®, used for delineating the bowel in magnetic resonance imaging, is approved and marketed in Europe and the United States.

Ferumoxytol and the Treatment of Chronic Anemia

Iron replacement therapy plays a major role, along with erythropoietin, a hormone produced in the kidneys that stimulates red blood cell production, in treating certain types of chronic anemia in patients suffering from chronic kidney disease or kidney failure as well as in many patients receiving chemotherapy. For most patients receiving erythropoietin, oral iron supplements do not adequately replenish the body's iron stores. Intravenous iron replacement products allow for greater amounts of iron to be provided to patients whose iron stores have been severely depleted while avoiding the side effects associated with taking oral iron supplements. In comparison to IV iron replacement products already on the market, we believe that ferumoxytol will afford greater flexibility in both the administration and the amount of iron that can be given to patients in a single dose. As a result, we expect that ferumoxytol will be a more effective and desirable form of iron replacement therapy for patients suffering from chronic anemia. Ferumoxytol is currently in Phase II clinical studies for use as an iron replacement therapeutic. We currently anticipate that Phase III studies will begin by the end of 2003 or early in 2004.

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The Role of Combidex in Contrast-enhanced MRI

Magnetic resonance imaging, commonly referred to as MRI, is a non-invasive method to visualize internal structures, abnormalities or anatomical changes in order to diagnose disease and injury. Contrast agents play a significant role in improving the quality of diagnostic images by increasing the contrast between different internal structures or types of tissues in various disease states. *Combidex* is a contrast agent that localizes to and causes contrast enhancement of the lymph nodes. We believe that MRI exams of lymph nodes using *Combidex* will provide increased accuracy in the evaluation of lymph nodes as metastatic or non-metastatic, allowing for improved patient diagnosis and staging and providing a cost-effective way to assess medical treatments and to improve patient outcomes. There are no MRI contrast agents designed specifically for the lymphatic system currently on the market. At the present time, we continue to work with the FDA to obtain final approval of *Combidex*. We have granted exclusive rights to market and sell *Combidex* in the United States to Cytogen Corporation. In western Europe, Brazil and Argentina we have granted such rights to Guerbet under the tradename Sinerem .

The Utility of Ferumoxytol in Contrast-enhanced MRA and Cardiovascular Disease

Contrast-enhanced MRA with currently approved gadolinium contrast agents is of limited clinical value for the diagnosis of cardiovascular disease due to the rapid leakage of these agents out of the vascular system and into surrounding tissue. We believe that ferumoxytol, a true intervascular blood pool agent that does not leak out of the vascular space, will significantly improve the ability to perform contrast-enhanced MRA and will provide more clinically useful information for physicians seeking to perform non-invasive cardiovascular disease assessment.

New medical theory suggests that the majority of heart attacks and strokes may be caused by the rupture of coronary plaques rather than blood flow restriction, as once commonly thought. The plaques that are prone to rupture are commonly referred to as "vulnerable plaques." We believe that the characteristics of ferumoxytol will allow physicians not only to image the vascular system to diagnose a variety of vascular diseases, including blood flow restrictions, but will also allow physicians to distinguish vulnerable plaque from stable plaque. Ferumoxytol is currently in Phase II studies for use in contrast-enhanced MRA and in exploratory studies for use in vulnerable plaque imaging. We currently

anticipate that Phase III clinical studies for ferumoxytol for use in contrast-enhanced MRA will begin in 2004.

Advanced Magnetics was incorporated in Delaware in November 1981. Our principal offices are located at 61 Mooney Street, Cambridge, Massachusetts 02138, and our telephone number is (617) 497-2070.

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RISK FACTORS

Any statements in this prospectus not reflecting historical information are forward-looking statements that involve risks and uncertainties. You should carefully consider the following risks and uncertainties in addition to the remainder of the information contained or incorporated by reference in this prospectus before purchasing any shares of our common stock. The risks and uncertainties described below are not the only ones facing our company. Additional risks and uncertainties may also impair our business. If any of the following risks occur, our business, financial condition or operating results could be adversely affected. In that case, the trading price of our common stock could decline, and you could lose all or part of your investment.

We may not be able to obtain the necessary regulatory approvals in order to market and sell our products; the approval process is costly and lengthy.

Prior to marketing, every product candidate must undergo an extensive regulatory approval process in the United States and in every other country in which we intend to test and market our product candidates and products. This regulatory process includes testing and clinical trials of product candidates to demonstrate safety and efficacy and can require many years and the expenditure of substantial resources. Data obtained from pre-clinical testing and clinical trials are subject to varying interpretations, which can delay, limit or prevent regulatory approval by the FDA or similar regulatory bodies in foreign countries. In addition, changes in FDA or foreign regulatory approval policies or requirements may occur or new regulations may be promulgated which may result in a delay or failure to receive FDA or foreign regulatory approval. Delays and related costs in obtaining regulatory approvals could delay our product commercialization and revenue and consume our resources, both financial and managerial.

One of our product candidates, ferumoxytol, is currently in late-stage Phase II clinical trials for use in iron replacement therapy and is in Phase II clinical trials as a compound for use as a contrast agent for MRA. Before applying for FDA approval to market ferumoxytol, we must conduct larger-scale human clinical trials that further demonstrate the safety and efficacy of ferumoxytol to the satisfaction of the FDA and other regulatory authorities. We may not be able to successfully complete these clinical trials for ferumoxytol, or, if completed, we may not be able to obtain regulatory approval or obtain regulatory approval of the desired scope.

Although we have filed a New Drug Application and received an "approvable" letter from the FDA for *Combidex* for lymph node metastases, final approval remains subject to the satisfaction of certain conditions imposed by the FDA and labeling must be resolved. The New Drug Application for *Combidex* may not be approved, or, if approved, it may not be approved for the indication that we are seeking. If we are unable to obtain approval for this indication or if the FDA requires labeling that imposes limitations on the use of *Combidex*, our ability to market the product to the medical community may be hindered. Any failure to successfully market and sell *Combidex* would reduce the amount of cash generated from operations available to fund research and development activities which could force us to seek other financing alternatives.

