As filed with the Securities and Exchange Commission on November 22, 2000

Registration No. 333-

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
Under
THE SECURITIES ACT OF 1933

MYRIAD GENETICS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

87-0494517
(I.R.S. Employer
Identification Number)

320 Wakara Way
Salt Lake City, UT 84108
(801) 584-3600
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Peter D. Meldrum
President and Chief Executive Officer
Myriad Genetics, Inc.
320 Wakara Way
Salt Lake City, UT 84108
(801) 584-3600
(Name, address, including zip code, and telephone number, including area code, of agent for service)

With a copy to:
Andrew J. Merken, Esquire
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
One Financial Center
Boston, Massachusetts 02111
(617) 542-6000

Approximate date of commencement of proposed sale to the public: As soon as practical after this Registration Statement becomes effective.

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

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

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

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

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

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED (1)	PROPOSED MAXIMUM OFFERING PRICE PER SHARE (2)	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE (2)	AMOUNT OF REGISTRATION FEE
Common Stock $0.01 par value	400,000	$73.75	$29,500,000	$7,788

(1) Includes an indeterminate number of shares of common stock as may from time to time be issued by reason of stock splits, stock dividends and other similar transactions, which shares are registered hereunder pursuant to Rule 416.

(2) The price of $73.75 per share, which was the average of the high and low prices of the common stock reported by the Nasdaq Stock Market on November 21, 2000, is set forth solely for the purpose of calculating the registration fee in accordance with Rule 457(c) of the Securities Act of 1933, as amended.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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

PROSPECTUS

Subject to Completion dated November 22, 2000

MYRIAD GENETICS, INC.

400,000 SHARES OF COMMON STOCK

This prospectus covers the sale by Acqua Wellington North American Equities Fund, Ltd. of 400,000 shares of common stock.

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

Our common stock is listed on the Nasdaq National Market under the symbol "MYGN." On November 21, the closing sale price of our common stock on the Nasdaq National Market was $71.13 per share.

Investing in our common stock involves risks. See "Risk Factors" beginning on page 3.

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

_____, 2000

TABLE OF CONTENTS

You may rely only on the information contained in this prospectus. We have not authorized anyone to provide information different from that contained in this prospectus. This prospectus is not an offer to sell nor is it seeking an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. The information contained in this prospectus is correct only as of the date of this prospectus, regardless of the time of the delivery of this prospectus or any sale of these securities.

You must also consult the more detailed financial statements, and notes to financial statements, incorporated by reference in this prospectus. This prospectus contains forward-looking statements and actual results could differ materially from those projected in the forward-looking statements as a result of certain of the risk factors as outlined in this prospectus.

The Company

We are a leader in the use of gene-based medicine to develop novel therapeutic and molecular diagnostic products. We are focused on the emerging field of proteomics, which involves establishing the relationship between protein function and particular diseases by identifying disease-specific proteins. We employ a variety of proprietary proteomic technologies to discover important disease genes and to understand the role these genes and their related proteins play in the onset and progression of disease. We have integrated these technologies using powerful bioinformatics and robotics systems to conduct our research efforts on a high-throughput basis. This integrated proteomics platform has enabled us to identify numerous proteins as promising targets for new proprietary drugs and molecular diagnostic tests.

Using our proprietary technologies, we have identified 22 drug targets to date. We have delivered 13 of these drug targets to our strategic partners based on our discovery of genes involved in breast cancer, brain cancer, prostate cancer, heart disease, dementia and other disorders. We have received total payments from our seven current strategic partners in excess of $100 million. We will receive additional milestone and royalty payments if our strategic partners develop and commercialize drugs from the thirteen targets we have delivered to them. Our current partners include Bayer Corporation, Eli Lilly and Company, Hitachi Ltd., Hoffmann-LaRoche Inc., Pharmacia Corporation, Novartis Corporation, Schering-Plough Corporation and Schering AG. We have also established a portfolio of nine new drug targets that we have retained for our own small molecule drug development program. We expect to independently develop, test and commercialize small molecule therapeutics from drug targets selected from our internal portfolio, particularly in the area of cancer. Outside of the oncology area, we expect to enter into future strategic partnerships for the clinical development of many of these targets.

