MYRIAD GENETICS INC
Form 424B3
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Registration Statement Nos. 333-123914 and 333-73124

The information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities, and we are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated October 28, 2005

Preliminary prospectus supplement

(to prospectus dated April 20, 2005)

7,000,000 shares

Common stock

This is a public offering of 7,000,000 shares of common stock of Myriad Genetics, Inc.

Our common stock is quoted on the Nasdaq National Market under the symbol MYGN. On October 26, 2005, the last reported sale price of our common stock on the Nasdaq National Market was $21.01 per share.

	Per share	Total
Public offering price	$	$
Underwriting discount	$	$
Proceeds, before expenses, to Myriad Genetics	$	$

Myriad Genetics has granted the underwriters an option for a period of 30 days to purchase up to 1,050,000 additional shares of common stock to cover any overallotments.

Investing in our common stock involves a high degree of risk. See Risk factors beginning on page S-9 of this preliminary prospectus supplement.

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

Sole Book-Running Manager

JPMorgan

Co-Lead Managers

Bear, Stearns & Co. Inc. **UBS Investment Bank**

Co-Managers

Piper Jaffray **First Albany Capital** **JMP Securities**

October , 2005

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Myriad, our graphical logo, BRACAnalysis, COLARIS, COLARIS AP, Flurizan and MELARIS are our trademarks. This prospectus supplement, the accompanying prospectus and the documents incorporated by reference may contain trademarks of other companies.

Unless stated otherwise, references in this prospectus supplement and the accompanying prospectus to Myriad, we, us or our refe to Myriad Genetics, Inc., a Delaware corporation, and its subsidiaries.

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This prospectus supplement and the accompanying prospectus are part of a universal shelf registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC. Under the shelf registration process, we may sell any combination of common stock, preferred stock, depositary shares, warrants and debt securities in one or more offerings from time to time up to a total dollar amount of $300,000,000, of which this offering is a part. In the accompanying prospectus, we provide you a general description of the securities we may offer from time to time under our shelf registration statement. This prospectus supplement describes the specific details regarding this offering, including the price, the amount of common stock being offered and the risks of investing in our common stock. This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein include important information about us, our common stock being offered and other information you should know before investing. To the extent information in this prospectus supplement is inconsistent with the accompanying prospectus or any of the documents incorporated by reference into the accompanying prospectus, you should rely on this prospectus supplement. You should read both this prospectus supplement and the accompanying prospectus together with the additional information about us described in the accompanying prospectus in the sections entitled Where you can find more information and Incorporation of documents by reference.

You should rely only on information contained in, or incorporated by reference into, this prospectus supplement or the accompanying prospectus. We have not authorized anyone to provide you with information different from that contained in, or incorporated by reference into, this prospectus supplement or the accompanying prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

The information contained in this prospectus supplement or the accompanying prospectus is accurate only as of the date on the front cover of the prospectus supplement or the accompanying prospectus and information we have incorporated by reference in this prospectus supplement or the accompanying prospectus is accurate only as of the date of the document incorporated by reference. You should not assume that the information contained in, or incorporated by reference into, this prospectus supplement or the accompanying prospectus is accurate as of any other date.

Forward-looking statements

The SEC encourages companies to disclose forward-looking information so that investors can better understand a company s future prospects and make informed investment decisions. This prospectus supplement contains such forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be made directly in this prospectus supplement or the accompanying prospectus, and they may also be made a part of this prospectus supplement and the accompanying prospectus by reference to other documents filed with the SEC, which is known as incorporation by reference.

Words such as may, anticipate, estimate, expects, projects, intends, plans, believes and words and terms of similar sub used in connection with any discussion of future operating or financial performance, identify forward-looking statements. All forward-looking statements are management s present expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those described in the forward-looking statements. These risks include, but are not limited to, the risks and uncertainties set forth in Risk factors, beginning on page S-9 of this prospectus supplement, as well as those set forth in our other SEC filings incorporated by reference herein.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this prospectus supplement, the accompanying prospectus, or in any document incorporated by reference might not occur. You are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this prospectus supplement or the date of the document incorporated by reference in this prospectus supplement or the accompanying prospectus. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events, or otherwise. All subsequent forward-looking statements attributable to us or to any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

Prospectus supplement summary

This summary highlights only some of the information included or incorporated by reference in this prospectus supplement and the accompanying prospectus. You should read this entire document carefully, including the section entitled Risk factors beginning on page S-9 regarding our company and the common stock being sold in this offering.

Overview

We are a leading biotechnology company focused on the development and marketing of novel therapeutic and predictive medicine products. We employ a number of proprietary technologies that permit us to understand the genetic basis of human disease and the role that genes and their related proteins play in the onset and progression of disease. We use this information to guide the development of new healthcare products that will treat major diseases and assess a person s risk of disease later in life.

We believe that the future of medicine lies in the creation of new classes of drugs that treat the underlying cause, not just the symptoms, of disease and that may be useful in disease prevention. By understanding the genetic basis of disease, we believe we will be able to develop drugs that are safer and more efficacious. In addition, we believe that advances in the emerging field of predictive medicine will improve our ability to determine which patients are subject to a greater risk of developing these diseases and who therefore would benefit from preventive therapies.

Myriad researchers have made important discoveries in the fields of cancer, Alzheimer s disease and infectious diseases such as AIDS. These discoveries point to novel disease pathways that may pave the way for the development of new classes of drugs. We intend to develop and, subject to regulatory approval, market our therapeutic products in the areas of cancer, Alzheimer s disease and viral disease.

Therapeutic products in development

We currently have three drug candidates in six clinical trials and a number of drug candidates in late-stage preclinical development. Our most advanced drug development programs are described below:

Flurizan (R-flurbiprofen): drug candidate for Alzheimer s disease. Flurizan, our lead therapeutic candidate for the treatment of Alzheimer s disease, is the first in a new class of drug candidates known as selective amyloid beta lowering agents, or SALAs. In April 2005, we completed a Phase 2 human clinical trial of Flurizan in 207 patients with mild to moderate Alzheimer s disease. Although not statistically significant, the study found that patients with mild Alzheimer s disease who received the 800 mg twice-daily dose of Flurizan achieved between 34 and 45% slowing in decline on the three primary endpoints (activities of daily living, overall function and cognitive ability). A 20% or greater slowing in decline is generally regarded as clinically relevant. Flurizan appeared to be well tolerated by Alzheimer s patients in the Phase 2 study and adverse events were generally mild and non-specific and did not differ significantly between placebo and treated groups. Since April 2005, we have continued a Phase 2 follow-on study, gathering longer term data from the same patients beyond the 12 months of the original study. We have also initiated enrollment in a Phase 3 study in patients

with mild Alzheimer s disease. This two-arm study (800 mg twice daily and placebo) will enroll 800 patients per arm in over 130 centers in the United States and is designed to assess the ability of Flurizan to reduce the rate of cognitive decline and decline in activities of daily living. Alzheimer s disease is a degenerative neurological condition affecting up to 50% of all people aged 85 or older, with an estimated four million cases in the United States alone. We own or have exclusive rights to four United States patents covering Flurizan for Alzheimer s disease.

Flurizan (R-flurbiprofen): drug candidate for prostate cancer. Flurizan is also in a Phase 2b human clinical trial for the treatment of patients with pre-metastatic prostate cancer. This clinical trial is a three arm (800 mg twice daily, 800 mg once daily and placebo) 82 patient per arm study being conducted at 56 centers in the United States and Canada and is designed to assess the ability of Flurizan to delay the onset of metastatic cancer in patients with prostate cancer. Approximately 232,000 men in the United States will be diagnosed with prostate cancer this year. It is the second leading cause of death from cancer in men. We own or have exclusive rights to two United States patents covering Flurizan for prostate cancer.

MPC-6827: drug candidate for solid cancer tumors and brain metastases. Our drug candidate MPC-6827 is a novel, small-molecule tubulin inhibitor that is being studied in two Phase 1 human clinical trials. These trials use an escalating dose regimen designed to evaluate the safety and pharmacokinetic profile of MPC-6827 in patients with advanced solid tumors and metastatic brain tumors, respectively. In preclinical studies, MPC-6827 showed better activity against a range of human tumors in mouse xenografts than the standard of care treatments for those cancers. In addition, MPC-6827 demonstrated the ability to effectively cross the blood-brain barrier and was not subject to multiple drug resistance. This drug candidate has demonstrated activity in preclinical studies against tumors of the prostate, breast, pancreas, colon and skin (melanoma). According to the American Cancer Society, these cancers are expected to account for approximately 642,000 new cases in 2005 in the United States alone. In addition, according to the National Cancer Institute, it is estimated that there will be as many as 170,000 new cases of brain metastases in 2005. We own or are the exclusive licensee to five United States patent applications covering MPC-6827.

MPC-2130: drug candidate for blood cancers. Our drug candidate MPC-2130, a novel apoptosis-inducing small molecule, is also in the Phase 1 clinical trial stage. The study is designed to evaluate the safety and pharmacokinetic profile of MPC-2130 in patients with advanced metastatic tumors or blood cancers as well as refractory cancer that has progressed despite previous chemotherapy. In preclinical studies, MPC-2130 demonstrated cancer cell killing activity in ovarian cancer and prostate cancer as well as two lymphoma cell lines, Burkitt s lymphoma and T-cell lymphoma. In addition, MPC-2130 was not subject to multiple drug resistance and was able to cross the blood-brain barrier. According to the American Cancer Society, approximately 98,000 Americans will be diagnosed with blood cancers this year. We own or are the exclusive licensee to four United States patent applications covering MPC-2130.

MPI-49839: drug candidate for AIDS. As published in the scientific journal *Cell* in October 2001, our scientists and their collaborators discovered the viral budding mechanism in HIV and other viruses. This discovery led to the development of MPI-49839, an orally available viral budding/maturation inhibitor, which is one of a new class of drug candidates for the treatment of AIDS. MPI-49839 has demonstrated strong anti-HIV activity and has been shown to be active against many of the drug resistant strains of HIV. MPI-49839 is in late-stage preclinical

development in preparation for human clinical testing, and we may file an Investigational New Drug application, or IND, as early as the end of our fiscal year ending June 30, 2006.

MPC-0920: drug candidate for thrombosis. Our drug candidate MPC-0920, an orally available direct thrombin inhibitor, has demonstrated characteristics that may offer improvements over traditional anticoagulants, which have limitations such as nonselectivity, inability to effect thrombin-bound fibrin and drug interactions. We believe that deep-vein thrombosis and arterial fibrillation represent two large potential markets. MPC-0920 is in late-stage preclinical development in preparation for human clinical testing, and we may file an IND as early as the end of our fiscal year ending June 30, 2006.

MPC-4505: drug candidate for chemotherapy induced emesis. Our drug candidate MPC-4505, a small molecule that has demonstrated solubility and oral bioavailability, is an NK1 receptor antagonist for chemotherapy induced emesis (nausea and vomiting). We believe these characteristics of MPC-4505 make it suitable for both an oral formulation and a sterile IV formulation. MPC-4505 has shown central nervous system penetration, a long half-life and a favorable safety profile in preclinical testing. MPC-4505 is in late-stage preclinical development in preparation for human clinical testing in the future.

Therapeutic product pipeline

Molecule	Therapeutic area	Status
Flurizan	Alzheimer s disease	Phase 3*
Flurizan	Prostate cancer	Phase 2b
MPC-6827	Brain metastases	Phase 1
MPC-6827	Solid tumors	Phase 1
MPC-2130	Blood cancers and metastatic tumors	Phase 1
MPI-49839	AIDS	Preclinical
MPC-0920	Thrombosis	Preclinical
MPC-4505	Emesis	Preclinical

* We are also conducting a Phase 2 follow-on study to collect longer term data from the patients who participated in our 12-month Phase 2 study that was completed in April 2005.

Predictive medicine products

Predictive medicine analyzes genes and their mutations to assess an individual s risk for developing disease later in life. Armed with this risk assessment information, individuals can increase surveillance and take action to prevent or delay the onset of disease.

To date, we have launched four commercial predictive medicine products. We market these products through our own 115-person sales force in the United States, and we have entered into marketing collaborations with other organizations in selected foreign countries. Predictive medicine revenues were $71.3 million for the year ended June 30, 2005, an increase of 65% over the prior year ended June 30, 2004. For the three months ended September 30, 2005, our predictive medicine revenues were $21.5 million, an increase of 49% over the three months

ended September 30, 2004. Our predictive medicine gross profit margin was 71% for the fiscal year ended June 30, 2005 and 73% for the three months ended September 30, 2005. Our current commercial predictive medicine products are described below:

BRACAnalysis: predictive medicine product for breast and ovarian cancer. BRACAnalysis is a comprehensive analysis of the BRCA1 and BRCA2 genes for assessing a woman s risk for breast and ovarian cancer. A woman who tests positive with the BRACAnalysis test has an 82% risk of developing breast cancer during her lifetime and up to a 54% risk of developing ovarian cancer. BRACAnalysis provides important information that we believe will help the patient and her physician make better informed lifestyle, surveillance, preventive medication and treatment decisions. As published in the *Journal of the National Cancer Institute*, researchers have shown that presymptomatic individuals who have a high risk of developing breast cancer can reduce their risk by approximately 50% with appropriate preventive therapies. Additionally, as published in the *New England Journal of Medicine*, researchers have shown that presymptomatic individuals who carry gene mutations can lower their risk of developing ovarian cancer by approximately 60% with appropriate preventive therapies. It is estimated that in 2005 there will be approximately 235,000 women in the United States diagnosed with breast or ovarian cancer. This year in the United States, an estimated 57,000 women will die from these cancers. The test is currently priced at $2,975 and is covered by all major health maintenance organizations and health insurance providers in the United States. We own or are the exclusive licensee to 20 United States patents covering BRACAnalysis.

COLARIS: predictive medicine product for colon cancer and uterine cancer. COLARIS is a comprehensive analysis of the MLH1 and MSH2 genes for determining a person s risk of developing colon cancer or uterine cancer. Individuals who carry a deleterious mutation in one of the two colon cancer genes in the COLARIS test have a greater than 80% lifetime risk of developing colon cancer and women have a 60% lifetime chance of developing uterine cancer. Highly effective preventive measures include colonoscopy and the removal of precancerous polyps. Through proper screening and polyp removal, colon cancer is a preventable disease. Colorectal cancer is the second leading cause of cancer deaths in the United States, with approximately 145,000 new cases expected to be diagnosed this year. Familial forms of colorectal cancer are estimated to account for 10% to 30% of all cases according to the American Society of Clinical Oncologists. The test is currently priced at $1,950 and is covered by all major health maintenance organizations and health insurance providers in the United States. We own or are a licensee to seven United States patents covering COLARIS.