We may also be required to demonstrate that *Combidex* or ferumoxytol represent an improved form of treatment over existing therapies or diagnostics in order to receive regulatory approval and we may be unable to do so without conducting further clinical studies, if at all. These types of clinical trials could be significantly large and expensive studies that we may be unable to fund and therefore we could be forced us to curtail our development activity.

In addition, until we or our marketing partners obtain the required regulatory approvals for *Combidex* or ferumoxytol in any specific foreign country, we and our marketing partners will be unable to sell these products in that country. International regulatory authorities have imposed numerous and varying regulatory requirements and the approval procedures could involve testing in addition to that

required by the FDA. Furthermore, approval by one regulatory authority does not ensure approval by any other regulatory authority.

Final regulatory approvals may not be obtained for *Combidex* or ferumoxytol or any other products developed by us. Failure to obtain requisite governmental approvals or failure to obtain approvals of the scope requested could delay and may preclude us or our licensees or other collaborators from marketing our products or limit the commercial use of our products. Alternatively, regulatory approvals may entail limitations on the indicated uses of our products and impose labeling requirements which may also adversely impact our ability to market our products.

Even if we obtain regulatory approval for our product candidates, a marketed product and its manufacturer are subject to continuing regulatory review. Noncompliance with the regulatory requirements of the approval process at any stage may result in adverse consequences, including the FDA's delay in approving or its refusal to approve a product, withdrawal of an approved product from the market or, under certain circumstances, the imposition of criminal penalties. We may be restricted or prohibited from marketing or manufacturing a product, even after obtaining product approval, if previously unknown problems with the product or its manufacture are subsequently discovered. Any such adverse consequence could limit or preclude our ability to sell our products commercially which would seriously hinder our ability to generate revenue through royalties or direct sales of our products.

We cannot predict the results and progress of our clinical trials and our ability to complete the development of our product candidates is uncertain.

The development of new pharmaceutical products is highly uncertain and subject to a variety of inherent risks of failure, including the following:

Our products may be found to be unsafe, to have harmful side effects on humans, to be ineffective or may otherwise fail to meet regulatory standards or receive necessary regulatory approvals,

Other parties may claim proprietary rights to our product technology that prevent us from marketing our products, and

Our products may not be widely adopted or commercially successful.

Before obtaining regulatory approvals for the commercial sale of any of our product candidates, we must demonstrate through extensive pre-clinical testing and human clinical trials that the product is safe and efficacious. If our products fail in human clinical trials, we will be unable to obtain regulatory approval for, and market, our products, thereby reducing our potential future revenues. Although we have received promising results from pre-clinical testing and early clinical trials of ferumoxytol, these results may not be predictive of results obtained in subsequent clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in early-stage development. We cannot be sure that clinical trials for ferumoxytol will demonstrate sufficient safety and efficacy to obtain regulatory approvals.

The completion rate of our clinical trials also depends on patient enrollment. Clinical trials are often conducted with patients in the most advanced stages of disease. During the course of treatment, these patients can die or suffer adverse medical effects for reasons that may not be related to the product being tested, but which can nevertheless adversely affect clinical trial results or approvals by the FDA. Clinical testing of pharmaceutical products is itself subject to approvals by various governmental regulatory authorities. We may not be permitted by regulatory authorities to commence or continue clinical trials. Any delays in or termination of our clinical trial efforts could negatively affect our future prospects and stock price.

In addition, although we have dedicated significant resources to our research and development efforts, we may not be successful in finding new applications for our technology or in expanding the

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indications for our current products or product candidates for development into future product candidates.

As a result of these and other risks and uncertainties, our development programs may not be completed successfully. Any delays or failures in the development of our current or future product candidates will delay or prevent generation of revenue from such product candidates and may damage our ability to become profitable.

We have a limited number of customers and are dependent on our collaborative relationships.

Our strategy for the development, commercialization and marketing of our product candidates has been to enter into strategic partnerships with various corporate partners, licensees, and other collaborators. We rely on a limited number of marketing and distribution partners to market and sell our approved products, Feridex I.V. and GastroMARK, both in the U.S. and in foreign countries, and we depend on these strategic partners for a significant portion of our revenue. Three companies were responsible for approximately 84% of our revenue during the fiscal quarter ended June 30, 2003. Cytogen represented approximately 47% of our revenue in the quarter ended June 30, 2003, all of which represented recognition of deferred revenue. A decrease in revenue from any of our significant marketing and distribution partners could seriously impair our overall revenues. In some cases, we have granted exclusive rights to these partners. If these partners are not successful in marketing our products, or if these partners fail to meet minimum sales requirements or projections, our ability to generate revenue would be harmed. In addition, we might incur additional costs in an attempt to enforce our contractual rights, renegotiate agreements, find new partners or market our own products. In some cases, we are dependent upon some of our collaborators to conduct clinical testing, to obtain regulatory approvals and to manufacture and market our products. We may not be able to derive any revenues from these arrangements. If any of our collaborators breaches its agreement with us or otherwise fails to perform, such event could impair our revenue and impose on us additional costs. In addition, many of our corporate partners have considerable discretion in electing whether to pursue the development of any additional products and may pursue technologies or products either on their own or in collaboration with other competitors. Given these and other risks, our current and future collaborative efforts may not be successful. Failure of these efforts could delay our product development or impair commercialization of our products.