We also focus on developing, marketing and selling molecular diagnostic products for predictive medicine and personalized medicine. We have developed and commercialized two innovative molecular diagnostic tests, one of which is used for analyzing breast and ovarian cancer susceptibility and the other for therapeutic management of hypertensive patients. In August 2000, we announced the future launch of a predictive medicine test for hereditary colon cancer and uterine cancer. Revenues from these proprietary tests grew approximately 70% from the prior year to $8.8 million in the fiscal year ended June 30, 2000.

Our business strategy is to understand the relationship between proteins and diseases in order to develop the next generation of therapeutic and molecular diagnostic products and includes the following key elements:

- Expand our proprietary proteomic databases. We will continue to expand our existing proprietary genetic and medical databases in Utah and Quebec, which accelerate our protein discovery efforts and are useful in target validation, pharmacogenomics and disease association studies.

- Discover important disease genes, understand their function and identify lead compounds. We will expand ProNet(R), our proprietary proteomic database, which is used to discover disease pathways, understand protein function and identify high quality drug targets. We will also continue to employ our ProTrap technology for high-throughput screening for lead compound identification.

- Selectively develop and commercialize therapeutic products. We intend to take selected compounds, particularly in the area of cancer, through the clinical development process. We are focusing on cancer due to the large unmet need for effective, less toxic drugs, the potential for fast track status that the FDA has typically afforded novel cancer drugs and our ability to leverage the expertise of our existing oncology sales force.

- Capitalize on our strategic alliances with major pharmaceutical companies. We expect to maintain and expand our strategic alliances. As we identify and develop lead compounds, we plan to enter into strategic

alliances with major pharmaceutical companies to diversify the risk of clinical stage drug development and to benefit from our potential partners' development expertise and marketing strength.

- Grow and expand our molecular diagnostic business. We will continue to increase the domestic and foreign market penetration of our existing molecular diagnostic tests and create additional tests to capitalize on the emergence of predictive and personalized medicine.

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. The information found on our website is not intended to be a part of this prospectus.

RISK FACTORS

You should carefully consider the following risk factors and all other information contained in this prospectus before purchasing our common stock. Investing in our common stock involves a high degree of risk. If any of the following risks actually occurs, we may not be able to conduct our business as currently planned and our financial condition and operating results could be seriously harmed. In that case, the market price of our common stock could decline, and you could lose all or part of your investment. See "Special Note Regarding Forward-Looking Statements."

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

We may be unable to continue to successfully develop or commercialize our technologies. Our technologies are still in the early stages of development and we have only recently begun to incorporate them into commercialized products.

We began operations in 1991 and have been engaged primarily in research directed toward the discovery and sequencing of genes that predispose people to common diseases and the development of molecular diagnostic tests and therapeutic products. In October 1996 we introduced for commercial use BRACAnalysis(R), our first diagnostic test. In January 1998 we introduced for commercial use CardiaRisk(R), our second diagnostic test. In August 2000, we announced the launch of COLARISO(TM), our most recent diagnostic test to be introduced.

We are beginning early stage preclinical development of therapeutic products for cancer and have delivered several drug targets to our collaborators for further development by them. Any therapeutic products under development by us or our collaborators will take several more years to develop and undergo extensive preclinical and clinical testing. Additionally, therapeutic products are subject to substantial regulatory review. We or any of our collaborators may be unable to discover or develop any therapeutic or additional diagnostic products through the utilization of our technologies. Even if we or our collaborators develop products for commercial use, we or they may not, however, 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;
- are manufacturable in sufficient quantities or at reasonable cost; or
- are successfully marketed.