COLARIS AP: predictive medicine product for colon cancer. COLARIS AP detects mutations in the APC and MYH genes, which cause a colon polyp-forming syndrome known as familial adenomatous polyposis (FAP) and a more common variation of the syndrome known as attenuated FAP. Individuals who carry a deleterious mutation in the APC or MYH gene may have a greater than 90% lifetime risk of developing colon cancer. Effective preventive measures include colonoscopy and the removal of pre-cancerous polyps and prophylactic surgery. The test is currently priced at $1,685 and is covered by all major health maintenance organizations and health insurance providers in the United States. We own or are a licensee to eight United States patents covering COLARIS AP.

MELARIS: predictive medicine product for melanoma. MELARIS analyzes mutations in the p16 gene to determine genetic susceptibility to malignant melanoma, a deadly form of skin cancer.

Individuals who test positive for MELARIS have a 75-fold increased risk of developing melanoma during their lifetimes as compared to the general population. MELARIS, which assesses a person s risk of developing melanoma, provides important information that we believe will be useful in the surveillance and prevention of melanoma. Melanoma can be prevented through appropriate screening and a specific threshold of action for mutation carriers, in which pre-cancerous lesions are removed before cancer can develop. Melanoma is lethal within five years in 86% of cases where it has spread to another site in the body. However, when melanoma is diagnosed at an early stage, fewer than 10% of patients die within five years. MELARIS, our newest predictive medicine product, is currently priced at $745 and is covered by certain health maintenance organizations and health insurance providers in the United States. We own or are a licensee to 11 United States patents covering MELARIS.

Our business strategy

Our business strategy is to understand the relationship between genes, proteins and human diseases in order to develop the next generation of therapeutic and predictive medicine products. Through our proprietary technologies, we believe we are well positioned to identify important disease genes, the proteins they produce and the biological pathways in which they are involved to better understand the underlying molecular basis for the cause of human disease. We believe that identifying these genes, proteins and pathways will enable us to develop novel therapeutic and predictive medicine products.

Our business strategy includes the following key elements:

Discover important disease genes, understand their function and determine their role in human disease. We will continue to use our proprietary technologies, combined with our bioinformatics and robotic technologies, to efficiently discover important genes and proteins and to understand their role in human disease. These technologies enable us to go beyond a single gene, protein or drug target and explore a large number of potential drug targets involved in a disease pathway. We also use a large array of molecular risk phenotypes to simultaneously screen hundreds of genes against dozens of important diseases. We believe these technologies provide us with a significant competitive advantage and numerous product opportunities.

Grow and expand our predictive medicine business. We will continue to increase the market penetration of our existing predictive medicine products and create additional products to capitalize on the emerging areas of predictive medicine. Additionally, we will pursue new products and business opportunities in the area of personalized medicine, which analyzes genes and their mutations to predict a patient s response to specific treatments. Because complex diseases are caused by a variety of different factors and patients have genetic differences, we believe that a single drug will not be effective in all patients. By understanding these different genetic factors, personalized medicine may assist physicians in both selecting the best therapy for a particular patient and prescribing optimal dosage for that patient.

Develop and commercialize therapeutic products in our areas of primary focus. We will continue to employ our assay development and high-throughput screening technologies to rapidly identify lead compounds for potential drug development. We intend to take selected drug candidates, particularly in the areas of cancer, viral diseases and Alzheimer s disease,

through the clinical development process independently. If a drug candidate in one of these core areas receives approval from the United States Food and Drug Administration, or FDA, we plan to build a commercial operation focused on promoting the drug to specialist physicians in that area. To address general practitioners and primary care physicians, we intend to form a strategic relationship with a large pharmaceutical company.

Capitalize on our strategic alliances with major pharmaceutical companies in areas outside our primary focus. We will continue to enter into strategic alliances with large pharmaceutical companies to develop and commercialize novel drug targets and drug candidates in areas outside our primary focus. Ideally, we plan to form strategic relationships for these compounds with major pharmaceutical companies prior to pursuing human clinical trials. Thus far we have licensed certain of our drug targets/candidates to Abbott Laboratories, Novartis, Schering-Plough, Eli Lilly and Cephalon.

Acquire promising drug candidates and biomarkers/genes from other organizations. We will continue to take advantage of in-licensing opportunities to augment our in-house product development programs. We recognize that we cannot discover everything ourselves and can benefit from the research performed at other organizations. We hope to leverage our financial strength and product development expertise to acquire new product opportunities in our therapeutic and predictive medicine areas of focus.

Collaborative research activities

In areas outside of our primary focus, we have entered into strategic partnerships and collaborative relationships to discover genes and proteins associated with human disease, elucidate protein networks and disease pathways and sequence the genome of entire organisms. We are currently undertaking collaborative research and development work with a number of organizations, including E.I. du Pont de Nemours, Instituto Agrario di San Michele all Adigea and various entities within the National Institutes of Health. These collaborations allow us to further develop and exploit our technologies and to generate revenue.

Other information

We are a Delaware corporation. Our principal executive offices are located at 320 Wakara Way, Salt Lake City, Utah 84108, and our telephone number is (801) 584-3600. Our web site address is *www.myriad.com*. The information contained on our web site is not incorporated by reference into this prospectus supplement. We have included our web site address in this prospectus supplement only as an inactive textual reference and do not intend it to be an active link to our web site.

The offering

Common stock offered by Myriad	7,000,000 shares
Common stock to be outstanding after this offering	37,956,685 shares
Use of proceeds	We intend to use the net proceeds we receive from this offering for general corporate purposes, to advance drug development, including our preclinical studies and clinical trials, to further our predictive medicine product strategy, to develop or in-license new technologies, for general working capital and for possible future acquisitions. See Use of proceeds on page S-29.
Risk factors	See Risk factors beginning on page S-9 and other information included in this prospectus supplement and the accompanying prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Nasdaq National Market symbol	MYGN

The number of shares of common stock to be outstanding after the offering is based on 30,956,685 shares of common stock outstanding as of October 26, 2005. Unless otherwise indicated, all information in this prospectus supplement assumes that the underwriters do not exercise their overallotment option.

The number of shares of common stock to be outstanding after this offering does not take into account:

- 7,960,629 shares of common stock issuable upon the exercise of stock options outstanding as of October 26, 2005 at a weighted average exercise price of $25.32 per share;
- 30,000 shares of common stock issuable upon the exercise of warrants outstanding as of October 26, 2005 at a weighted average exercise price of $40.00 per share;
- 66,425 shares of common stock reserved for future awards under our 2003 Employee, Director and Consultant Stock Option Plan as of October 26, 2005;
- an additional 1,700,000 shares of common stock that will be reserved for future awards under our 2003 Employee, Director and Consultant Stock Option Plan if an amendment to this plan is approved by our stockholders at our annual meeting of stockholders to be held on November 10, 2005; and
- 196,181 shares of common stock reserved for future issuance under our Employee Stock Purchase Plan as of October 26, 2005.

Summary consolidated financial data

The following is a summary of financial data incorporated by reference in this prospectus supplement and the accompanying prospectus. You should read the following data in conjunction with the more detailed information in Selected Consolidated Financial Data, Management s Discussion and Analysis of Financial Condition and Results of Operations and our audited consolidated financial statements and related notes contained in our Annual Report on Form 10-K for the year ended June 30, 2005, which is incorporated herein by reference, and Management s Discussion and Analysis of Financial Condition and Results of Operations and our unaudited consolidated financial statements, and related notes contained in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2005, which is also incorporated herein by reference.

	Year ended June 30,					Three months ended September 30,	
(in thousands, except per share data)	**2001**	**2002**	**2003**	**2004**	**2005**	**2004**	**2005**
						(unaudited)	
Consolidated statement of operations data:							
Total revenues	$ 45,162	$ 53,836	$ 64,321	$ 56,648	$ 82,406	$ 16,710	$ 25,114
Total costs and expenses	58,299	72,496	91,667	99,283	123,151	27,327	35,167
Operating loss	(13,137)	(18,660)	(27,346)	(42,635)	(40,745)	(10,617)	(10,053)
Other income	6,546	5,171	2,938	2,015	767	625	811
Loss before income taxes	(6,591)	(13,489)	(24,408)	(40,620)	(39,978)	(9,992)	(9,242)
Income taxes	583	500	417				
Net loss	$ (7,174)	$ (13,989)	$ (24,825)	$ (40,620)	$ (39,978)	$ (9,992)	$ (9,242)
Basic and diluted net loss per share	$ (0.31)	$ (0.59)	$ (0.96)	$ (1.49)	$ (1.30)	$ (0.33)	$ (0.30)
Basic and diluted weighted average shares outstanding	22,815	23,660	25,730	27,326	30,720	30,649	30,886

The as adjusted column in the consolidated balance sheet data below gives effect to the sale of 7,000,000 shares of common stock at an assumed public offering price of $21.01 per share (based on the last reported sale price on October 26, 2005) after deducting underwriting discounts and estimated offering expenses payable by us.

As of September 30, 2005 (in thousands)	**Actual**	**As adjusted**
		(unaudited)
Consolidated Balance Sheet Data:		
Cash, cash equivalents and marketable investment securities	$ 102,997	$ 240,993

Working capital	105,014	243,010
Total assets	150,035	288,031
Stockholders equity	127,688	265,684

Risk factors

An investment in our common stock involves a high degree of risk. You should carefully consider the following risk factors, as well as the other information included or incorporated by reference in this prospectus supplement or the accompanying prospectus, in evaluating our business before purchasing any of our common stock. If any of these risks, or other risks not presently known to us or that we currently believe are not significant, develops into an actual event, then our business, financial condition and results of operations could be adversely affected. If that happens, the market price of our common stock could decline, and you may lose all or part of your investment.

Risks related to our business and our strategy

We are a company in the early stages of development and commercialization and may never achieve the goals of our business plan.

Although we have developed and marketed several predictive medicine products to date, we believe our future success is dependent upon our ability to successfully develop and commercialize additional predictive medicine products and our potential therapeutic products. Many of our therapeutic products are still in the early stages of development. We have entered into a Phase 3 human clinical trial for the evaluation of Flurizan, our lead therapeutic compound, for the treatment of Alzheimer s disease. Flurizan is also in a large, multi-center Phase 2b human clinical trial for prostate cancer. Our drug candidate MPC-6827 is currently the subject of two Phase 1 human clinical trials for advanced solid tumors and metastatic brain cancer. Our drug candidate MPC-2130 is currently the subject of a Phase 1 human clinical trial for advanced metastatic tumors and blood cancers. Other potential therapeutic products are in various stages of preclinical development. Any therapeutic products under development by us will take several more years to develop and undergo extensive preclinical and clinical testing. Therapeutic products are subject to substantial regulatory review. We also continue to research and develop potential additional predictive medicine products, any of which may be costly and time-consuming to develop, but not result in a commercially viable product. We may be unable to discover or develop any therapeutic or additional predictive medicine products through the utilization of our technologies. Even if we develop products for commercial use, we may not be able to develop products that:

- meet applicable regulatory standards in a timely manner, or at all;
- successfully compete with other technologies and products;
- avoid infringing the proprietary rights of others;
- can be manufactured in sufficient quantities or at reasonable cost; or
- can be successfully marketed.

We must generate significant revenue to achieve and maintain profitability. All of our therapeutic drug candidates are still in early stages of development. Even if we succeed in developing and commercializing one or more of our therapeutic drug candidates, we may not be able to generate sufficient revenue and we may never be able to achieve or maintain profitability.

We depend heavily on the success of our lead product candidate, Flurizan, which is still under development.

We have invested a significant portion of our resources in the development of Flurizan. We anticipate that our future success will depend heavily on the successful development and commercialization of Flurizan for the treatment of Alzheimer s disease and for prostate cancer. The commercial success of Flurizan will depend on several factors, including the following:

- successful completion of our current Phase 3 clinical trial of Flurizan for the treatment of Alzheimer s disease and any additional Phase 3 trials that may be required by the FDA or that we may initiate on our own;
- successful completion of our current Phase 2b clinical trial of Flurizan for the treatment of prostate cancer and any additional trials that may be required by the FDA or that we may initiate on our own;
- receipt of marketing approvals from the FDA and similar foreign regulatory authorities;
- if approved, the successful commercial launch of Flurizan;
- producing batches of the active pharmaceutical ingredient used in Flurizan in commercial quantities through a validated process;
- manufacturing and supplying Flurizan in sufficient quantities to meet commercial demand; and
- acceptance of Flurizan or competitive products in the medical community and with third-party payors.

If we are not successful in developing or commercializing Flurizan, or we are significantly delayed in doing so, our business will be materially harmed and we may need to curtail or cease drug development operations.

We have a history of operating losses and expect to continue to incur losses in the future.

We have a limited operating history and have experienced operating losses since our inception. We expect these losses to continue for the next several years, and we may never be profitable. For example, we experienced net losses of $40.0 million, $40.6 million and $24.8 million for the years ended June 30, 2005, 2004 and 2003, respectively, and $9.2 million for the three months ended September 30, 2005. We had an accumulated deficit of $188.5 million as of September 30, 2005. In order to develop and commercialize our products, we expect to incur significant increases in our expenses over the next several years as we expand clinical trials for our product candidates currently in clinical development, including Flurizan, advance our other product candidates into clinical trials, expand our research and development activities, and seek regulatory approvals and engage in commercialization activities in anticipation of potential FDA and other foreign regulatory approvals of our product candidates. Because of the numerous risks and uncertainties associated with developing our product candidates and their potential for commercialization, we are unable to predict the extent of any future losses or when we will become profitable, if at all. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. If we are unable to achieve and sustain profitability, the market value of our common stock will likely decline. Our ability to achieve profitability will depend upon numerous factors, including:

our ability to identify drug targets and lead compounds that may lead to future therapeutic products;

our ability to develop drug candidates and receive required regulatory approvals;

our ability to launch new therapeutic products on a commercially viable basis;

the approval and introduction of competitive products;

the willingness of third-party payors to provide full or even partial reimbursement coverage for our products;

our ability to develop a sales force and marketing team to market our therapeutic products; and

our ability to create and introduce personalized medicine products and additional predictive medicine products.

If our current operating plan changes and we find that our existing capital resources will not meet our needs, we may find it necessary to raise additional funding, which funding may not be available.

We anticipate that the proceeds from this offering and our existing capital resources will enable us to maintain currently planned operations for at least the next two years. However, we base this expectation on our current operating plan, which may change. We have incurred, and will continue to incur, significant costs in the discovery, development and marketing of current and prospective therapeutic and predictive and personalized medicine products. Our ongoing drug discovery programs and our efforts to develop therapeutic and predictive medicine products will require substantial cash resources. If, for example, we discover a new drug target with promising therapeutic properties, we would require funding in addition to our current operating plan to move the drug candidate into preclinical studies and human clinical trials. Additionally, if a new disease gene is discovered through these efforts, we would require funds in addition to our current operating plan to demonstrate clinical utility and develop and launch a new predictive or personalized medicine product. If, due to changes in our current operating plan, adequate funds are not available, we may be required to raise additional funds. Sources of potential additional capital resources may include, but are not limited to, public or private equity financings, establishing a credit facility, or selling convertible debt securities. This additional funding, if necessary, may not be available to us on reasonable terms, or at all.