We may not be able to enter into future collaborative relationships related to the development, commercialization and marketing of ferumoxytol. Due to the high cost of our research and development activities, in particular the anticipated cost of future clinical trials for ferumoxytol, our inability to secure strategic partners could limit our ability to continue developing ferumoxytol or force us to raise additional capital through alternative means which may not be available to us on acceptable terms, if at all. Any delay in, or termination of, any of our research and development projects due to insufficient funds would reduce our potential revenues. In addition, if, in the future, we are unable to enter into collaborative agreements related to ferumoxytol, or choose not to enter into collaborative agreements, we would need to develop an internal sales and marketing department, including a direct sales force, or contract for these services from a third party, in order to market and sell ferumoxytol since we do not have the necessary sales and marketing expertise in the company at this time. If we are unable to successfully recruit and retain the necessary sales and marketing personnel, to obtain the financing to support these efforts, if necessary, or to contract with third parties for these services on acceptable terms, if at all, our product marketing efforts and potential product launch would be delayed and the commercialization of ferumoxytol severely impaired.

We may need additional capital to achieve our business objectives.

We have expended and will continue to expend substantial funds to complete the research, development, clinical trials, regulatory approvals and other activities necessary to achieve final commercialization of our products. We estimate that our existing cash resources will be sufficient to

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finance our operations at current and projected levels of development and general corporate activity for at least the next two years. Thereafter, we may require additional funds to continue our research and development, commence future pre-clinical and clinical trials, seek regulatory approvals, establish commercial-scale manufacturing capabilities and market and sell our products. We may seek such financing through arrangements with collaborative partners or through public or private sales of our securities, including equity securities. We may not be able to obtain financing on acceptable terms, if at all. Any additional equity financings could be dilutive to our stockholders. In addition, our recently completed private placement places certain restrictions on our ability to raise additional capital through equity issuances, including a prohibition on such activity (with certain limited exceptions) for a period of 90 days from the effective date of the registration statement related to this prospectus. These provisions may severely limit our ability to obtain additional financing in the short-term or to do so on favorable terms. If adequate additional funds are not available to us in the long-term, we may be required to curtail significantly one or more of our research and development programs or obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to certain of our products or product candidates on terms that we might otherwise find unacceptable.

Our operating results may fluctuate so you should not rely on a good or bad quarter to predict how we will perform over time.

Our future operating results may vary from quarter to quarter or from year to year depending on a number of factors including:

the cyclical nature of our products sales to our marketing partners and the batch size in which our products are manufactured.

uneven demand for our products by end users which affects the royalties we receive from our marketing partners,

market demand for Feridex I.V. and GastroMARK,

fluctuations in the equity markets in which our marketable securities are traded,

the timing and likelihood of FDA approval for *Combidex* or ferumoxytol,

market acceptance of Combidex or ferumoxytol, if approved,

the timing of our recognition of deferred revenue which is affected by the performance of our obligations under our license agreements,

the extent of reimbursement for the cost of our products from government health administration authorities, private health insurers and other third-party payors, and

a significant portion of our operating expenses is relatively fixed in nature due to our administrative, research and development and manufacturing costs which could affect our ability to quickly compensate for a revenue shortfall.

As a result, our quarterly operating results could fluctuate, and this fluctuation could cause the market price of our common stock to decline. Results from one quarter should not be used as an indication of future performance.

Our stock price has been and may continue to be volatile, and your investment in our stock could decline in value or fluctuate significantly.

The market price of our common stock has been, and may continue to be, volatile. This price has ranged between \$3.50 and \$13.74 in the fifty-two week period prior to July 28, 2003. The stock market has from time to time experienced extreme price and volume fluctuations, particularly in the biotechnology sector, which have often been unrelated to the operating performance of particular companies. Various factors and events, including announcements by us or our competitors concerning results of regulatory actions, technological innovations, new products, clinical trial results, agreements

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with collaborators, governmental regulations, developments in patent or other proprietary rights, or public concern regarding the safety of products developed by us or others, may have a significant impact on the market price of our common stock. Thus, as a result of events both within and beyond our control, our stock price could fluctuate significantly or lose value rapidly. In addition, sales of a substantial number of shares of our common stock by stockholders could adversely affect the market price of our shares. In 2002, our shares had an average daily trading volume of approximately 3,000 shares. As of July 29, 2003, this average daily trading volume had increased to approximately 65,000 shares. Bulk sales, including sales by the selling stockholders, or purchases of our stock in a short period of time could cause the market price for our shares to decline or fluctuate drastically.

We cannot be certain that our products will be accepted in the marketplace.

For a variety of reasons, many of which are beyond our control, our products may not achieve market acceptance or become commercially successful. If our products do not receive market acceptance for any reason, it may limit sales of our products and reduce our revenues from royalties and direct sales, if any. The degree of market acceptance of any of our products will depend on a number of factors, including:

the establishment and demonstration in the medical community of the clinical efficacy and safety of our products,

our products' potential advantage over existing treatment or diagnostic methods, and

reimbursement policies of government and third-party payors, including insurance companies.

For example, even if we obtain regulatory approval to sell our products, physicians and health care payors could conclude that our products are not safe or effective and decide not to use them to treat patients. Our competitors may also develop new technologies or products which are more effective or less costly, or that are perceived as more effective or cost-effective than our products. Physicians, patients, third-party payors or the medical community in general may fail to accept or choose not to use any of our products that we develop.

To date, we have not generated significant revenues on royalties from the sale of our approved products by our marketing partners. Although on the market since 1996 and 1997, respectively, *Feridex I.V.* and *GastroMARK* represent an alternative technology platform for physicians to adopt. *Combidex*, if approved, may also represent a new technology and ferumoxytol, if approved, may represent an alternative to existing products, that might not be adopted by the medical community. If our approved products, or future products, are not adopted by physicians, revenues will be delayed or fail to materialize.

We lack marketing and sales experience.