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 or achieve significant revenues. For example, we experienced net losses of $8,722,102 during the year ended June 30, 2000, $9,995,453 during the year ended June 30, 1999 and $9,797,035 during the year ended June 30, 1998. We had an accumulated deficit of $52,661,982 as of June 30, 2000. In order to develop and commercialize our technologies, we expect to incur significant increases in our expenses over the next several years. In addition, we expect significant increases in expenses in connection with our internal research programs and any therapeutic product that we independenty seek to develop, test and commercialize. As a result, we expect to incur operating losses at least for the foreseeable future. Our ability to achieve significant revenues or profitability will depend upon numerous factors, including, our ability to:

- obtain and maintain strategic collaborations;

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

- create and introduce additional marketable molecular diagnostic tests.

If we or our collaborative partners are unable to overcome financial and regulatory obstacles, including those that arise in connection with new technologies, then we may never be able to develop commercially viable therapeutic products.

We are currently initiating the development of potential therapeutic products, which will require significant research and development expenditures, extensive preclinical and clinical testing and regulatory approvals. Preclinical and clinical testing will require the expenditure of significant funds. Even after spending significant funds, we may not be able to develop or successfully commercialize any potential therapeutic products.

Therapeutic products that we or our collaborative partners may develop will be subject to the risks of failure inherent in the development of therapeutic products based on new technologies. These risks include the possibilities that:

- potential therapeutic products will be found to be unsafe or ineffective or otherwise fail to receive necessary regulatory clearances;

- the products, if safe and effective, will be difficult to manufacture on a large scale or uneconomical to market;

- proprietary rights of third parties will preclude us or our partners from marketing our products; or

- third parties will market superior or equivalent products.

In addition, before receiving all required FDA approvals to market any product, we or our partners will have to demonstrate that the product is safe and effective on the patient population and for the diseases that would be treated. The clinical testing, manufacturing and marketing of products are subject to the rigorous testing and approval process of the FDA and equivalent foreign regulatory authorities, which can take many years and requires the expenditure of substantial financial and other resources. We or our collaborative partners may never obtain regulatory approvals for any products that we develop. Moreover, if regulatory approval of a product is granted, this approval may impose limitations on the indicated uses for which it may be marketed. Further, even if such regulatory approval is obtained, a marketed product and its manufacturer are subject to continuing review, and the discovery of previously unknown problems with a product or manufacturer may result in restrictions on such product or manufacturer, including withdrawal of the product from the market.

Clinical trials or marketing of any potential therapeutic products may expose us to liability claims from the use of these therapeutic products. We may not be able to obtain product liability insurance or, if obtained, sufficient coverage may not be available at a reasonable cost. In addition, as we develop therapeutic products internally, we will have to make significant investments in therapeutic product development, marketing, sales and regulatory compliance resources. We will also have to establish or contract for the manufacture of products, including supplies of drugs used in clinical trials, under the current good manufacturing practices of the FDA, which can be time consuming and costly.

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

We currently depend heavily and will depend heavily in the future on third parties for support in product development, manufacturing, marketing and distribution. Part of our current business strategy is to form collaborative arrangements with strategic partners to develop and commercialize therapeutic products based on our gene discoveries. We may not be able to maintain our current collaborative arrangements or negotiate additional

acceptable collaborative arrangements in the future.

The research phase of our collaborations expire after a fixed term. In particular, the research phase of our collaborations with Schering-Plough Corporation and with Novartis Corporation each ended successfully in April 2000. 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 the 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. In addition, there have been a significant number of recent consolidations among pharmaceutical companies. These consolidations among the companies with which we are collaborating could result in the diminution or termination of, or delays in, the development or commercialization of the products or research programs under one or more of our collaborative agreements.

BRACAnalysis(R), CardiaRisk(R), COLARIS(TM) and any other molecular diagnostic tests 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. While we have marketed BRACAnalysis for several years and have gained some acceptance with oncologists and surgeons, we need to convince the larger group of obstetricians/gynecologists and primary care physicians of the benefits of BRACAnalysis in order to increase our sales of the test. We introduced our newer products CardiaRisk in August 1998 and COLARIS in August 2000 and may not succeed in achieving commercial acceptance of either test. Our ability to successfully commercialize BRACAnalysis, CardiaRisk and COLARIS, as well as any other molecular diagnostic tests 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 diagnostic techniques.