Because of our potential long-term capital requirements, we may access the public or private equity markets whenever conditions are favorable, even if we do not have an immediate need for additional capital at that time. We have an effective shelf registration on file with the SEC pursuant to which may sell up to $300 million of our securities. We are selling approximately $147.1 million of these securities in this offering (assuming a public offering price of $21.01 per share, based on the last reported sale price on October 26, 2005). Accordingly, approximately $152.9 million of these registered securities will remain available for sale at our discretion, subject to certain limitations under federal securities laws and the rules of the Nasdaq Stock Market. If additional funds are raised by issuing equity securities, existing shareholders may suffer significant dilution.

We have limited sources of revenue and if we are unable to secure additional funding, we will have to reduce or discontinue operations.

As of September 30, 2005, we had approximately $103.0 million in cash, cash equivalents and marketable securities. For the fiscal year ended June 30, 2005, our revenues were approximately $82.4 million, and our operating activities used approximately $23.3 million. For the three months ended September 30, 2005, our revenues were approximately $25.1 million, and our operating activities used approximately $11.0 million. Almost all of our revenues result from sales

of our predictive medicine products. In order to develop and bring our therapeutic product candidates to market, we must commit substantial resources to costly and time-consuming research, preclinical testing and clinical trials. While we anticipate that the proceeds from this offering and our existing cash, cash equivalents and marketable securities will be sufficient to fund our current operations for at least the next two years, we may need or want to raise additional financing within this period of time. Our future capital requirements will depend on many factors that are currently unknown to us, including:

- the progress and results of our current Phase 3 clinical trial of Flurizan for the treatment of Alzheimer s disease and any additional Phase 3 trials that may be required by the FDA or that we may initiate on our own;
- the progress and results of our current Phase 2b clinical trial of Flurizan for the treatment of prostate cancer and any additional trials that may be required by the FDA or that we may initiate on our own;
- our ability to enter into strategic collaborations, licensing or other arrangements favorable to us;
- the progress and results of our Phase 1 clinical trials for MPC-6827 and MPC-2130 and any future trials we may initiate based on the Phase 1 results;
- the results of our preclinical studies and testing for our preclinical programs and any decisions to initiate clinical trials if supported by the preclinical results;
- the costs, timing and outcome of regulatory review of Flurizan, MPC-6827 and MPC-2130 and any other preclinical drug candidates that progress to clinical trials;
- the scope, progress, results and cost of preclinical development, clinical trials and regulatory review of any new drug candidates we may discover or acquire;
- the progress, results and cost of developing personalized medicine products and additional predictive medicine products;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our issued patents and defending intellectual property-related claims;
- the costs of establishing sales and marketing functions and of establishing commercial manufacturing capacities if any of our drug candidates is approved;
- the costs to satisfy our obligations under potential future collaborations; and
- the timing, receipt and amount of sales or royalties, if any, from Flurizan, MPC-6827 and MPC-2130, and any other drug candidates.

Additional funds may not be available when we need them on terms that are acceptable to us, or at all. If adequate funds are not available on a timely basis, we may be required to:

terminate or delay preclinical studies, clinical trials, regulatory approvals, or other development for one or more of our drug candidates;

terminate or delay programs to develop personalized medicine products and additional predictive medicine products;

delay our establishment of sales and marketing capabilities, commercial manufacturing capabilities, or other activities that may be necessary to commercialize our drug candidates;

curtail significant drug development programs that are designed to identify new drug candidates; or

enter into strategic collaborations that we would otherwise not enter into or on terms less favorable than we could otherwise obtain.

If we were successfully sued for product liability, we could face substantial liabilities that exceed our resources.

Our business exposes us to potential liability risks inherent in the testing, marketing and processing of predictive or personalized medicine products, including possible misdiagnoses. In addition, clinical trials or marketing of any potential therapeutic products may expose us to liability claims from the use of these therapeutic products. Although we are insured against such risks in amounts that we believe to be commercially reasonable, our present product liability insurance may be inadequate. A successful product liability claim in excess of our insurance coverage could have a material adverse effect on our business. Any successful product liability claim may prevent us from obtaining adequate product liability insurance in the future on commercially desirable or reasonable terms. An inability to obtain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims could prevent or inhibit the commercialization of our products.

Our business involves environmental risks that may result in liability for us.

In connection with our research and development activities, we are subject to federal, state and local laws, rules, regulations and policies governing the use, generation, manufacture, storage, air emission, effluent discharge, handling and disposal of certain materials, biological specimens, chemicals and wastes. Although we believe that we have complied with the applicable laws, regulations and policies in all material respects and have not been required to correct any material noncompliance, we may be required to incur significant costs to comply with environmental and health and safety regulations in the future. Although we believe that our safety procedures for handling and disposing of controlled materials comply with the standards prescribed by state and federal regulations, accidental contamination or injury from these materials may occur. In the event of such an occurrence, we could be held liable for any damages that result and any such liability could exceed our resources.

If we fail to maintain adequate and effective internal control over financial reporting, our ability to manage our business, comply with Sarbanes-Oxley, obtain required auditor attestation and provide reliable financial reporting could be impaired and our management and auditors may be precluded from certifying effective internal control over financial reporting, which could harm our business reputation and cause our stock price to decline.

As directed by Section 404 of the Sarbanes-Oxley Act of 2002, the Securities and Exchange Commission adopted rules requiring public companies to include a report of management on the company s internal control over financial reporting in their Annual Reports on Form 10-K. In addition, the independent registered public accounting firm auditing a public company s financial statements must attest to and report on management s assessment of the effectiveness of the company s internal control over financial reporting. Although our auditors did so attest in connection with our Form 10-K for the fiscal year ended June 30, 2005, if in the future our

independent registered public accounting firm is not satisfied with our internal control over financial reporting or the level at which these controls are documented, designed, operated or reviewed, or if that firm interprets the requirements, rules or regulations differently from the way we interpret them, then they may decline to attest to management s assessment or may issue a report that is qualified or has a scope limitation.

From time-to-time, in our ongoing effort to improve business and operational processes and our internal control over financial reporting, we or our auditors may determine that significant deficiencies or material weaknesses (as such terms are defined under accounting standards established by the Public Company Accounting Oversight Board) exist or that our internal control over financial reporting may otherwise require improvement. Significant deficiencies or material weaknesses could impair our ability to provide financial statements that can be relied upon. If this were to occur, our business reputation could be harmed and investors may lose confidence in the reliability of our financial statements and reports, either of which could have a significant negative impact on our stock price.

Risks related to regulatory approval of our drug candidates and other government regulations

If we do not obtain required regulatory approval, we will be unable to market and sell our therapeutic candidates.

Our therapeutic candidates are subject to extensive regulation by the FDA and similar regulatory agencies in other countries relating to development, clinical trials, manufacturing and commercialization. In the United States and in many foreign jurisdictions, rigorous preclinical testing and clinical trials and an extensive regulatory review process must be successfully completed before a new therapeutic can be sold. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. The time required to obtain approval by the FDA is unpredictable and depends on many factors, including the complexity of the therapeutic candidate. Our clinical trials for Flurizan, MPC-6827 and MPC-2130 have been studied in a relatively small number of patients to date. Early-stage clinical trials in small numbers of patients are often not predictive of results in later-stage clinical trials with a larger and more diverse patient population. Even therapeutic candidates with favorable results in late-stage pivotal clinical trials may fail to get approved for commercialization for many reasons, including:

- failure to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a therapeutic candidate is safe and effective for a particular indication;
- inability to demonstrate that a therapeutic candidate s benefits outweigh its risks;
- inability to demonstrate that the therapeutic candidate presents a significant advantage over existing therapies;
- the FDA s or comparable foreign regulatory authorities disagreement with the manner in which we and our collaborators interpret the data from preclinical studies or clinical trials;
- the FDA s or comparable foreign regulatory authorities failure to approve our manufacturing processes or facilities or the processes or facilities of our collaborators; or
- a change in the approval policies or regulations of the FDA or comparable foreign regulatory authorities.

It is possible that none of our current therapeutic candidates or any other therapeutic candidates we may seek to develop in the future will ever obtain the appropriate regulatory approvals necessary for us to begin selling them.

Our clinical trials may not yield results that will enable us to obtain regulatory approval for our therapeutic candidates.

We will only receive regulatory approval to commercialize a therapeutic candidate if we can demonstrate to the satisfaction of the FDA or the applicable foreign regulatory agency, in well-designed and conducted clinical trials, that the therapeutic candidate is safe and effective and otherwise meets the appropriate standards required for approval for a particular indication. Clinical trials are lengthy, complex and extremely expensive processes with uncertain results. We have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. In connection with the clinical trials of our current therapeutic candidates and any other therapeutic candidates that we may seek to develop in the future, we face risks including that:

- the therapeutic candidate may not prove to be safe and effective;
- patients may die or suffer other adverse effects for reasons that may or may not be related to the therapeutic candidate being tested;
- the results of later-stage clinical studies may not confirm the positive results of earlier trials;
- the results may not meet the level of statistical significance required by the FDA or other regulatory agencies for approval;
- the FDA or other regulatory agencies may require additional or expanded trials (for example, the FDA may require a second pivotal Phase 3 clinical trial regarding use of Flurizan for treatment of Alzheimer s disease); and
- regulatory agencies in other jurisdictions are likely to require separate clinical trials in their jurisdictions.

Of the large number of drugs in development, only a small percentage result in the submission of a new drug application, or NDA, to the FDA and even fewer are approved for commercialization. If we fail to demonstrate the safety and efficacy of our therapeutic candidates, we will not be able to obtain the required regulatory approvals to commercialize these therapeutic candidates. Furthermore, even if we do receive regulatory approval to market a commercial product, any such approval may be subject to limitations on the indicated uses for which we may market the product.

Because our therapeutic candidates are in an early stage of development, there is a high risk of failure, and we may never succeed in developing marketable products or generating product revenue.

We have no therapeutic candidates that have received regulatory approval for commercial sale. Our most advanced therapeutic candidate, Flurizan for the treatment of Alzheimer s disease, completed a Phase 2 clinical trial in April 2005, and we initiated a pivotal Phase 3 clinical trial in January 2005. Flurizan is also being studied for treatment of prostate cancer in a Phase 2b clinical trial in the United States. Our two other clinical-stage therapeutic candidates, MPC-6827 and MPC-2130, are currently in Phase 1 clinical trials. We do not expect to have any commercial therapeutic products on the market for at least the next several years, if at

all. Trial and error is

inherent in drug discovery and development, and we may fail at numerous stages along the way. Success in preclinical studies of a drug candidate may not be predictive of similar results in humans during clinical trials, and successful results from early clinical trials of a drug candidate may not be replicated in later clinical trials. We may face additional challenges with some of our drug candidates that are members of new classes of drugs which attempt to modify the course of a disease rather than simply addressing the symptoms of the disease because measurement of success, protocols and regulatory standards for such disease-modifying drugs have not been defined and are still evolving. 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. Accordingly, the results from the completed and ongoing studies and trials for Flurizan, MPC-6827 and MPC-2130 may not be predictive of the results we may obtain in later-stage trials.

If clinical trials for our therapeutic candidates are prolonged or delayed, we may be unable to commercialize our therapeutic candidates on a timely basis, which would require us to incur additional costs and delay our receipt of any revenue from potential product sales.

We may encounter problems with our completed, ongoing or planned clinical trials that will cause us or any regulatory authority to delay or suspend those clinical trials or delay the analysis of data derived from them. A number of events, including any of the following, could delay the completion of our ongoing and planned clinical trials and negatively impact our ability to obtain regulatory approval for, and to market and sell, a particular therapeutic candidate, including our clinical-stage drug candidates:

- modifications or conditions imposed on us by the FDA or any foreign regulatory authority regarding the scope or design of our clinical trials, including modifications to or conditions imposed on ongoing trials based on the results and data from completed trials;
- delays in obtaining, or our inability to obtain, required approvals from institutional review boards or other reviewing entities at clinical sites selected for participation in our clinical trials;
- insufficient supply or deficient quality of our drug candidates or other materials necessary to conduct our clinical trials;
- negative or inconclusive results from clinical trials, or results that are inconsistent with earlier results, that necessitate additional clinical study;
- clinical trial holds imposed by the data safety committees for our trials due to serious and/or unexpected drug-related side effects experienced by subjects in clinical trials; or
- failure of our third-party contractors or our investigators to comply with regulatory requirements or otherwise meet their contractual obligations to us in a timely manner.

Our clinical trials may not begin as planned, may need to be restructured, and may not be completed on schedule, if at all. We meet with the FDA and other governmental and self-regulatory bodies from time-to-time regarding our research and clinical trials. Any such meeting could provide us with new information or requirements that would cause us to modify ongoing or future clinical trials or research efforts, which could delay or make commercially untenable such clinical trials or research efforts. Delays in our clinical trials may result in increased development costs for our drug candidates. In addition, if our clinical trials are delayed, our competitors may be able to bring products to market before we do and the commercial viability of our drug candidates, including our clinical-stage therapeutic candidates, could be significantly reduced.

If we encounter difficulties enrolling subjects in our clinical trials, or subjects drop out of trials in progress, our trials could be delayed or otherwise adversely affected.

Clinical trials for our therapeutic candidates require sufficient patient enrollment. We may not be able to enroll a sufficient number of qualified patients in a timely or cost-effective manner. Any delays in patient enrollment could result in increased costs and longer development times. Enrollment of patients is affected by many factors, including:

- the limited size of the patient population for certain target indications;
- the nature and design of the trial protocol;
- the proximity of patients to clinical sites;
- the availability of other effective treatments for the relevant disease (whether approved or experimental);
- the eligibility criteria for enrollment in our clinical trials;
- perceived risks and benefits of the drug candidate under study; and
- competing studies or trials.

Our failure to enroll patients in our clinical trials could delay the completion of the clinical trial beyond our current expectations. Furthermore, enrolled patients may drop out of our clinical trials, which could impair the validity or statistical significance of the clinical trials. In addition, the FDA could require us to conduct clinical trials with a larger number of subjects than we have projected for any of our therapeutic candidates. If we have difficulty enrolling or retaining a sufficient number of patients to participate and complete our clinical trials as planned, we may need to delay or terminate ongoing or planned clinical trials. Delays in enrolling patients in our clinical trials or the withdrawal of subjects enrolled in our clinical trials would adversely affect our ability to develop and seek approval for our drug candidates, could delay or eliminate our ability to generate products and revenue and could impose significant additional costs on us.

Failure to comply with foreign regulatory requirements governing human clinical trials and marketing approval for drugs could prevent us from selling our drug candidates in foreign markets, which may adversely affect our operating results and financial condition.