We have limited experience in marketing and selling our products and product candidates and rely on our corporate partners to market and sell *Feridex I.V.* and *GastroMARK* and have agreed to permit Cytogen to do so, pending FDA approval, for *Combidex* and for ferumoxytol for oncology applications. In order to achieve commercial success for any product candidate approved by the FDA for which we do not have a marketing partner, we may have to develop a marketing and sales force or enter into arrangements with others to market and sell our products. If we choose to market and sell any of our product candidates ourselves, we may encounter difficulties in attracting and retaining qualified marketing and sales personnel. In addition, in order to establish our own marketing and sales force, we would have to raise substantial amounts of additional capital to support the costs associated with such an effort. We may not be able to secure such additional financing on terms acceptable to us, if at all. We also may not be able to enter into marketing and sales agreements with others on acceptable terms, if at all. Furthermore, we, or our corporate partners, may not be successful in marketing and selling our products.

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Our success depends on our ability to attract and retain key employees.

Because of the specialized nature of our business, we are highly dependent on our executive officers and senior scientists, as well as our ability to attract and retain qualified scientific and technical personnel for the research and development activities conducted or sponsored by us. Our product development efforts could be delayed or curtailed if we lose the services of any of these people. Furthermore, our possible expansion into areas and activities requiring additional expertise, such as late-stage clinical development and marketing and sales, may require the addition of new management personnel or the development of additional expertise by existing management personnel. There is intense competition for qualified personnel in the areas of our activities, and we may not be able to continue to attract and retain the qualified personnel necessary for the development of our business. The failure to attract and retain such personnel or to develop such expertise could impose significant limits on our business operations and limit our ability to expand our business.

We need to maintain, and possibly increase, our manufacturing capabilities in order to commercialize our products.

We manufacture bulk *Feridex I.V.* and *GastroMARK* as well as *Feridex I.V.* finished product, for sale by our marketing partners, and ferumoxytol for use in human clinical trials, in our Massachusetts facility. We intend to, pending FDA approval, manufacture *Combidex* formulated drug product at our Massachusetts facility as well. This facility is subject to current Good Manufacturing Practices regulations prescribed by the FDA, also known as cGMP. We may not be able to continue to operate at commercial scale in compliance with cGMP regulations. Failure to operate in compliance with cGMP regulations and other applicable manufacturing requirements of various regulatory

agencies could delay our development efforts and impede product sales due to the unavailability of our products and product candidates. In addition, we are dependent on contract manufacturers for the final production of *Combidex*. In the event that we are unable to obtain or retain final manufacturing for *Combidex*, we will not be able to develop and commercialize this product as planned. In addition, we may not be able to enter into agreements for the manufacture of future products with manufacturers whose facilities and procedures comply with cGMP regulations and other regulatory requirements. Furthermore, such manufacturers may not be able to deliver required quantities of product that conform to specifications in a timely manner.

We currently have only one manufacturing facility at which we produce limited quantities of ferumoxytol. Some aspects of our manufacturing processes may not be easily scalable to allow for production in larger volumes, resulting in higher than anticipated material, labor and overhead costs per unit. As a result, manufacturing and quality control problems may arise as we increase our level of production. We may not be able to increase our manufacturing capacity in a timely and cost-effective manner and we may experience delays in manufacturing this product. If we are unable to consistently manufacture our products on a timely basis because of these or other factors, we will not be able to meet anticipated demand. As a result, we may lose sales and fail to generate increased revenue and become profitable.

We currently purchase the raw materials used to manufacture our products from third-party suppliers. We do not, however, have any long-term supply contracts with these third parties. Certain of these raw materials are available from a limited number of suppliers. Alternative sources for these materials may not be readily available. If we cannot obtain sufficient quantities of these materials on commercially reasonable terms, or in a timely manner, we would be unable to manufacture our products on a timely and cost-effective basis, which would hinder our ability to generate revenues from sales of our products and impede our development efforts with respect to our product candidates.

We may not be successful in competing with other companies or our technology may become obsolete.

The pharmaceutical and biopharmaceutical industries are subject to intense competition and rapid technological change. We believe that our ability to compete successfully will depend on a number of

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factors including the implementation of effective marketing campaigns by us or our marketing and distribution partners, development of efficacious products, timely receipt of regulatory approvals and product manufacturing at commercially acceptable costs. We may not be able to successfully develop efficacious products, obtain timely regulatory approvals, manufacture products at commercially acceptable costs, market our products alone or with our partners, gain satisfactory market acceptance, or otherwise successfully compete in the future.

We have many competitors, many of which have substantially greater capital and other resources than we do and represent significant competition for us. These companies may succeed in developing technologies and products that are more effective or less costly than any that we may develop, and may be more successful than we are in developing, manufacturing and marketing products. In addition, our collaborators are not restricted from developing and marketing certain competing products and, as a result of certain cross-license agreements with our competitors (including one of our collaborators), our competitors will be able to utilize elements of our technology in the development of certain competing contrast agents. We may not be able to compete successfully with these companies. Additionally, further technological and product developments may make other iron replacement therapy products more competitive than ferumoxytol or other imaging modalities more compelling than MRI, and adversely impact sales of our iron replacement and imaging products, respectively.

We may not be able to successfully complete Phase III clinical trials for ferumoxytol for iron replacement therapy, or, if completed, may not be able to obtain regulatory approval. In addition, although we believe ferumoxytol will present benefits over existing products in the IV iron replacement therapy market, this market is highly sensitive to several factors including, but not limited to, reimbursement, price competitiveness and product characteristics such as perceived safety profiles and dosing regimens. Competing IV iron therapy products may receive greater market acceptance than ferumoxytol.

Market acceptance of both MRI as an appropriate technique for imaging the lymphatic system and cardiac imaging, and the use of our products as part of such imaging, is critical to the success of our contrast agent products. For example, many cardiac imaging procedures are currently being performed using other imaging modalities, such as x-ray, computed tomography, also known as CT, and other imaging methods. In addition, many contrast-enhanced MRA procedures are currently conducted with gadolinium-based contrast agents which are not specifically approved for use in MRA. Although we believe that ferumoxytol offers advantages over competing MRI contrast agents and contrast agents used in other imaging modalities, competing contrast agents might receive greater acceptance. Additionally, to the extent that other diagnostic techniques may be perceived as providing greater value than MRI, any corresponding decrease in the use of MRI could have an adverse effect on the demand for our contrast agent products.

Our success depends on our ability to maintain the proprietary nature of our technology.

We rely on a combination of patents, trademarks, copyrights and trade secrets in the conduct of our business. The patent positions of pharmaceutical and biopharmaceutical firms are generally uncertain and involve complex legal and factual questions. We may not be successful or timely in obtaining any patents for which we submit applications. The breadth of the claims obtained in our patents may not provide significant protection of our technology. The degree of protection afforded by patents for licensed technologies or for future discoveries may not be adequate to protect our proprietary technology. The patents issued to us may not provide us with any competitive advantage. We also cannot be sure that we will develop additional proprietary products that are patentable. In addition, there is a risk that others will independently develop or duplicate similar technology or products or circumvent the patents issued to us.

Moreover, patents issued to us may be contested, invalidated or circumvented. Future patent interference proceedings involving either our patents or patents of our licensors may harm our ability

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to commercialize our products. Claims of infringement or violation of the proprietary rights of others may be asserted against us. If we are required to defend against such claims or to protect our own proprietary rights against others, it could result in substantial costs to us and distraction of our management. An adverse ruling in any litigation or administrative proceeding could prevent us from marketing and selling our products, limit our development of our product candidates or harm our competitive position and result in additional significant costs. In addition, any successful claim of infringement asserted against us could subject us to monetary damages or injunction preventing us or our marketing partners from making or selling products. We also may be required to obtain licenses to use the relevant technology and licenses may not be available on commercially reasonable terms, if at all.

In the future, we may be required to obtain additional licenses to patents or other proprietary rights of others in order to commercialize our products or continue with our development efforts. Such licenses may not be available on acceptable terms, if at all. The failure to obtain such licenses could result in delays in marketing our products or our inability to proceed with the development, manufacturing or sale of our products or product candidates requiring such licenses. In addition, the termination of any of our existing licensing arrangements could impair our revenues and impose additional costs which could limit our ability to sell our products commercially.

The laws of foreign countries may not protect our intellectual property rights to the same extent as do the laws of the United States. In countries where we do not have or have not applied for patents on our products, we will be unable to prevent others from developing or selling similar products. In addition, in jurisdictions outside the United States where we have patent rights, we may be unable to prevent unlicensed parties from selling or importing products or technologies derived elsewhere using our proprietary superparamagnetic iron oxide nanoparticle technology.

We also rely upon unpatented trade secrets and improvements, unpatented know-how and continuing technological innovation to develop and maintain our competitive position, which we seek to protect, in part, by confidentiality agreements with our corporate partners, collaborators, employees and consultants. These agreements, however, may be breached. We may not have adequate remedies for any such breach, and our trade secrets might otherwise become known or be independently discovered by our competitors. In addition, we cannot be certain that others will not independently develop substantially equivalent or superseding proprietary technology, or that an equivalent product will not be marketed in competition with our products, thereby substantially reducing the value of our proprietary rights.

Our success is dependent on third-party reimbursement policies and decisions.

In both the United States and foreign markets, our ability to commercialize our products may depend in part on the extent to which reimbursement for the costs of such products and related treatments will be available from government health administration authorities, private health insurers and other third-party payors. Significant uncertainty exists as to the reimbursement status of newly-approved health care products, products used for indications not approved by the FDA and products which have competitors for their approved indications. If the government or third-party payors do not approve our products and related treatments for reimbursement, or for adequate levels of reimbursement, the adoption of our products may be limited, sales may suffer as some physicians or their patients will opt for a competing product that is approved for sufficient reimbursement, and our ability to generate revenue may be impaired. Even if third-party payors make reimbursement available, these payors' reimbursement policies may negatively impact us and our corporate partners' ability to sell our products on a profitable basis.

In the United States, there have been, and we expect that there will continue to be, a number of federal and state proposals to reform the health care system. The trend toward managed healthcare in the United States, the growth of organizations such as health maintenance organizations, and legislative

proposals to reform healthcare and government insurance programs could significantly influence the purchase of healthcare services and products, resulting in lower prices and reduced demand for our products which could harm our ability to profit from product sales. In addition, legislation and regulations affecting the pricing of pharmaceuticals may change in ways adverse to us that may affect the marketing of our current or future products. While we cannot predict the likelihood of any of these legislative or regulatory proposals, if the government or an agency adopts these proposals they could limit our ability to price our products at desired levels.

We are exposed to potential liability claims and we may not be able to maintain or obtain sufficient insurance coverage.

We maintain product liability insurance coverage for claims arising from the use of our products in clinical trials and commercial use. However, coverage is becoming increasingly expensive and we may not be able to maintain insurance at a reasonable cost. Furthermore, our insurance may not provide sufficient coverage amounts to protect us against liability that could deplete our capital resources. We also may not be able to obtain commercially reasonable product liability insurance for any product approved for marketing in the future. Our insurance coverage and our resources may not be sufficient to satisfy any liability or cover costs resulting from product liability claims. A product liability claim or series of claims brought against us could reduce or eliminate our resources, whether or not the plaintiffs in such claims ultimately prevail. In addition, pursuant to our certificate of incorporation and by-laws, and in order to attract competent candidates, we are obligated to indemnify our officers and directors against certain claims arising from their service to Advanced Magnetics. Currently, we do not maintain liability insurance to cover such potential claims against our officers and directors. As a result of our indemnification obligations, any such liability claim or series of claims brought against our officers or directors could deplete or exhaust our resources, regardless of the ultimate disposition of such claims.

We are subject to environmental laws and potential exposure to environmental liabilities.