The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement for marketing our therapeutic candidates outside the United States vary greatly from country to country and may require additional testing. We have no experience in obtaining foreign regulatory approvals for our therapeutic drug candidates. The time required to obtain approvals outside the United States may differ from that required to obtain FDA approval. We may not obtain foreign regulatory approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other countries or by the FDA. Failure to comply with these regulatory requirements or obtain required approvals could impair our ability to develop foreign markets for our therapeutic candidates.

Our therapeutic candidates will remain subject to ongoing regulatory requirements even if they receive marketing approval, and if we fail to comply with requirements, we could lose these approvals and the sale of any approved commercial products could be suspended.

Even if we receive regulatory approval to market a particular therapeutic candidate, the product will remain subject to extensive regulatory requirements, including requirements relating to

manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion and record keeping. In addition, as clinical experience with a drug expands after approval because it is typically used by a greater number of patients after approval than during clinical trials, side effects and other problems may be observed after approval that were not seen or anticipated during pre-approval clinical trials. Such post-approval problems are sometimes not well understood until after a new drug has been on the market for some time, such as Merck & Co. Inc. recently experienced with their painkiller, VIOXX. 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 any approved commercial products, manufacturers or manufacturing processes are discovered, we could be subject to administrative or judicially imposed sanctions or other setbacks, including:

- restrictions on the products, manufacturers or manufacturing processes;
- civil or criminal penalties;
- fines;
- injunctions;
- product seizures or detentions;
- import bans;
- product recalls and related publicity requirements;
- suspension or withdrawal of regulatory approvals;
- total or partial suspension of production; and
- refusal to approve pending applications for marketing approval of new products or supplements to approved applications.

If we are unable to comply with applicable governmental regulations, we may not be able to continue our predictive medicine operations.

The establishment and operation of our predictive medicine laboratory and the production and marketing of services and products developed through our technologies, as well as our ongoing research and development activities, are subject to regulation by numerous federal, state and local governmental authorities in the United States. We have been accredited under the Clinical Laboratory Evaluation Program by the Department of Health of the State of New York. Failure to maintain state regulatory compliance, or changes in state regulatory schemes, could result in a substantial curtailment or even prohibition of our clinical activities and could have a material adverse effect on our business. We have received federal accreditation from the Department of Health and Human Services under the Clinical Laboratory Improvement Amendments, or CLIA, to operate our clinical laboratory. However, our accreditation may subsequently be revoked, suspended or limited, or our accreditation may not be renewed on an annual basis as required. Furthermore, while the FDA has elected not to substantially regulate the activities or tests performed by laboratories like our clinical laboratory, the FDA has stated that it has the right to do so, and the FDA may seek to regulate or require clearance or approval of our products in the future. If the FDA should require that these products receive FDA approval

prior to their use in our laboratory, this approval may not be received on a timely basis, if at all.

Risks related to commercialization of our products and product candidates

Our current predictive medicine products and other predictive and personalized medicine or therapeutic products that we may develop may never achieve significant commercial market acceptance.

We may not succeed in achieving significant commercial market acceptance of any of our products and services. While we have marketed several of our predictive medicine products for several years and have gained some market acceptance, we need to convince physicians and consumers of the benefits of our current predictive medicine products in order to increase our sales of those products. Our ability to successfully commercialize our current predictive medicine products, as well as any future predictive or personalized medicine or therapeutic products that we may develop, will depend on several factors, including:

- Our ability to convince the medical community of the safety and clinical efficacy of our products and their potential advantages over existing therapeutic products and predictive and personalized medicine products.

- The agreement by third-party payors to provide full or even partial reimbursement coverage for our products, the scope and extent of which will affect patients willingness or ability to pay for our products and will likely heavily influence physicians decisions to recommend our products.

- The willingness of physicians and patients to utilize predictive and personalized medicine products which are difficult to perform and interpret. This difficulty is caused by a combination of factors, including the large number, sometimes many hundreds, of different mutations in the genes which our tests analyze, the need to characterize each specific mutation, and the ability of our products to predict only as to a statistical probability, not certainty, that a tested individual will develop the disease for which the test has been completed.

These factors present obstacles to significant commercial acceptance of our products, which we will have to spend substantial time and money to overcome, if we can do so at all. Our inability to successfully do so will harm our business.

We may not be able to maintain or increase revenue growth and profitability for our predictive medicine products.

We have experienced revenue growth in our predictive medicine business over past years; however, we may not be able to continue this revenue growth or maintain existing revenue levels. Presently, our predictive medicine business subsidiary operates profitably providing a cash contribution to our other funding and operational needs. We may not be able to continue to operate our predictive medicine business on a profitable basis. Potential events or factors that may have a significant impact on our ability to sustain revenue growth and profitability for our predictive medicine business include the following:

- increased costs of reagents and other consumables required for predictive medicine testing;

- increased licensing or royalty costs;

- increased personnel and facility costs;

inability to hire competent, trained staff, including medical doctors required to review and approve all reports we issue in our predictive medicine business, and sales personnel;

inability to obtain necessary equipment or reagents to perform predictive medicine testing;

inability to increase production capacity as demand increases or inability to fully utilize any increased capacity; and

potential obsolescence of our products.

We rely on a single laboratory facility to process our predictive medicine tests.

We rely on a single laboratory facility in Salt Lake City, Utah to process our predictive medicine tests. This facility and certain pieces of laboratory equipment would be difficult to replace and may require significant replacement lead-time. This facility may be affected by natural disasters such as earthquakes, floods and fires. In the event our laboratory facility or equipment is affected by man-made or natural disasters, we would be unable to continue our predictive medicine business and meet customer demands for a significant period of time. Although we maintain insurance on this facility, including business interruption insurance, it may not be adequate to protect us from all potential losses if this facility were damaged or destroyed. In addition, any interruption in our predictive medicine business would result in a loss of goodwill, including damage to our reputation. If our predictive medicine business were interrupted, it would seriously harm our business.

If we do not compete effectively with scientific and commercial competitors, we may not be able to successfully commercialize our products.

The biotechnology research field is intense and highly competitive. This research is characterized by rapid technological change. Our competitors in the United States and abroad are numerous and include, among others, major pharmaceutical companies, reference laboratories, biotechnology firms, universities and other research institutions. Many of our potential competitors have considerably greater financial, technical, marketing and other resources than we do, which may allow these competitors to discover important genes and determine their function before we do. We could be adversely affected if we do not discover genes, proteins or protein pathways and characterize their function, develop therapeutic and predictive medicine products based on these discoveries, obtain regulatory and other approvals and launch these products and their related services before our competitors. We also expect to encounter significant competition with respect to any therapeutic or predictive medicine products that we may develop or commercialize. Those companies that complete clinical trials, obtain required regulatory approvals and commence commercial sales of therapeutic products before we do may achieve a significant competitive advantage in marketing and commercializing their products. We may not be able to develop therapeutic or predictive medicine products successfully and may not obtain patents covering these products that provide protection against our competitors. Moreover, our competitors may succeed in developing therapeutic or predictive medicine products that circumvent our technologies or products. Furthermore, our competitors may succeed in developing technologies or products that are more effective than those developed by us or that would render our technologies or products less competitive or obsolete. We expect competition to intensify in the fields in which we are involved as technical advances in these fields occur and become more widely known.

If we are unable to maintain relationships with current collaborative partners or enter into new collaborative arrangements, then our business could be harmed.

Part of our current business strategy is to form collaborative arrangements with strategic partners to develop and commercialize therapeutic products in the therapeutic areas outside of our primary focus areas of cancer, infectious disease and Alzheimer s disease. We currently

depend and will depend in the future on third parties for support in product development, manufacturing, marketing and distribution. We may not be able to maintain our current collaborative arrangements or negotiate additional acceptable collaborative arrangements in the future. While we intend to market our therapeutic drugs that become approved for sale to specialist physicians using our internal sales staff, we plan to market these products to other physicians by entering into a marketing arrangement with one or more large pharmaceutical companies. If we are unable to enter into such arrangements, or if the terms of any such arrangement are unfavorable to us, our business could be adversely affected.

Any current or future collaborative arrangement may not be successful. Failure of any collaborative arrangement, or termination by any of our collaborative partners of their respective agreements, could have a material adverse effect on our business. Further, additional milestone payments and future potential royalty payments from our collaborators are dependent upon their continuing to develop products based on the potential therapeutic targets we delivered to them. These partners may decide not to develop any products based on these targets. Even if these partners commence such development, they could decide to terminate it at any time.

In addition, our collaborative partners may pursue alternative technologies or develop alternative products either on their own or in collaboration with others, including our competitors, as a means of developing diagnostic products or treatments for the diseases targeted by our collaborative programs. Our interests may not continue to coincide with those of our collaborative partners, and some of our collaborative partners may develop, independently or with third parties, therapeutic or diagnostic products that could compete with those developed in collaboration with our partners or independently. Additionally, disputes over rights or technology or other proprietary interests may arise. Such disputes or disagreements between us and our collaborative partners could lead to delays in collaborative research projects, or could result in litigation or arbitration, any of which could have a material adverse effect on our business.

If our current research collaborators or scientific advisors terminate their relationships with us or develop relationships with a competitor, our ability to discover genes, proteins and drug targets, and to commercialize therapeutic and predictive medicine products, could be adversely affected.

We have relationships with research collaborators at academic and other institutions who conduct research at our request. These research collaborators are not our employees. As a result, we have limited control over their activities and, except as otherwise required by our collaboration agreements, can expect only limited amounts of their time to be dedicated to our activities. Our ability to discover genes, proteins and protein pathways involved in human disease and commercialize therapeutic and predictive medicine products will depend in part on the continuation of these collaborations. If any of these collaborations are terminated, we may not be able to enter into other acceptable collaborations. In addition, our existing collaborations may not be successful.

Our research collaborators and scientific advisors may have relationships with other commercial entities, some of which could compete with us. Our research collaborators and scientific advisors sign agreements which provide for the confidentiality of our proprietary information and the results of studies conducted at our request. We may not, however, be able to maintain the confidentiality of our technology and other confidential information in connection with every collaboration. The dissemination of our confidential information could have a material adverse effect on our business.

If we fail to retain our key personnel and hire, train and retain qualified employees and consultants, we may not be able to successfully continue our business.

Because of the specialized scientific nature of our business, we are highly dependent upon our ability to attract and retain qualified management, scientific and technical personnel. We are currently recruiting additional qualified management, scientific and technical personnel. Competition for such personnel is intense. Loss of the services of or failure to recruit additional key management, scientific and technical personnel would adversely affect our research and development programs and predictive medicine business and may have a material adverse effect on our business as a whole.

Our agreements with our employees generally provide for employment that can be terminated by either party without cause at any time, subject to specified notice requirements. Further, the non-competition provision to which each employee is subject expires on the applicable date of termination of employment.

We have no experience manufacturing therapeutic products, and we currently intend to rely on third-party manufacturers to manufacture such products for us.

We have no manufacturing experience and no commercial scale manufacturing capabilities for therapeutic products. We currently rely upon third parties to produce material for preclinical and clinical testing purposes and expect to continue to do so in the future. We also expect to rely upon third parties, including our collaborators, for the commercial production of approved therapeutic products. There are a limited number of manufacturers that operate under the FDA s current Good Manufacturing Practices regulations. If we are unable to arrange for third-party manufacturing of our products, or to do so on commercially reasonable terms, our clinical trials may be delayed, or we may not be able to complete development of our therapeutic products or market them.

Reliance on third-party manufacturers also entails risks to which we would not be subject if we manufactured products ourselves, including reliance on the third party for regulatory compliance and quality assurance, the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control, the possibility of termination or non-renewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us and potential import/export issues with foreign manufacturers that we may use. Although we have no current intention to do so, if in the future we elected to manufacture certain of our therapeutic products in our own manufacturing facilities, we would need to invest substantial additional funds and recruit qualified personnel in order to build or lease and operate any manufacturing facilities.

We have limited sales, marketing and distribution capabilities, and with respect to our potential therapeutic products, we may be dependent on third parties to successfully perform these functions on our behalf, or we may be required to incur significant costs and devote significant efforts to augment our existing capabilities.

We have limited sales, marketing and distribution experience and capabilities. These capabilities consist primarily of our sales force that markets our cancer-related predictive medicine products to oncologists in the United States. We believe that if we develop therapeutic products in the area of cancer, given the concentrated nature of the oncology market, we would be able to leverage the efforts of our existing oncology sales force to market these products. However, depending on the nature of the therapeutic products and services for which we obtain marketing approval, we may need to rely significantly on sales, marketing and distribution arrangements

with our collaborators and other third parties. For example, some types of pharmaceutical products, such as Alzheimer s disease, require a large sales force and extensive marketing capabilities for effective commercialization. To date, we have not entered into an arrangement for marketing any approved Alzheimer s drug and may not be able to do so when required. For therapeutic products for diseases with small medical specialty groups, such as AIDS, we may elect to develop our own sales and marketing force. If in the future we elect to perform sales, marketing and distribution functions for such types of products ourselves, we would face a number of additional risks, including the need to recruit a large number of additional experienced marketing and sales personnel.

We depend on a limited number of third parties for some of our supplies of equipment and reagents. If these supplies become unavailable, then we may not be able to successfully perform our research or operate our business at all or on a timely basis.

We currently rely on a small number of suppliers to provide our gene sequencing machines, robots and specialty reagents required in connection with our research. We believe that currently there are limited alternative suppliers of gene sequencing machines, robots and reagents. The gene sequencing machines, robots, or the reagents may not remain available in commercial quantities at acceptable costs. If we are unable to obtain when needed additional gene sequencing machines, robots, or an adequate supply of reagents or other ingredients at commercially reasonable rates, our ability to continue to identify genes and perform predictive medicine testing would be adversely affected.

If the government and third-party payors fail to provide coverage and adequate payment rates for our products and future products, if any, our revenue and prospects for profitability will be harmed.

In both domestic and foreign markets, our sales of our predictive medicine products or any future products will depend in part upon the availability of reimbursement from third-party payors. Such third-party payors include government health programs such as Medicare, managed care providers, private health insurers and other organizations. These third-party payors are increasingly attempting to contain health care costs by demanding price discounts or rebates and limiting both coverage on which drugs or tests they will pay for and the amounts that they will pay for new drugs or tests. The fact that a drug or diagnostic test has been approved for reimbursement in the past, for any particular indication or in any particular jurisdiction does not guarantee that such a drug or diagnostic test will remain approved for reimbursement or that similar or additional drugs or diagnostic tests will be approved in the future. As a result, third-party payors may not cover or provide adequate payment for our current or future predictive and personalized medicine tests or, if approved, our drugs. We might need to conduct post-marketing studies in order to demonstrate the cost-effectiveness of any future products to such payors satisfaction. Such studies might require us to commit a significant amount of management time and financial and other resources. Our future products might not ultimately be considered cost-effective. Adequate third-party reimbursement might not be available to enable us to maintain price levels sufficient to realize an appropriate return on investment in product development.