We are subject to various federal, state and local environmental laws and regulations that govern our operations, including the handling and disposal of nonhazardous and hazardous wastes, and emissions and discharges into the environment. Failure to comply with these laws and regulations could result in costs for corrective action, penalties or the imposition of other liabilities. We also are subject to laws and regulations that impose liability and clean-up responsibility for releases of hazardous substances into the environment. Under certain of these laws and regulations, a current or previous owner or operator of property may be liable for the costs of remediating hazardous substances or petroleum products on or from its property, without regard to whether the owner or operator knew of, or caused, the contamination, and may incur liability to third parties impacted by such contamination. The presence of, or failure to remediate properly, these substances could adversely affect the value of and the ability to transfer or encumber the property.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act. This section provides a "safe harbor" for forward-looking statements to encourage companies to provide prospective information about themselves so long as they identify these statements as forward-looking and provide meaningful cautionary statements identifying important factors that could cause actual results to differ from the projected results. All statements other than statements of historical fact we make in this prospectus or in any document incorporated by reference are forward-looking statements. These statements are based on management's beliefs and assumptions and on information currently available to management and use words such as "expect," "anticipate," "intend," "plan," "believe," "estimate," or similar expressions. Forward-looking statements include information concerning possible or assumed future results of operations, future product development and related clinical trials and statements regarding future research and development. Forward-looking statements reflect our current expectations and are inherently uncertain. Our actual results could differ materially from those anticipated in these forward-looking statements. The section entitled "Risk Factors" describes some, but not all, of the factors that could cause these differences.

USE OF PROCEEDS

We will not receive any proceeds from the sale of our common stock by the selling stockholders.

SELLING STOCKHOLDERS

The following table sets forth, to our knowledge, certain information as of July 29, 2003 with respect to the selling stockholders, including:

the name of each selling stockholder,

the number of shares of common stock owned by each selling stockholder,

the number of shares that may be offered under this prospectus, and

the number of shares of our common stock that will be owned by each selling stockholder after this offering is completed, assuming all of the shares covered by this prospectus are sold.

Number of Shares

Upon acquisition of our shares, any of the selling stockholders, their transferees and their distributees may offer and sell the shares they acquire from us from time to time under Rule 415 of the Securities Act. See "Plan of Distribution."

Prior to Offering (1) Number of Shares

Shares Beneficially Owned

| Name of Selling Stockholder | Number Percent(2) | | Number of Shares Being Offered(1) | Beneficially Owned After Offering(1) | |
|------------------------------------|-------------------|------|--------------------------------------|-----------------------------------------|--|
| Bonanza Master Fund Ltd. | 196,335(3) | 2.5% | 196,335(3) | 0 | |
| Liongate Capital, Inc. | 65,445(4) | 0.8% | 65,445(4) | 0 | |
| Gryphon Master Fund, L.P. | 130,890(5) | 1.7% | 130,890(5) | 0 | |
| Smithfield Fiduciary LLC | 130,890(5) | 1.7% | 130,890(5) | 0 | |
| Mainfield Enterprises Inc. | 261,780(6) | 3.4% | 261,780(6) | 0 | |
| Vertical Ventures Investments, LLC | 261,780(6) | 3.4% | 261,780(6) | 0 | |
| BayStar Capital II, LP | 130,890(5) | 1.7% | 130,890(5) | 0 | |
| SDS Merchant Fund, L.P. | 130,890(5) | 1.7% | 130,890(5) | 0 | |
| TOTAL | 1,308,900 | | 1,308,900 | 0 | |

(1)We do not know when or in what amounts a selling stockholder may offer shares for sale. The selling stockholders might not sell any or all of the shares offered by this prospectus. Because the selling stockholders may offer all or some of the shares pursuant to this offering, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the shares, we cannot estimate the number of the shares that will be held by the selling stockholders after completion of the offering. However, for purposes of this table, we have

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assumed that, after completion of the offering, none of the shares covered by this prospectus will be held by the selling stockholders.

- (2) In calculating the percentage of shares beneficially owned by each selling stockholder prior to and after the offering, we have based our calculations on the number of shares of common stock deemed outstanding as of July 29, 2003 which includes: 7,757,482 shares of common stock outstanding as of July 29, 2003 and all shares of common stock issuable upon the exercise of warrants which may be exercised by that selling stockholder within 60 days of July 29, 2003.
- (3) Includes 157,068 shares of common stock held by the selling stockholder and 39,267 shares of common stock issuable to the selling stockholder upon exercise of a warrant held by such selling stockholder. The exercise price to purchase each share of common stock pursuant to the warrant is \$15.50 per share.

- (4) Includes 52,356 shares of common stock held by the selling stockholder and 13,089 shares of common stock issuable to the selling stockholder upon exercise of a warrant held by such selling stockholder. The exercise price to purchase each share of common stock pursuant to the warrant is \$15.50 per share.
- Includes 104,712 shares of common stock held by the selling stockholder and 26,178 shares of common stock issuable to the selling stockholder upon exercise of a warrant held by such selling stockholder. The exercise price to purchase each share of common stock pursuant to the warrant is \$15.50 per share.
- (6) Includes 209,424 shares of common stock held by the selling stockholder and 52,356 shares of common stock issuable to the selling stockholder upon exercise of a warrant held by such selling stockholder. The exercise price to purchase each share of common stock pursuant to the warrant is \$15.50 per share.

To the best of our knowledge, based on representations from the selling stockholders, none of the selling stockholders had any material relationship with Advanced Magnetics or any of its affiliates within the three-year period ending on the date of this prospectus.

PLAN OF DISTRIBUTION

The selling stockholders and any of their pledgees, donees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on the American Stock Exchange and any other stock exchange, market or trading facility on which the shares are then-traded or in private transactions. These sales may be at fixed or negotiated prices. As used herein, the term "selling stockholders" includes donees and pledgees selling shares received from a named selling stockholder after the date of this prospectus. The selling stockholders may use any one or more of the following methods when selling shares:

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

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,

settlement of short sales,

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

a combination of any such methods of sale, and

any other method permitted pursuant to applicable law.

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Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they 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, a supplement to this prospectus or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

The selling stockholders may make gifts of some or all of their shares and the donees of these shares may subsequently sell their gifted shares under this prospectus, a supplement to this prospectus or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending the list of selling stockholders to include the donee, transferee or other successors in interest as selling stockholders under this prospectus.

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed Advanced Magnetics that it does not have any agreement or understanding, directly or indirectly, with any person to distribute the common stock. Because the selling stockholders may be deemed to be "underwriters" within the meaning of the Securities Act, the selling stockholders will be subject to the prospectus delivery requirements of the Securities Act.

We are required to pay all fees and expenses incident to the registration of the shares. We estimate these expenses will total approximately \$47,000. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act. We will not receive any of the proceeds from the sale by the selling stockholders of the shares offered by this document.

The selling stockholders are not restricted as to the price or prices at which they may sell the shares of our common stock offered under this prospectus. Sales of shares at less than the market price may depress the market price of our stock. Moreover, the selling stockholders are not restricted as to the number of shares which may be sold at any one time, and it is possible that a significant number of shares could be sold at the same time which may also depress the market price of our stock.

Under applicable rules and regulations under the Securities Exchange Act, any person engaged in the distribution of the shares of our common stock offered under this prospectus may not simultaneously engage in market making activities with respect to the shares for a period of time prior to the commencement of the distribution. In addition, each selling stockholder has been advised that it will be subject to applicable provisions of the Securities Exchange Act and the rules and regulations under the Securities Exchange Act, including, but not limited to, Rule 10b-5 and Regulation M, which provisions may limit the timing of purchases and sales of the shares by the selling stockholder.

There is no assurance that any selling stockholder will sell any or all of the shares described in this prospectus and may transfer or devise these securities by other means not described in this prospectus.

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Upon the Company being notified by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of shares through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, a supplement to this prospectus will be filed, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such shares were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus and (vi) other facts material to the transaction. In addition, upon the Company being notified by a selling stockholder that a donee or pledgee intends to sell more than 500 shares, a supplement to this prospectus will be filed.

We are permitted to suspend the use of this prospectus in connection with sales of the shares of our common stock offered under this prospectus by holders during periods of time under certain circumstances relating to pending corporate developments and public filings with the Securities and Exchange Commission and similar events.

LEGAL MATTERS

Certain legal matters with respect to the shares of common stock offered hereby have been passed upon by Testa, Hurwitz & Thibeault, LLP, Boston, Massachusetts. As of the date of this prospectus, certain attorneys with the firm of Testa, Hurwitz & Thibeault, LLP beneficially own an aggregate of approximately 1,600 shares of our common stock.

EXPERTS

The financial statements incorporated in this prospectus and elsewhere in this registration statement by reference to our Annual Report on Form 10-K for the year ended September 30, 2002 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

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INCORPORATION OF DOCUMENTS BY REFERENCE

The Securities and Exchange Commission allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is considered part of this prospectus and later information we file with the SEC will automatically update and supersede this information. The following documents filed by us with the SEC are incorporated by reference in this prospectus, except as superseded or modified by this prospectus:

- 1. Our Annual Report on Form 10-K for the fiscal year ended September 30, 2002,
- Our Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2002,
- Our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2003,
- Our Current Report on Form 8-K as filed on April 21, 2003,
- 5. Our Current Report on Form 8-K as filed on July 2, 2003,
- Our Current Report on Form 8-K as filed on July 9, 2003,
- 7. Our Current Report on Form 8-K as filed on July 17, 2003, and
- 8. The section entitled "Description of Registrant's Securities to be Registered" contained in our Registration Statement on Form 8-A as filed on September 24, 1991.

We incorporate by reference all future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 until this offering is completed.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon the written or oral request of that person, a copy of any document incorporated in this prospectus by reference other than exhibits unless those exhibits are specifically incorporated by reference into the documents. Requests for these copies should be directed to our Vice President of Finance at the following address and telephone number: Advanced Magnetics, Inc., 61 Mooney Street, Cambridge, MA, 02138; (617) 497-2070.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy the reports, proxy statements and other information that we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for information about the operation of its Public Reference Room and for its prescribed rates to obtain copies of such material. The SEC also maintains an Internet site that contains reports, proxy and information statements and other information regarding registrants, like us, that file electronically with the SEC. The address of the SEC's Internet site is http://www.sec.gov. Our Internet site is http://www.advancedmagnetics.com. Information contained on our Internet site is not a part of this prospectus.

This prospectus provides you with a general description of the common stock being registered. This prospectus is part of a registration statement that we have filed with the SEC. To see more detail, you should read the registration statement and the exhibits and schedules filed with, or incorporated by reference into, our registration statement.

You should rely only on the information contained in this prospectus or information specifically incorporated by reference in this prospectus. We have not authorized anyone to provide you with information that is different. Neither the delivery of this prospectus, nor any sale made hereunder, shall create any implication that the information in this prospectus is correct after the date hereof. This prospectus is not an offer to or solicitation of any person in any jurisdiction in which such offer or solicitation is illegal.

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PART II INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of the securities being registered hereby, all of which will be borne by Advanced Magnetics. All amounts shown are estimates except for the Securities and Exchange Commission registration fee and the American Stock Exchange additional listing fee:

| Securities and Exchange Commission registration fee | \$ 969 |
|-----------------------------------------------------|--------------|
| American Stock Exchange additional listing fee | \$ 22,500 |
| Legal fees and expenses | \$ 15,000 |
| Accounting fees and expenses | \$ 7,500 |
| Miscellaneous expenses | \$ 1,031 |
| Total | \$ 47,000 |

Item 15. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of Delaware empowers a corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation or another enterprise if serving at the request of the corporation. Depending on the character of the proceeding, a corporation may indemnify against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding if the person indemnified acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. In the case of an action by or in the right of the corporation, no indemnification may be made in respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine that despite the adjudication of liability, but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses that the court shall deem proper. Section 145 further provides that to the extent a present or former director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to above, or in defense of any claim, issue or matter therein, he or she shall be indemnified against expenses (including attorney's fees) actually and reasonably incurred by him or her in connection therewith.