The United States and foreign governments continue to propose and pass legislation designed to reduce the cost of health care. For example, in some foreign markets, the government controls the pricing of prescription pharmaceuticals. In the United States, we expect that there will continue to be federal and state proposals to implement similar governmental controls. In addition, recent changes in the Medicare program and increasing emphasis on managed care in

the United States will continue to put pressure on pharmaceutical product pricing. Cost control initiatives could decrease the price that we would receive for any products in the future, which would limit our revenue and profitability. Accordingly, legislation and regulations affecting the pricing of pharmaceuticals might change before our drug candidates are approved for marketing. Adoption of such legislation could further limit reimbursement for pharmaceuticals.

Risks related to our intellectual property

We may be unable to adequately prevent disclosure of trade secrets and other proprietary information.

We rely on trade secrets to protect our proprietary technologies, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. We rely in part on confidentiality agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and others to protect our trade secrets and other proprietary information. These agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy if unauthorized disclosure of confidential information occurs. In addition, others may independently discover our trade secrets and proprietary information. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive position. We rely on trade secrets and confidentiality in particular with respect to our drug discovery technology and any future competitive advantage provided by it. We may not enjoy any such competitive advantage if we are not able to effectively maintain and enforce any trade secret rights relating to our drug discovery technology.

If we are not able to protect our proprietary technology, others could compete against us more directly, which would harm our business.

As of October 1, 2005, our patent portfolio included a total of 247 issued patents owned or licensed by us and numerous patent applications in the United States and other countries with claims covering our intellectual property rights. Our commercial success will depend, in part, on our ability to obtain additional patents and licenses and protect our existing patent position, both in the United States and in other countries, for drug targets we discover, for therapeutic compounds we develop, for predisposing genes we identify and related technologies, processes, methods and other inventions that we believe are patentable. Our ability to preserve our trade secrets and other intellectual property is also critical to our long-term success. If we do not adequately protect our intellectual property, competitors may be able to use our technologies and erode or negate any competitive advantage we may have, which could harm our business and ability to achieve profitability. Patents may also issue to third parties which could interfere with our ability to bring one or more of our drug candidates to market. The laws of some foreign countries do not protect our proprietary rights to the same extent as the laws of the United States, and we may encounter significant problems in protecting our proprietary rights in these countries.

The patent positions of biotechnology and pharmaceutical companies, including our patent position, are generally highly uncertain and involve complex legal and factual questions, and, therefore, any patents issued to us may be challenged, deemed unenforceable, invalidated or circumvented. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies, drug candidates and any future

products are covered by valid and enforceable patents or are effectively maintained as trade secrets. To date there has not emerged from the United States Patent and Trademark Office, or PTO, the United States courts, or from patent offices or courts in foreign countries, a consistent policy regarding the breadth of claims allowed in biotechnology patents. Our patent applications may never issue as patents, and the claims of any issued patents may not afford meaningful protection for our technology or products. In addition, any patents issued to us or our licensors may be challenged, and subsequently narrowed, invalidated or circumvented. The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

- we or our licensors were the first to make the inventions covered by each of our pending patent applications;
- we or our licensors were the first to file patent applications for these inventions;
- others will not independently develop similar or alternative technologies or duplicate any of our technologies;
- any of our or our licensors pending patent applications will result in issued patents;
- any of our or our licensors patents will be valid or enforceable;
- any patents issued to us or our licensors and collaborators will provide a basis for commercially viable products, will provide us with any competitive advantages or will not be challenged by third parties;
- we will develop additional proprietary technologies or drug candidates that are patentable; or
- the patents of others will not have an adverse effect on our business.

If a third party files a patent application with claims to a drug target, gene or protein we have discovered, the PTO may declare an interference between competing patent applications. If an interference is declared, we may not prevail in the interference. If the other party prevails in the interference, we may be precluded from commercializing services or products based on the drug target, gene or protein, or may be required to seek a license. A license may not be available to us on commercially acceptable terms, if at all.

We also rely upon unpatented proprietary technologies. Although we require employees, consultants and collaborators to sign confidentiality agreements, we may not be able to adequately protect our rights in such unpatented proprietary technologies, which could have a material adverse effect on our business. For example, others may independently develop substantially equivalent proprietary information or techniques or otherwise gain access to our proprietary technologies or disclose our technologies to our competitors.

If we were sued for patent infringement by third parties, we might incur significant costs and delays in product introduction.

Our products may also conflict with patents that have been or may be granted to others. Our industry includes many organizations seeking to rapidly identify drug targets, small-molecule compounds, proteins and genes through the use of genomic, proteomic and

other technologies. To the extent any patents are issued to those organizations on drug targets, proteins, genes or uses for such genes and proteins, the risk increases that the sale of our predictive and personalized medicine products currently being marketed or under development, and any sales of therapeutic drugs developed by us, may give rise to claims of patent infringement. Others may

have filed and in the future are likely to file patent applications covering genes or drug targets that are similar or identical to our products. Any of these patent applications may have priority over our patent applications and these entities or persons could bring legal proceedings against us seeking damages or seeking to enjoin us from testing, manufacturing or marketing our products. Patent litigation is costly, and even if we prevail, the cost of such litigation could have a material adverse effect on us. If the other parties in any such actions are successful, in addition to any liability for damages, we could be required to cease the infringing activity or obtain a license. Any license required may not be available to us on commercially acceptable terms, if at all. Our failure to obtain a license to any technology that we may require to commercialize our products could have a material adverse effect on our business. We believe that there may be significant litigation in the industry regarding patent and other intellectual property rights. If we become involved in this litigation, it could consume a substantial portion of our managerial and financial resources.

We may be subject to claims that we or our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

As is commonplace in our industry, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including our potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

Risks related to our common stock and this offering

Our stock price is highly volatile, and our stock may lose all or a significant part of its value.

The market prices for securities of biotechnology companies have been volatile. This volatility has significantly affected the market prices for these securities for reasons frequently unrelated to the operating performance of the specific companies. These broad market fluctuations may adversely affect the market price of our common stock. The market price for our common stock has fluctuated significantly since public trading commenced in October 1995, and it is likely that the market price will continue to fluctuate in the future. From July 1, 2003 to September 30, 2005, our stock price has ranged from $10.88 per share to $26.07 per share. In addition, the stock market has experienced extreme price and volume fluctuations. Events or factors that may have a significant impact on our business and on the market price of our common stock include the following:

- results of our current Phase 3 clinical trial of Flurizan for the treatment of Alzheimer s disease and any additional Phase 3 trials that may be required by the FDA or that we may initiate on our own;
- results of our current Phase 2b clinical trial of Flurizan for the treatment of prostate cancer and any additional trials that may be required by the FDA or that we may initiate on our own;
- our entry into or the loss of a significant collaboration;
- results of our current Phase 1 or any subsequent clinical trials for MPC-6827 and MPC-2130;

results of clinical trials conducted by others on drugs that would compete with our drug candidates;

failure or delays in advancing drug candidates from our preclinical programs, or other drug candidates we may discover or acquire in the future, into clinical trials;

failure or discontinuation of any of our research programs;

delays or other problems with manufacturing our drug candidates or approved products;

regulatory developments or enforcement in the U.S. and foreign countries;

developments or disputes concerning patents or other proprietary rights involving us directly or otherwise affecting the industry as a whole;

introduction of technological innovations or new commercial products by us or our competitors;

changes in estimates or recommendations by securities analysts relating to our common stock or the securities of our competitors;

failure to meet estimates or recommendations by securities analysts that cover our common stock;

public concern over our drug candidates or any approved products;

litigation;

future sales or anticipated sales of our common stock by us or our stockholders;

general market conditions;

changes in the structure of health care payment systems;

failure to sustain revenue growth or margins in our predictive medicine business;

failure of any of our drug candidates, if approved, to achieve commercial success;

seasonal slowness in sales, particularly in the quarters ending September 30 and March 31, the effects of which may be difficult to understand during periods of growth;

economic, healthcare and biotechnology trends, disasters or crises and other external factors; and

period-to-period fluctuations in our financial results.

These and other external factors may cause the market price and demand for our common stock to fluctuate substantially, which may limit or prevent investors from readily selling their shares of common stock and may otherwise negatively affect the liquidity of our common stock. In addition, in the past, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit regardless of the outcome. Such a lawsuit could also divert the time and attention of our management.

Management will have broad discretion as to the use of the proceeds from this offering, and we may not use the proceeds effectively.

We have not designated the amount of net proceeds we will use for any particular purpose. Accordingly, our management will have broad discretion as to the application of the net

proceeds and could use them for purposes other than those contemplated at the time of this offering. Our stockholders may not agree with the manner in which our management chooses to allocate and spend the net proceeds. Moreover, our management may use the net proceeds for corporate purposes that may not increase our profitability or our market value.

Anti-takeover provisions of Delaware law, provisions in our charter and bylaws and our stockholders rights plan, or poison pill, could make a third-party acquisition of us difficult.

Because we are a Delaware corporation, the anti-takeover provisions of Delaware law could make it more difficult for a third party to acquire control of us, even if the change in control would be beneficial to stockholders. We are subject to the provisions of Section 203 of the General Corporation Law of Delaware, which prohibits us from engaging in certain business combinations, unless the business combination is approved in a prescribed manner. In addition, our restated certificate of incorporation and restated bylaws also contain certain provisions that may make a third-party acquisition of us difficult, including:

- a classified board of directors, with three classes of directors each serving a staggered three-year term;
- the ability of the board of directors to issue preferred stock;
- a 70% super-majority shareholder vote to amend our bylaws and certain provisions of our certificate of incorporation; and
- the inability of our stockholders to call a special meeting or act by written consent.

We also have implemented a stockholders rights plan, also called a poison pill, which could make it uneconomical for a third party to acquire our company on a hostile basis. These provisions, as well as Section 203, may discourage certain types of transactions in which our stockholders might otherwise receive a premium for their shares over then current market price, and may limit the ability of our stockholders to approve transactions that they think may be in their best interests.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Assuming a public offering price of $21.01 per share (based on the last reported sale price on October 26, 2005), if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of $14.03 per share in the net tangible book value of the common stock. See Dilution at page S-31 for a more detailed discussion of the dilution you will incur in this offering.

Use of proceeds

We estimate that the net proceeds we will receive from this offering will be approximately $138.0 million, after deducting the underwriting discount and estimated offering expenses and assuming a public offering price of $21.01 per share (based on the last reported sale price on October 26, 2005). If the underwriters exercise their over-allotment option in full, we estimate that the net proceeds will be approximately $158.7 million. We intend to use the net proceeds from this offering for general corporate purposes, to advance drug development, including our preclinical studies and clinical trials, to further our predictive medicine product strategy, to develop or in-license new technologies, for general working capital and for possible future acquisitions. We have no current plans, agreements or commitments for any acquisitions.

We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds from this offering. Pending application of the net proceeds as described above, we intend to invest the net proceeds of the offering in short-term, investment-grade, interest-bearing securities.

Dividend policy

We have never declared or paid any dividends on our capital stock. We intend to retain any future earnings to finance the growth and development of our business and do not anticipate paying any cash dividends in the foreseeable future.

Capitalization

The following table summarizes our capitalization as of September 30, 2005 on an actual basis and as adjusted to reflect our sale of 7,000,000 shares of common stock at an assumed public offering price of $21.01 per share (based on the last reported sale price on October 26, 2005), after deducting the estimated underwriting discount and estimated offering expenses we expect to pay. You should read this information in conjunction with our consolidated financial statements and the related notes incorporated by reference in this prospectus supplement and the accompanying prospectus.

Amounts representing common stock outstanding on September 30, 2005 exclude the following:

- 7,971,854 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2005 at a weighted average exercise price of $25.31 per share;
- 30,000 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2005 at a weighted average exercise price of $40.00 per share;
- 64,350 shares of common stock reserved for future awards under our 2003 Employee, Director and Consultant Stock Option Plan as of September 30, 2005;
- an additional 1,700,000 shares of common stock that will be reserved for future awards under our 2003 Employee, Director and Consultant Stock Option Plan if an amendment to this plan is approved by our stockholders at our annual meeting of stockholders to be held on November 10, 2005; and
- 196,181 shares of common stock reserved for future issuance under our Employee Stock Purchase Plan as of September 30, 2005.

As of September 30, 2005

(in thousands, except share data)	**Actual**	**As adjusted**
	(unaudited)	
Cash and cash equivalents	$ 38,728	$ 176,724
Marketable investment securities	64,269	64,269
Stockholders equity:		
Preferred stock, $0.01 par value. Authorized 5,000 shares; none issued and outstanding		
Common stock, $0.01 par value. Authorized 60,000 shares; 30,948 shares issued and outstanding; 37,948 shares issued and outstanding, as adjusted	309	379
Additional paid-in capital	316,510	454,436
Accumulated other comprehensive loss	(640)	(640)
Accumulated deficit	(188,491)	(188,491)
Total stockholders equity	127,688	265,684
Total capitalization	127,688	265,684

Dilution

If you purchase our common stock in this offering, your interest will be diluted to the extent of the difference between the public offering price per share and the net tangible book value per share of our common stock after this offering. We calculate net tangible book value per share by dividing the net tangible book value, tangible assets less total liabilities, by the number of outstanding shares of our common stock.

Our net tangible book value at September 30, 2005 was $127.0 million, or $4.10 per share, based on 30,947,535 shares of our common stock outstanding. After giving effect to the sale of 7,000,000 shares of common stock by us at an assumed public offering price of $21.01 per share (based on the last reported sale price on October 26, 2005), less the underwriting discounts and commissions and our estimated offering expenses, our net tangible book value at September 30, 2005, would be $265.0 million, or $6.98 per share. This represents an immediate increase in the net tangible book value of $2.88 per share to existing stockholders and an immediate dilution of $14.03 per share to investors in this offering. The following table illustrates this per share dilution:

Assumed public offering price per share		$ 21.01
Net tangible book value per share as of September 30, 2005	$ 4.10	
Increase per share attributable to new investors	2.88	
Net tangible book value per share after this offering		6.98
Dilution per share to new investors		$ 14.03

The number of shares of our common stock outstanding as of September 30, 2005 does not include the following:

- 7,971,854 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2005 at a weighted average exercise price of $25.31 per share;
- 30,000 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2005 at a weighted average exercise price of $40.00 per share;
- 64,350 shares of common stock reserved for future awards under our 2003 Employee, Director and Consultant Stock Option Plan as of September 30, 2005;
- an additional 1,700,000 shares of common stock that will be reserved for future awards under our 2003 Employee, Director and Consultant Stock Option Plan if an amendment to this plan is approved by our stockholders at our annual meeting of stockholders to be held on November 10, 2005; and
- 196,181 shares of common stock reserved for future issuance under our Employee Stock Purchase Plan as of September 30, 2005.

To the extent options outstanding as of September 30, 2005 have been or may be exercised or other shares have been or are issued, there may be further dilution to new investors.

Underwriting

We are offering the shares of our common stock described in this prospectus supplement through the underwriters named below. J.P. Morgan Securities Inc. is acting as the representative of the underwriters. We have entered into an underwriting agreement with the underwriters named below. Subject to the terms and conditions set forth in the underwriting agreement, each of the underwriters has severally agreed to purchase the number of shares of common stock set forth opposite its name in the following table:

Underwriters	Number of shares
J.P. Morgan Securities Inc.	
Bear, Stearns & Co. Inc.	
UBS Securities LLC	
Piper Jaffray & Co.	
First Albany Capital Inc.	
JMP Securities LLC	
Total	7,000,000

The underwriting agreement provides that the obligations of the underwriters to purchase the shares included in this offering are subject to conditions customary for offerings of this type. The underwriters must purchase all of the shares if they purchase any of them. However, the underwriters are not required to take or pay for the shares covered by the underwriters overallotment option described below.

Overallotment option

We have granted the underwriters an option to purchase up to 1,050,000 additional shares of our common stock. The underwriters may exercise this option solely for the purpose of covering overallotments, if any, made in connection with this offering. The underwriters have 30 days from the date of this prospectus supplement to exercise this option. If the underwriters exercise this option, they will each purchase additional shares approximately in proportion to the amounts specified in the table above.

Underwriting discounts and commissions

Shares sold by the underwriters to the public will initially be offered at the offering price set forth on the cover of this prospectus supplement. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the public offering price. Any of these securities dealers may resell any shares purchased from the underwriters to other brokers or dealers at a discount of up to $ per share from the public offering price. If all the shares are not sold at the public offering price, the representative may change the offering price and the other selling terms. Upon execution of the underwriting agreement, the underwriters will be obligated to purchase the shares at the prices and upon the terms stated therein, and, as a result, will thereafter bear any risk associated with changing the offering price to the public or other selling terms.

The following table shows the per share and total underwriting discounts and commissions we will pay to the underwriters assuming both no exercise and full exercise of the underwriters option to purchase up to 1,050,000 additional shares.

	No exercise	Full exercise
Per share	$	$
Total	$	$

We estimate that the total expenses of this offering payable by us, not including the underwriting discounts and commissions, will be approximately $250,000.

Restrictions on sales of similar securities

We, our executive officers and our directors have entered into lock-up agreements with the underwriters prior to commencement of this offering. The shares covered by these agreements do not include (a) 150,000 shares of common stock held by our executive officers and directors which may be sold under new trading plans that may be established in accordance with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended, or transferred as bona fide gifts to charitable organizations or (b) any shares sold by our executive officers and directors pursuant to existing Rule 10b5-1 plans. Under these agreements, we and each of these persons may not, without the prior written approval of J.P. Morgan Securities Inc., subject to certain limited exceptions where the transferee agrees to be bound by the terms of a similar lock-up, offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock or enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of common stock. These restrictions will be in effect for a period of 90 days after the date of the final prospectus supplement. In addition, if we issue an earnings release or material news or a material event relating to us occurs during the last 17 days of the 90-day restricted period or if, prior to the expiration of the 90-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 90-day restricted period, the restrictions imposed by the underwriter lock-up agreements will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event. At any time and without public notice, J.P. Morgan Securities Inc. may in its sole discretion, release all or some of the securities from these lock-up agreements.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act. If we are unable to provide this indemnification, we will contribute to payments the underwriters may be required to make in respect of those liabilities.

Nasdaq National Market Listing

Our common stock is traded on the Nasdaq National Market under the symbol MYGN.

Price stabilization, short positions

The underwriters may engage in overallotment, stabilizing transactions, syndicate covering transactions and penalty bids or purchases for the purpose of pegging, fixing or maintaining the

price of the common stock, in accordance with Regulation M under the Securities Exchange Act of 1934, as amended:

Overallotment involves sales by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares overallotted by the underwriters is not greater than the number of shares that they may purchase in the overallotment option. In a naked short position, the number of shares involved is greater than the number of shares in the overallotment option. The underwriters may close out any short position by either exercising their overallotment option or purchasing shares in the open market.

Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.

Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the overallotment option. If the underwriters sell more shares than could be covered by the overallotment option, a naked short position, the position can only be closed out by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.

Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the common stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction.

As a result of these activities, the price of our common stock may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. The underwriters may carry out these transactions on the Nasdaq National Market, in the over-the-counter market or otherwise.

Legal matters

The validity of the shares of common stock offered by this prospectus supplement will be passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts. Certain legal matters will be passed upon for the underwriters by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Salt Lake City, Utah. Members of Mintz Levin and certain members of their families and trusts for their benefit own an aggregate of approximately 2,000 shares of our common stock.

Experts

The consolidated financial statements and schedule of Myriad Genetics Inc. as of June 30, 2005 and 2004, and for each of the years in the three-year period ended June 30, 2005, and management s assessment of the effectiveness of internal control over financial reporting as of June 30, 2005 have been incorporated by reference in this prospectus supplement in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference, and upon the authority of said firm as experts in accounting and auditing.

PROSPECTUS

MYRIAD GENETICS, INC.

$300,000,000

COMMON STOCK

PREFERRED STOCK

DEPOSITARY SHARES

DEBT SECURITIES

WARRANTS

We may from time to time issue up to $300,000,000 aggregate principal amount of common stock, preferred stock, depositary shares, debt securities and/or warrants. We will specify in the accompanying prospectus supplement the terms of the securities. We may sell these securities to or through underwriters and also to other purchasers or through agents. We will set forth the names of any underwriters or agents in the accompanying prospectus supplement.

INVESTING IN OUR SECURITIES INVOLVES RISKS.

SEE RISK FACTORS ON PAGE 5.

Our common stock is listed on the Nasdaq National Market under the symbol MYGN. On April 4, 2005, the last reported sale price of our common stock on the Nasdaq National Market was $17.30 per share. Prospective purchasers of common stock are urged to obtain current information as to the market prices of 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.

This prospectus may not be used to consummate sales of securities unless it is accompanied by a prospectus supplement.

The date of this prospectus is April 20, 2005.

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About this prospectus

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a shelf registration process. Under this shelf process, we may sell any combination of the securities described in this prospectus in one or more offerings up to a total dollar amount of $300,000,000. We have provided to you in this prospectus a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering.

This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and the applicable prospectus supplement together with additional information under the heading Where You Can Find More Information.

This prospectus may not be used to consummate sales of securities, unless it is accompanied by a prospectus supplement covering those securities. To the extent there are inconsistencies between any prospectus supplement, this prospectus and any documents incorporated by reference, the document with the most recent date will control.

You should rely only on information contained in, or incorporated by reference into, this prospectus and any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or

incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

The information in this prospectus is accurate as of the date on the front cover. You should not assume that the information contained in this prospectus is accurate as of any other date.

Our business

The following is only a summary. We urge you to read the entire prospectus, including the more detailed financial statements, notes to the financial statements and other information incorporated by reference from our other filings with the SEC. Investing in our securities involves risk. Therefore, carefully consider the information provided under the heading Risk Factors on page 5.

We are a leading biopharmaceutical company focused on the development and marketing of novel therapeutic and molecular diagnostic products. We employ a number of proprietary technologies that permit us to understand the genetic basis of human disease and the role that genes and their related proteins play in the onset and progression of disease. We use this information to guide the development of new healthcare products that treat major diseases and assess a person s risk of disease later in life.

We believe that the future of medicine lies in the creation of new classes of drugs that treat the underlying cause, not just the symptoms, of disease and that may be useful in disease prevention. By understanding the genetic basis of disease, we believe we will be able to develop drugs that are safer and more efficacious. In addition, we believe that advances in the emerging field of predictive medicine will improve our ability to determine which patients are subject to a greater risk of developing these diseases and who therefore would benefit from these new preventive therapies.

Myriad researchers have made important discoveries in the fields of cancer, Alzheimer s disease and infectious diseases such as AIDS. We intend to independently develop and, subject to regulatory approval, market our therapeutic products in these areas. These discoveries point to novel disease pathways that may pave the way for the development of new classes of drugs.

Flurizan, our lead therapeutic candidate for the treatment of Alzheimer s disease, is currently the subject of a phase 2 human clinical study in Europe and Canada and a phase 3 human clinical study in the United States. The phase 2 study is designed to assess Flurizan s efficacy for the treatment of patients with mild to moderate Alzheimer s disease and is expected to conclude its clinical study period in March 2005. The phase 3 trial is designed to determine Flurizan s ability to alter the course of cognitive decline and behavioral change in patients with mild to moderate Alzheimer s disease. Flurizan is also in a large, multi-center phase 2b human clinical trial in the U.S. for the treatment of patients with pre-metastatic prostate cancer.

On March 1, 2005 we announced the submission of an Investigational New Drug (IND) application to the FDA to begin a phase 1 clinical study for our cancer drug candidate MPC-6827. This new human clinical study is designed to evaluate the safety and pharmacokinetic profile of MPC-6827 in patients with metastatic brain cancer. MPC-6827 is also the subject of a phase 1 study to evaluate its safety and pharmacokinetic profile in patients with advanced solid tumors, in an escalating dose regimen. In preclinical testing MPC-6827 has demonstrated the ability to inhibit tumor growth in animal models of human melanoma and cancers of the ovary, breast, prostate, colon, and pancreas and was shown to be effective against cancers that have developed multiple drug resistance.

In December 2004, we announced the submission of an IND to begin a phase 1 clinical study with our cancer drug candidate MPC-2130, a broad-acting inducer of programmed cell death, or apoptosis. The phase 1 clinical study is designed to valuate the safety and pharmacokinetic profile of MPC-2130 in patients with advanced metastatic tumors or blood cancers as well as

refractory cancer that has progressed despite previous chemotherapy. In preclinical studies MPC-2130 has demonstrated significant cancer cell killing activity in ovarian cancer, prostate cancer and two lymphoma cell lines, Burkitt lymphoma and T-cell lymphoma. MPC-2130 was also shown to be effective against cancers that have developed multiple drug resistance.

We also have developed and commercialized a number of innovative predictive medicine products, including BRACAnalysis, which assesses a woman s risk of developing breast and ovarian cancer, COLARIS and COLARIS AP, which determine a person s risk of developing colon cancer, and MELARIS, which assesses a person s risk of developing malignant melanoma, a deadly form of skin cancer. In the United States we market these products using our own 100 person sales force.

We have devoted substantially all of our resources to undertaking our drug discovery and development programs, operating our predictive medicine business, and continuing our research and development efforts. Our revenues have consisted primarily of sales of predictive medicine products and research payments. We expect to incur losses for at least the next several years, primarily due to the expansion of our drug discovery and development efforts, the initiation and continuing conduct of human clinical trials, the launch of new predictive medicine products, the continuation of our internal research and development programs, and expansion of our facilities. Additionally, we expect to incur substantial sales, marketing and other expenses in connection with building our pharmaceutical and predictive medicine businesses. We expect that losses will fluctuate from quarter to quarter and that such fluctuations may be substantial. We have yet to attain profitability and, for year ended June 30, 2004, we had a net loss of $40.6 million. As of June 30, 2004 we had an accumulated deficit of $139.3 million.

We are a Delaware corporation. Our principal executive offices are located at 320 Wakara Way, Salt Lake City, Utah 84108. Our telephone number is (801) 584-3600. Our website is http://www.myriad.com. Our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K which have been filed with the SEC are available to you free of charge through a hyperlink on our internet website. The information on our website or any other website is not incorporated by reference into this prospectus and does not constitute a part of this prospectus.

Myriad, our graphical logo, BRACAnalysis, COLARIS, COLARIS AP, Flurizan, MELARIS, PROLARIS, ProNet, and ProSpec are our trademarks. This prospectus supplement, the accompanying prospectus, and the documents incorporated by reference may contain trademarks of other companies.

Risk factors

Investing in our securities is very risky. Please carefully consider the risk factors described in our periodic reports filed with the SEC, including our Annual Report on Form 10-K for the fiscal year ended June 30, 2004, which is incorporated by reference in this prospectus. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus or include in any applicable prospectus supplement. Additional risks and uncertainties not presently known to us or that we deem currently immaterial may also impair our business operations. You should be able to bear a complete loss of your investment. See Special Note Regarding Forward-Looking Statements.

Special note regarding forward-looking statements

The Securities and Exchange Commission encourages companies to disclose forward-looking information so that investors can better understand a company s future prospects and make informed investment decisions. This prospectus contains such forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be made directly in this prospectus, and they may also be made a part of this prospectus by reference to other documents filed with the Securities and Exchange Commission, which is known as incorporation by reference.

Words such as may, anticipate, estimate, expects, projects, intends, plans, believes and words and terms of similar sub used in connection with any discussion of future operating or financial performance, identify forward-looking statements. All forward-looking statements are management s present expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. These risks and uncertainties include, among other things: our inability to further identify, develop and achieve commercial success for new products and technologies; the possibility of delays in the research and development necessary to select drug development candidates and delays in clinical trials; the risk that we may not be able to timely obtain drug compound being used in our clinical trials; the risk that clinical trials may not result in marketable products; the risk that we may be unable to successfully finance and secure regulatory approval of and manufacture, market, and sell our drug candidates; our dependence upon pharmaceutical and biotechnology collaborations; the levels and timing of payments under our collaborative agreements; uncertainties about our ability to obtain new corporate collaborations and acquire new technologies on satisfactory terms, if at all; the development of competing systems; our ability to protect our proprietary technologies; patent-infringement claims; and risks of new, changing and competitive technologies and regulations in the United States and internationally. Please also see the discussion of risks and uncertainties under Risk Factors in our Annual Report on Form 10-K for the fiscal year ended June 30, 2004.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this prospectus or in any document incorporated by reference might not occur. Investors are cautioned not to place undue reliance on the forward-looking statements, which speak only of the date of this prospectus or the date of the document incorporated by reference in this prospectus. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to the Company or to any person acting on its behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

Use of proceeds

Unless we indicate otherwise in the applicable prospectus supplement, we currently intend to use the net proceeds from this offering for general corporate purposes, to advance drug development and regulatory approvals, including our preclinical studies and clinical trials, to advance the manufacturing, marketing and sale of approved drug candidates, to further our predictive medicine product strategy, to develop new technologies, for general working capital and for possible future acquisitions. We have no current plans, agreements or commitments for any acquisitions.

We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds from this offering. Pending application of the net proceeds as described above, we intend to invest the net proceeds of the offering in short-term, investment-grade, interest-bearing securities.

We may set forth additional information on the use of net proceeds from the sale of securities we offer under this prospectus in a prospectus supplement relating to the specific offering.

The securities we may offer

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

We may sell from time to time, in one or more offerings:

- common stock;
- preferred stock;
- depositary shares;
- debt securities; and/or
- warrants.