The registrant's Certificate of Incorporation, as amended, provides that the registrant shall, to the fullest extent permitted by law, indemnify all directors, officers, employees and agents of the registrant. The Certificate of Incorporation also contains a provision eliminating the liability of directors of the registrant to the registrant or its stockholders for monetary damage, to the fullest extent permitted by law. The Certificate of Incorporation also permits the registrant to maintain insurance to protect itself and any director, officer, employee or agent against any liability whether or not the registrant would have the power to indemnify such persons under the General Corporation Law of Delaware. The Certificate of Incorporation also permits the registrant to enter into agreements with any director, officer, employee or agent providing for indemnification rights equivalent to or greater than the indemnification rights set forth in the Certificate of Incorporation. The registrant has entered into indemnification agreements with certain of its directors.

Reference also is hereby made to Section 5(b) of the Registration Rights Agreement filed as Exhibit 4.3 to this registration statement, for a description of indemnification arrangements between

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Advanced Magnetics and the selling stockholders, pursuant to which the selling stockholders are obligated, under certain circumstances, to indemnify our directors, officers and controlling persons against certain liabilities, including liabilities under the Securities Act.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the registrant pursuant to the foregoing provisions, the registrant has been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy and is therefore unenforceable.

Item 16. Exhibits.

The following exhibits are filed as part of this registration statement:

| Exhibit No. | Description of Documents | | |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| | | | |
| 4.1 | Specimen certificate representing the registrant's Common Stock (incorporated by reference to Exhibit 6 to the Registration Statement on Form 8-A of the registrant, Reg. No. 1-10865). | | |
| *4.2 | Securities Purchase Agreement dated as of July 2, 2003 among Advanced Magnetics, Inc. and the Purchasers identified on the signature pages thereto. | | |
| *4.3 | Registration Rights Agreement dated as of July 2, 2003 among Advanced Magnetics, Inc. and the Purchasers identified on the signature pages thereto. | | |
| *4.4 | Form of Common Stock Purchase Warrant. | | |
| *5 | Opinion of Testa, Hurwitz & Thibeault, LLP as to the legality of the securities being registered. | | |
| *23.1 | Consent of PricewaterhouseCoopers LLP, independent certified public accountants. | | |
| *23.2 | Consent of Testa, Hurwitz & Thibeault, LLP (included in Exhibit 5). | | |
| 24 | Power of Attorney (included in the signature pages of this registration statement). | | |

Filed herewith.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

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(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (1)(i) and (1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling person of the registrant pursuant to the General Corporation Law of the State of Delaware, the Certificate of Incorporation or the By-Laws of registrant, indemnification agreements entered into between registrant and its directors, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the

undersigned, thereunto duly authorized, in the city of Cambridge, the Commonwealth of Massachusetts, on this 31st day of July, 2003.

ADVANCED MAGNETICS, INC.

By: /s/ JEROME GOLDSTEIN

DATE

Jerome Goldstein Chairman of the Board, Chief Executive Officer, President and Treasurer

POWER OF ATTORNEY

We, the undersigned officers and directors of Advanced Magnetics, Inc. hereby severally constitute Jerome Goldstein and James A. Matheson and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below, any and all amendments (including post-effective amendments) to this registration statement on Form S-3, and to file the same with the Securities and Exchange Commission, and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable Advanced Magnetics, Inc. to comply with the provisions of the Securities Act, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-3 has been signed by the following persons in the capacities and on the dates indicated.

TITI D

SIGNATURE

| SIGNATURE | TITLE | DATE | |
|--------------------------|-------------------------------------------------------------------------|---------------|--|
| /s/ JEROME GOLDSTEIN | Chairman of the Board, Chief Executive Officer, President and Treasurer | July 30, 2003 | |
| Jerome Goldstein | (principal executive and financial officer) | | |
| /s/ JAMES A. MATHESON | Vice President of Finance (principal accounting officer) | July 30, 2003 | |
| James A. Matheson | | | |
| /s/ SHELDON L. BLOCH | Director | July 30, 2003 | |
| Sheldon L. Bloch | | | |
| /s/ MICHAEL D. LOBERG | Director | July 30, 2003 | |
| Michael D. Loberg | | | |
| | 20 | | |
| /s/ EDWARD B. ROBERTS | Director | July 30, 2003 | |
| Edward B. Roberts | _ | | |
| /s/ GEORGE M. WHITESIDES | Director | July 27, 2003 | |
| George M. Whitesides | 21 | | |
| | | | |

EXHIBIT INDEX

| Exhibit 1 | No. | Description of Documents |
|-----------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 4.1 | Specimen certificate representing the registrant's Common Stock (incorporated by reference to Exhibit 6 to the Registration Statement on Form 8-A of the registrant, Reg. No. 1-10865). |
| | *4.2 | Securities Purchase Agreement dated as of July 2, 2003 among Advanced Magnetics, Inc. and the Purchasers identified on the signature pages thereto. |
| | *4.3 | Registration Rights Agreement dated as of July 2, 2003 among Advanced Magnetics, Inc. and the Purchasers identified on the signature pages thereto. |
| | *4.4 | Form of Common Stock Purchase Warrant. |
| | *5 | Opinion of Testa, Hurwitz & Thibeault, LLP as to the legality of the securities being registered. |
| ; | *23.1 | Consent of PricewaterhouseCoopers LLP, independent certified public accountants. |
| ; | *23.2 | Consent of Testa, Hurwitz & Thibeault, LLP (included in Exhibit 5). |
| | 24 | Power of Attorney (included in the signature pages of this registration statement). |
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| | Filed | herewith. |

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