This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

Description of common stock

The description of our capital stock and certain provisions of our restated certificate of incorporation, as amended, and our restated bylaws is a summary and is qualified in its entirety by the provisions of our restated certificate of incorporation, as amended and our restated bylaws.

We are authorized to issue 60,000,000 shares of common stock, $0.01 par value per share. As of April 4, 2005, there were approximately 30,760,472 shares of common stock outstanding.

Each stockholder of record is entitled to one vote for each outstanding share of our common stock owned by that stockholder on every matter properly submitted to the stockholders for their vote. After satisfaction of the dividend rights of holders of any preferred stock, holders of common stock are entitled to any dividend declared by our board out of funds legally available for that purpose. After the payment of liquidation preferences to holders of any preferred stock, holders of common stock are entitled to receive, on a pro rata basis, all our remaining assets available for distribution to stockholders in the event of our liquidation, dissolution or winding up. Holders of common stock do not have any preemptive right to become subscribers or purchasers of additional shares of any class of our capital stock. The rights, preferences and privileges of holders of common stock are subject to, and may be injured by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Transfer agent and registrar

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

Shareholder rights

On July 16, 2001, our Board of Directors adopted a shareholder rights plan (the Rights Agreement) and declared a dividend of one preferred stock purchase right (a Right) for each outstanding share common stock to stockholders of record at the close of business on July 17, 2001. On August 16, 2002, we amended the Rights Agreement to name American Stock Transfer & Trust Company, our transfer agent, as the rights agent under the agreement. Each right only becomes exercisable and transferable apart from the common stock at the earlier of (i) 10 days following a public announcement or disclosure that a person or group of affiliated or associated persons (an Acquiring Person) has acquired, or obtained the right to acquire, beneficial ownership of 15% or more of the outstanding shares of our common stock (the Stock Acquisition Date); or (ii) 10 business days following the commencement of a tender offer or exchange offer that may result in a person, entity or group becoming an Acquiring Person as defined in the Rights Agreement.

Initially, each Right entitles the registered holder to purchase from the Company a unit consisting of one one-hundredth of a share (a Unit) of our Series A Junior Participating Preferred Stock, $0.01 par value per share, at a purchase price of $300.00 per Unit. If (i) the Company is the surviving corporation in a merger with an Acquiring Person and its common stock is not changed or exchanged, (ii) a person, entity or group becomes an Acquiring Person (except pursuant to an offer for all outstanding shares of common stock which the Board determines to be fair to, and otherwise in the best interests of, the Company and its stockholders), (iii) an Acquiring Person engages in one or more self-dealing transactions as set forth in the Rights Agreement, or

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(iv) during such time as there is an Acquiring Person, an event occurs which results in such Acquiring Person s ownership interest being increased by more than 1% (e.g., a reverse stock split), each holder of a Right (other than Rights held by an Acquiring Person) will thereafter have the right to receive, upon exercise, that number of shares of common stock which equals the exercise price of the Right divided by one-half of the current market price of the common stock at the date of the occurrence of the event.

In general, the Company may redeem the Rights in whole, but not in part, at any time until ten days following the Stock Acquisition Date. The Rights will expire at the close of business on July 17, 2011, unless earlier redeemed by the Company in accordance with the Rights Agreement

Delaware law and certain charter and by-law provisions

The provisions of Delaware law and of our restated certificate of incorporation, as amended, and restated by-laws discussed below could discourage or make it more difficult to accomplish a proxy contest or other change in our management or the acquisition of control by a holder of a substantial amount of our voting stock. It is possible that these provisions could make it more difficult to accomplish, or could deter, transactions that stockholders may otherwise consider to be in their best interests or the best interests of Myriad Genetics.

Delaware statutory business combinations provision. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. For purposes of Section 203, a business combination is defined broadly to include a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder, and, subject to certain exceptions, an interested stockholder is a person who, together with his or her affiliates and associates, owns (or within three years prior, did own) 15% or more of the corporation s voting stock.

Classified board of directors. Our board of directors is divided into three classes. Each year our stockholders elect the members of one of the three classes to a three-year term of office. All directors elected to our classified board of directors serve until the election and qualification of their respective successors or their earlier resignation or removal. Only the board of directors is authorized to create new directorships and to fill such positions so created and is permitted to specify the class to which any such new position is assigned. The person filling such position would serve for the term applicable to that class. Only the board of directors (or its remaining members, even if less than a quorum) is empowered to fill vacancies on the board of directors occurring for any reason for the remainder of the term of the class of directors in which the vacancy occurred. Members of the board of directors may only be removed for cause. These provisions are likely to increase the time required for stockholders to change the composition of the board of directors. For example, in general, at least two annual meetings would be necessary for stockholders to effect a change in a majority of the members of the board of directors.

Advance notice provisions for stockholder proposals and stockholder nominations of directors. Our restated by-laws provide that, for nominations to the board of directors or for other business to be properly brought by a stockholder before a meeting of stockholders, the stockholder must first have given timely notice of the proposal in writing to our Secretary. For an annual meeting, a stockholder s notice generally must be delivered not less than 60 days nor

more than 90 days prior to the anniversary of the previous year s annual meeting. For a special meeting, the notice must generally be delivered by not less than 60 days nor more than 90 days prior to the special meeting or ten days following the day on which public announcement of the meeting is first made. Detailed requirements as to the form of the notice and information required in the notice are specified in our restated by-laws. If it is determined that business was not properly brought before a meeting in accordance with our by-law provisions, such business will not be conducted at the meeting.

Special meetings of stockholders. Special meetings of the stockholders may be called only by the chairman of our board of directors, the chief executive officer or president with the approval of the executive committee of the board of directors, or the entire board of directors pursuant to a resolution adopted by a majority of the total number of directors.

No stockholder action by written consent. Our restated certificate of incorporation, as amended, does not permit our stockholders to act by written consent. As a result, any action to be effected by our stockholders must be effected at a duly called annual or special meeting of the stockholders.

Shareholders rights plan. We have adopted a shareholder rights plan, as discussed above under the caption Shareholder rights.

Super-majority stockholder vote required for certain actions. The Delaware General Corporation Law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation s certificate of incorporation or by-laws, unless the corporation s certificate of incorporation or by-laws, as the case may be, requires a greater percentage. Our restated certificate of incorporation, as amended, requires the affirmative vote of the holders of at least 70% of our outstanding voting stock to amend or repeal any of the provisions discussed in this section of this prospectus entitled Delaware Law and Certain Charter and By-law Provisions. This 70% stockholder vote would be in addition to any separate class vote that might in the future be required pursuant to the terms of any preferred stock that might then be outstanding. A 70% vote will also be required for any amendment to, or repeal of, our restated by-laws by the stockholders. Our restated by-laws may be amended or repealed by a simple majority vote of the board of directors.

Description of preferred stock

We are authorized to issue, without stockholder approval, up to 5,000,000 shares of preferred stock, $0.01 par value per share, having rights senior to those of our common stock. As of April 6, 2005, we did not have any outstanding shares of preferred stock or options to purchase preferred stock. Our board of directors is authorized to issue the preferred stock in one or more series and to fix and designate the rights, preferences, privileges and restrictions of the preferred stock, including:

- dividend rights;
- conversion rights;
- voting rights;

voting rights;

redemption rights and terms of redemption; and

liquidation preferences.

Our board may fix the number of shares constituting any series and the designations of these series. The rights, preferences, privileges and restrictions of the preferred stock of each series will be fixed by a certificate of designation relating to each series. The prospectus supplement relating to each series will specify the terms of the preferred stock, including:

- the maximum number of shares in the series and the distinctive designation;
- the terms on which dividends will be paid, if any;
- the terms on which the shares may be redeemed, if at all;
- the liquidation preference, if any;
- the terms of any retirement or sinking fund for the purchase or redemption of the shares of the series;
- the terms and conditions, if any, on which the shares of the series will be convertible into, or exchangeable for, shares of any other class or classes of capital stock;
- the voting rights, if any, on the shares of the series; and
- any or all other preferences and relative, participating, operational or other special rights or qualifications, limitations or restrictions of the shares.

We will describe the specific terms of a particular series of preferred stock in the prospectus supplement relating to that series. The description of preferred stock above and the description of the terms of a particular series of preferred stock in the prospectus supplement are not complete. You should refer to the applicable certificate of designation for complete information. The prospectus supplement will contain a description of U.S. federal income tax consequences relating to the preferred stock.

Our issuance of preferred stock may have the effect of delaying or preventing a change in control. Our issuance of preferred stock could decrease the amount of earnings and assets available for distribution to the holders of common stock or could adversely affect the rights and powers, including voting rights, of the holders of common stock. The issuance of preferred stock could have the effect of decreasing the market price of our common stock.

Description of depositary shares

At our option, we may elect to offer fractional shares of preferred stock, rather than full shares of preferred stock. If we do elect to offer fractional shares of preferred stock, we will issue to the public receipts for depositary shares and each of these depositary shares will represent a fraction of a share of a particular series of preferred stock, as specified in the applicable prospectus supplement. Each owner of a depositary share will be entitled, in proportion to the applicable fractional interest in shares of preferred stock underlying that depositary share, to all rights and preferences of the preferred stock underlying that depositary share. These rights include dividend, voting, redemption and liquidation rights.

The shares of preferred stock underlying the depositary shares will be deposited with a bank or trust company selected by us to act as depositary, under a deposit agreement between us, the depositary and the holders of the depositary receipts. The depositary will be the transfer agent, registrar and dividend disbursing agent for the depositary shares.

The depositary shares will be evidenced by depositary receipts issued pursuant to the depositary agreement. Holders of depositary receipts agree to be bound by the deposit agreement, which requires holders to take certain actions such as filing proof of residence and paying certain charges.

The summary of terms of the depositary shares contained in this prospectus is not complete. You should refer to the forms of the deposit agreement, our restated certificate of incorporation, as amended, and the certificate of amendment for the applicable series of preferred stock that will be, filed with the Securities and Exchange Commission.

Dividends

The depositary will distribute cash dividends or other cash distributions, if any, received in respect of the series of preferred stock underlying the depositary shares to the record holders of depositary receipts in proportion to the number of depositary shares owned by those holders on the relevant record date. The relevant record date for depositary shares will be the same date as the record date for the preferred stock.

In the event of a distribution other than in cash, the depositary will distribute property received by it to the record holders of depositary receipts that are entitled to receive the distribution, unless the depositary determines that it is not feasible to make the distribution. If this occurs, the depositary, with our approval, may adopt another method for the distribution, including selling the property and distributing the net proceeds to the holders.

Liquidation preference

If a series of preferred stock underlying the depositary shares has a liquidation preference, in the event of the voluntary or involuntary liquidation, dissolution or winding up of Myriad Genetics, holders of depositary shares will be entitled to receive the fraction of the liquidation preference accorded each share of the applicable series of preferred stock, as set forth in the applicable prospectus supplement.

Redemption

If a series of preferred stock underlying the depositary shares is subject to redemption, the depositary shares will be redeemed from the proceeds received by the depositary resulting from the redemption, in whole or in part, of the preferred stock held by the depositary. Whenever we redeem any preferred stock held by the depositary, the depositary will redeem, as of the same redemption date, the number of depositary shares representing the preferred stock so redeemed. The depositary will mail the notice of redemption to the record holders of the depositary receipts promptly upon receiving the notice from us and fewer than 20 or more than 60 days, unless otherwise provided in the applicable prospectus supplement, prior to the date fixed for redemption of the preferred stock.

Voting

Upon receipt of notice of any meeting at which the holders of preferred stock are entitled to vote, the depositary will mail the information contained in the notice of meeting to the record holders of the depositary receipts underlying the preferred stock. Each record holder of those depositary receipts on the record date will be entitled to instruct the depositary as to the exercise

of the voting rights pertaining to the amount of preferred stock underlying that holder s depositary shares. The record date for the depositary will be the same date as the record date for the preferred stock. The depositary will try, as far as practicable, to vote the preferred stock underlying the depositary shares in accordance with these instructions. We will agree to take all action which may be deemed necessary by the depositary in order to enable the depositary to vote the preferred stock in accordance with these instructions. The depositary will not vote the preferred stock to the extent that it does not receive specific instructions from the holders of depositary receipts.

Withdrawal of preferred stock

Owners of depositary shares will be entitled to receive upon surrender of depositary receipts at the principal office of the depositary:

- the number of whole shares of preferred stock underlying their depositary shares; and
- payment of any unpaid amount due to the depositary.

Partial shares of preferred stock will not be issued. Holders of preferred stock will not be entitled to deposit the shares under the deposit agreement or to receive depositary receipts evidencing depositary shares for the preferred stock.

Amendment and termination of deposit agreement

The form of depositary receipt evidencing the depositary shares and any provision of the deposit agreement may be amended by agreement between us and the depositary. However, any amendment which materially and adversely alters the rights of the holders of depositary shares, other than fee changes, will not be effective unless the amendment has been approved by at least a majority of the outstanding depositary shares. The deposit agreement may be terminated by the depositary or us only if:

- all outstanding depositary shares have been redeemed; or
- there has been a final distribution of the preferred stock in connection with our dissolution and such distribution has been made to all the holders of depositary shares.

Charges of depositary

We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depositary arrangement. We will also pay charges of the depositary in connection with:

the initial deposit of the preferred stock;

the initial issuance of the depositary shares;

any redemption of the preferred stock; and

all withdrawals of preferred stock by owners of depositary shares.

Holders of depositary receipts will pay transfer, income and other taxes and governmental charges and other specified charges as provided in the deposit agreement for their accounts. If these charges have not been paid, the depositary may:

refuse to transfer depositary shares;

withhold dividends and distributions; and

sell the depositary shares evidenced by the depositary receipt.

Miscellaneous

The depositary will forward to the holders of depositary receipts all reports and communications we deliver to the depositary that we are required to furnish to the holders of the preferred stock. In addition, the depositary will make available for inspection by holders of depositary receipts at the principal office of the depositary, and at such other places as it may from time to time deem advisable, any reports and communications we deliver to the depositary as the holder of preferred stock.

Neither the depositary nor Myriad Genetics will be liable if either the depositary or Myriad Genetics is prevented or delayed by law or any circumstance beyond either the depositary or Myriad Genetics control in performing their respective obligations under the deposit agreement. Myriad Genetics obligations and the depositary s obligations will be limited to the performance in good faith of Myriad Genetics or the depositary s respective duties under the deposit agreement. Neither the depositary nor Myriad Genetics will be obligated to prosecute or defend any legal proceeding in respect of any depositary shares or preferred stock unless satisfactory indemnity is furnished. Myriad Genetics and the depositary may rely on:

written advice of counsel or accountants;

information provided by holders of depositary receipts or other persons believed in good faith to be competent to give such information; and

documents believed to be genuine and to have been signed or presented by the proper party or parties.

Resignation and removal of depositary

The depositary may resign at any time by delivering a notice to us. We may remove the depositary at any time. Any such resignation or removal will take effect upon the appointment of a successor depositary and its acceptance of such appointment. The successor depositary must be appointed within 60 days after delivery of the notice for resignation or removal. The successor depositary must be a bank and trust company having its principal office in the United States of America and having a combined capital and surplus of at least $150,000,000.

Federal income tax consequences

Owners of the depositary shares will be treated for Federal income tax purposes as if they were owners of the preferred stock underlying the depositary shares. As a result, owners will be entitled to take into account for Federal income tax purposes and deductions to which they would be entitled if they were holders of such preferred stock. No gain or loss will be recognized for Federal income tax purposes upon the withdrawal of preferred stock in exchange for depositary shares. The tax basis of each share of preferred stock to an exchanging owner of depositary shares will, upon such exchange, be the same as the aggregate tax basis of the depositary shares exchanged. The holding period for preferred stock in the hands of an exchanging owner of depositary shares will include the period during which such person owned such depositary shares.

Description of debt securities

The following description, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus. While the terms we have summarized below will apply generally to any future debt securities we may offer, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. If we indicate in a prospectus supplement, the terms of any debt securities we offer under that prospectus supplement may differ from the terms we describe below.

We will issue the senior notes under the senior indenture which we will enter into with a trustee to be named in the senior indenture. We will issue the subordinated notes under the subordinated indenture which we will enter into with a trustee to be named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement which includes this prospectus. We use the term indentures to refer to both the senior indenture and the subordinated indenture. The indentures will be qualified under the Trust Indenture Act. We use the term debenture trustee to refer to either the senior trustee or the subordinated trustee, as applicable.

The following summaries of material provisions of the senior notes, the subordinated notes and the indentures are subject to, and qualified in their entirety by reference to, all the provisions of the indenture applicable to a particular series of debt securities. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical.

General

We will describe in each prospectus supplement the following terms relating to a series of notes:

- the title;
- any limit on the amount that may be issued;
- whether or not we will issue the series of notes in global form, the terms and who the depositary will be;
- the maturity date;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- whether or not the notes will be secured or unsecured, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;

the place where payments will be payable;

our right, if any, to defer payment of interest and the maximum length of any such deferral period;

the date, if any, after which, and the price at which, we may, at our option, redeem the series of notes pursuant to any optional redemption provisions;

the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund provisions or otherwise, to redeem, or at the holder s option to purchase, the series of notes;

whether the indenture will restrict our ability to pay dividends, or will require us to maintain any asset ratios or reserves;

whether we will be restricted from incurring any additional indebtedness;

a discussion on any material or special United States federal income tax considerations applicable to the notes;

the denominations in which we will issue the series of notes, if other than denominations of $1,000 and any integral multiple thereof; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities.

Conversion or exchange rights

We will set forth in the prospectus supplement the terms on which a series of notes may be convertible into or exchangeable for our common stock or other securities of ours. We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock or other securities of ours that the holders of the series of notes receive would be subject to adjustment.

Consolidation, merger or sale

The indentures do not contain any covenant which restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the indentures or the notes, as appropriate.

Events of default under the indenture

The following are events of default under the indentures with respect to any series of notes that we may issue:

if we fail to pay interest when due and our failure continues for 90 days and the time for payment has not been extended or deferred;

if we fail to pay the principal, or premium, if any, when due and the time for payment has not been extended or delayed;

if we fail to observe or perform any other covenant contained in the notes or the indentures, other than a covenant specifically relating to another series of notes, and our failure continues for 90 days after we receive notice from the debenture trustee or holders of at least 25% in aggregate principal amount of the outstanding notes of the applicable series; and

if specified events of bankruptcy, insolvency or reorganization occur as to us.

If an event of default with respect to notes of any series occurs and is continuing, the debenture trustee or the holders of at least 25% in aggregate principal amount of the outstanding notes of that series, by notice to us in writing, and to the debenture trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, due and payable immediately.

The holders of a majority in principal amount of the outstanding notes of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the debenture trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of notes, unless such holders have offered the debenture trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding notes of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the debenture trustee, or exercising any trust or power conferred on the debenture trustee, with respect to the notes of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the debenture trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the notes of any series will only have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the debenture trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding notes of that series have made written request, and such holders have offered reasonable indemnity to the debenture trustee to institute the proceeding as trustee; and
- the debenture trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding notes of that series other conflicting directions within 60 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of notes if we default in the payment of the principal, premium, if any, or interest on, the notes.

We will periodically file statements with the debenture trustee regarding our compliance with specified covenants in the indentures.

Modification of indenture; waiver

We and the debenture trustee may change an indenture without the consent of any holders with respect to specific matters, including:

to fix any ambiguity, defect or inconsistency in the indenture; and

to change anything that does not materially adversely affect the interests of any holder of notes of any series.

In addition, under the indentures, the rights of holders of a series of notes may be changed by us and the debenture trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding notes of each series that is affected. However, we and the debenture trustee may only make the following changes with the consent of each holder of any outstanding notes affected:

- extending the fixed maturity of the series of notes;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or any premium payable upon the redemption of any notes; or
- reducing the percentage of notes, the holders of which are required to consent to any amendment.

Discharge

Each indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for obligations to:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

Form, exchange, and transfer

We will issue the notes of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of $1,000 and any integral multiple thereof. The indentures provide that we may issue notes of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on

behalf of, The Depository Trust Company or another depositary named by us and identified in a prospectus supplement with respect to that series. See Legal Ownership of Securities for a further description of the terms relating to any book-entry securities.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the notes of any series can exchange the notes for other notes of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the notes may present the notes for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the notes that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any notes. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the notes of each series.

If we elect to redeem the notes of any series, we will not be required to:

- issue, register the transfer of, or exchange any notes of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any notes that may be selected for redemption and ending at the close of business on the day of the mailing; or

- register the transfer of or exchange any notes so selected for redemption, in whole or in part, except the unredeemed portion of any notes we are redeeming in part.

Information concerning the debenture trustee

The debenture trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the debenture trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the debenture trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of notes unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and paying agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any notes on any interest payment date to the person in whose name the notes, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the notes of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, will we make interest payments by check which we will mail to the holder. Unless we otherwise indicate in a prospectus supplement, we will designate the corporate trust office of the debenture trustee in the City of New York as our sole paying agent for payments with respect to notes of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the notes of a particular series. We will maintain a paying agent in each place of payment for the notes of a particular series.

All money we pay to a paying agent or the debenture trustee for the payment of the principal of or any premium or interest on any notes which remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the security thereafter may look only to us for payment thereof.

Governing law

The indentures and the notes will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Subordination of subordinated notes

The subordinated notes will be unsecured and will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement. The subordinated indenture does not limit the amount of subordinated notes which we may issue. It also does not limit us from issuing any other secured or unsecured debt.

Description of warrants

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement which includes this prospectus.

General

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities.

We will evidence each series of warrants by warrant certificates that we will issue under a separate agreement. We will enter into the warrant agreement with a warrant agent. Each warrant agent will be a bank that we select which has its principal office in the United States and a combined capital and surplus of at least $50,000,000. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;

in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;

in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;

the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;

the terms of any rights to redeem or call the warrants;

any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;

the dates on which the right to exercise the warrants will commence and expire;

the manner in which the warrant agreement and warrants may be modified;

federal income tax consequences of holding or exercising the warrants;

the terms of the securities issuable upon exercise of the warrants; and

any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or

in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to 5:00 P.M. Salt Lake City, Utah time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as

provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised,

then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Enforceability of rights by holders of warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

Legal ownership of securities

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee maintain for this purpose as the holders of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as indirect holders of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

Book-entry holders

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary s book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Securities issued in global form will be registered in the name of the depositary or its participants. Consequently, for securities issued in global form, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a book-entry security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary s book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not holders, of the securities.

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Street name holders

We may terminate a global security or issue securities in non-global form. In these cases, investors may choose to hold their securities in their own names or in street name. Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal holders

Our obligations, as well as the obligations of any applicable trustee and of any third parties employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for the payment or notice even if that holder is required, under agreements with depositary participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of the indenture or for other purposes. In such an event, we would seek approval only from the holders, and not the indirect holders, of the securities. Whether and how the holders contact the indirect holders is up to the holders.

Special considerations for indirect holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders consent, if ever required;

whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;

how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and

if the securities are in book-entry form, how the depositary s rules and procedures will affect these matters.

Global securities

A global security is a security held by a depositary which represents one or any other number of individual securities. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in the applicable prospectus supplement, The Depository Trust Company, New York, New York, known as DTC, will be the depositary for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under Special Situations When a Global Security Will Be Terminated. As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued in global form only, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special considerations for global securities

As an indirect holder, an investor s rights relating to a global security will be governed by the account rules of the investor s financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only in the form of a global security, an investor should be aware of the following:

- An investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;

- An investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe under Legal Ownership of Securities above;

An investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;

An investor may not be able to pledge his or her interest in a global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;

The depositary s policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor s interest in a global security. We and any applicable trustee have no responsibility for any aspect of the depositary s actions or for its records of ownership interests in a global security. We and the trustee also do not supervise the depositary in any way;

The depositary may, and we understand that DTC will, require that those who purchase and sell interests in a global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and

Financial institutions that participate in the depositary s book-entry system, and through which an investor holds its interest in a global security, may also have their own policies affecting payments, notices and other matters relating to the securities. There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special situations when a global security will be terminated

In a few special situations described below, the global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own name, so that they will be direct holders. We have described the rights of holders and street name investors above.

The global security will terminate when the following special situations occur:

if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;

if we notify any applicable trustee that we wish to terminate that global security; or

if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depositary, and not we or any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

Plan of distribution

We may sell the securities being offered hereby in one or more of the following ways from time to time:

through dealers or agents to the public or to investors;

to underwriters for resale to the public or to investors;

directly to investors; or

through a combination of such methods.

We may determine the price or other terms of the securities offered under this prospectus by use of an electronic auction. We will describe how any auction will determine the price or other terms, how potential investors may participate in the auction and the nature of the underwriter s obligations in the related supplement to this prospectus.

We will set forth in a prospectus supplement the terms of the offering of securities, including:

- the name or names of any agents, dealers or underwriters;
- the purchase price of the securities being offered and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents or underwriters compensation;
- any initial public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchanges on which such securities may be listed.

Underwriters, dealers and agents that participate in the distribution of the securities may be deemed to be underwriters as defined in the Securities Act and any discounts or commissions they receive from us and any profit on their resale of the securities may be treated as underwriting discounts and commissions under the Securities Act. We will identify in the applicable prospectus supplement any underwriters, dealers or agents and will describe their compensation. We may have agreements with the underwriters, dealers and agents to indemnify them against specified civil liabilities, including liabilities under the Securities Act. Underwriters, dealers and agents may engage in transactions with or perform services for us or our subsidiaries in the ordinary course of their businesses.

Certain persons that participate in the distribution of the securities may engage in transactions that stabilize, maintain or otherwise affect the price of the securities, including over-allotment, stabilizing and short-covering transactions in such securities, and the imposition of penalty bids, in connection with an offering. Certain persons may also engage in passive market making transactions as permitted by Rule 103 of Regulation M. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker s bid, however, the passive market maker s bid must then be lowered when certain purchase limits are exceeded.

Legal matters

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, will provide us with an opinion as to the legal matters in connection with the securities we are offering. Members of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. and certain members of their families and trusts for their benefit own an aggregate of approximately 2,000 shares of common stock of the Company.

Experts

The consolidated financial statements of Myriad Genetics, Inc. as of June 30, 2004 and 2003 and for each of the years in the three-year period ended June 30, 2004 and the related consolidated financial statement schedule for each of the years in the three-year period ended June 30, 2004 have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, an independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

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 Station Place, 100 F Street, N.E., Room 1580, 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. In addition, our stock is listed for trading on the Nasdaq National Market. You can read and copy reports and other information concerning us at the offices of the National Association of Securities Dealers, Inc. located at 1735 K Street, Washington, D.C. 20006.

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.

Incorporation of documents by reference

The SEC allows us to incorporate by reference information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We filed a Registration Statement on Form S-3 under the Securities Act of 1933, as amended, with the SEC with respect to the securities stock being offered pursuant to this prospectus. This prospectus omits certain information contained in the Registration Statement, as permitted by the SEC. You should refer to the Registration Statement, including the exhibits, for further information about us and the securities being offered pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the Registration Statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the

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Registration Statement, including the documents incorporated by reference or the exhibits, may be obtained upon payment of the prescribed rates at the offices of the SEC listed above in Where to find more information. The documents we are incorporating by reference are:

(a) Our Annual Report on Form 10-K for the fiscal year ended June 30, 2004 (File No. 0-26642);

(b) Our Definitive Proxy Statement filed on October 15, 2004 (File No. 0-26642).

(c) Our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2004 (File No. 0-26642);

(d) Our Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2004 (File No. 0-26642);

(e) Our Current Reports on Form 8-K filed on November 12, 2004, December 9, 2004, December 28, 2004, January 12, 2005, February 23, 2005, February 23, 2005, March 1, 2005, March 24, 2005, March 25, 2005, and April 15, 2005 (File No. 0-26642);

(f) The description of the Common Stock contained in our Registration Statement on Form 8-A (File No. 0-26642) filed under the Securities Exchange Act of 1934, as amended (the Exchange Act), filed on August 17, 1995, including any amendment or report filed for the purpose of updating such description;

(g) The description of the Preferred Share Purchase Rights contained in the our Registration Statement on Form 8-A (File No. 0-26642) filed on July 18, 2001 under the Exchange Act, including any amendment or report filed for the purpose of updating such description; and

In addition, all documents subsequently filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, before the date our offering is terminated or complete are deemed to be incorporated by reference into, and to be a part of, this prospectus.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost, by contacting: Investor Relations, Myriad Genetics, Inc., 320 Wakara Way, Salt Lake City, Utah 84108. Our telephone number is (801) 584-3600.

You should rely only on information contained in, or incorporated by reference into, this prospectus and any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

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7,000,000 shares

Common stock

Prospectus supplement

Sole Book-Running Manager

JPMorgan

Co-Lead Managers

Bear, Stearns & Co. Inc. **UBS Investment Bank**

Co-Managers

Piper Jaffray **First Albany Capital** **JMP Securities**

October , 2005

You should rely only on the information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus supplement and the accompanying prospectus is accurate only as of the date of this prospectus supplement, regardless of the time of delivery of this prospectus supplement or of any sale of shares of our common stock.

No action is being taken in any jurisdiction outside the United States to permit a public offering of the shares of our common stock or possession or distribution of this prospectus supplement or the accompanying prospectus in that jurisdiction. Persons who come into possession of this prospectus supplement in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus supplement applicable to that jurisdiction.