. 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 tests and will

likely heavily influence physicians' decisions to recommend our products. To date, no third-party payors have been willing to reimburse patients for CardiaRisk.

. The willingness of physicians and patients to utilize molecular diagnostic tests 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 tests 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 tests, 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.

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

Research in the field of genomics and proteomics 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 and diagnostic companies, biotechnology firms, universities and other research institutions, including those receiving funding from the Human Genome Project. 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, characterize their function, develop therapeutic and diagnostic 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 diagnostic 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 or our collaborative partners may not be able to develop therapeutic or diagnostic 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 diagnostic products that circumvent our technologies or products. Or, our competitors may succeed in developing technologies or products that are more effective than those developed by us and our collaborative partners or that would render technology or products of us and our collaborators 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 our current collaborators or scientific advisors terminate their relationships with us or develop relationships with a competitor, our ability to discover genes and commercialize therapeutic and diagnostic

products could be adversely affected.

We have relationships with collaborators at academic and other institutions who conduct research at our request. These 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. We have established collaborations with the University of Utah, Intermountain Health Care, and Galileo Genomics, Inc. to pursue the discovery of genes involved in cancer, cardiovascular disease, obesity, osteoporosis, asthma, and certain central nervous system disorders. Our ability to discover genes involved in human disease and commercialize therapeutic and diagnostic 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 or all 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.

The termination of one or more license agreements that are important in our research and development activities would harm our business.

We are a party to various license agreements under which we have rights to use certain technologies owned by other companies in our proprietary research, development and testing processes. One of these agreements, with Roche Molecular Systems, Inc., is of material importance to us and is renewable on an annual basis at the option of both parties. We may not be able to continue to license this technology or, if the license were terminated, find suitable alternatives to this technology on timely or commercially reasonable terms, if at all. The loss of the right to use this technology that we have licensed would harm our business.

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 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 diagnostic products. Our ongoing gene discovery programs and our efforts to develop therapeutic products and molecular diagnostic tests will require substantial cash resources. If, for example, a new disease gene is discovered through these efforts, we would require funds in addition to our current operating plan to develop and launch a new molecular diagnostic product. Additionally, if we discover a new drug target with promising therapeutic properties, we would require funding in addition to our current operating plan to move the candidate drug into preclinical studies and human clinical trials. If, due to changes in our current operating plan, adequate funds are not available, we may be required to raise additional funds. Sources of additional capital resources include, but are not limited to, public or private equity financings, establishing a credit facility, or selling convertible debt securities. This additional funding may not be available to us or, if available, it may not be on reasonable terms.

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. If additional funds are raised by issuing equity securities, existing shareholders may suffer significant dilution.

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

The establishment and operation of our molecular diagnostic 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 and by comparable regulatory agencies in other countries where we or any collaborative partner might seek to market services and products that may be developed. On the state level, only New York has implemented regulations concerning molecular diagnostic testing and we have been accredited under the Clinical Laboratory Evaluation Program by the Department of Health of the State of New York for BRACAnalysis(R), CardiaRisk(R), and COLARISO. Failure to maintain state regulatory compliance, or changes in state regulatory schemes, could result in a substantial curtailment or even prohibition of Myriad Laboratories' 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 molecular diagnostic 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 U.S. Food and Drug Administration has elected not to substantially regulate the activities or diagnostic 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 tests in the future. If the FDA should require that these tests receive FDA approval prior to their use in our laboratory, this approval may not be received on a timely basis, if at all.

If the FDA decides to regulate molecular diagnostic testing , or if groups such as insurance companies and employers discriminate against individuals with a genetic predisposition to a disease, then demand for our molecular diagnostic tests may decrease.

Molecular diagnostic testing has raised ethical issues regarding confidentiality and the appropriate uses of information provided by this testing. For these reasons, governmental authorities place restrictions on, or regulate the use of, molecular diagnostic testing. Also, it is possible that discrimination by insurance companies against patients shown to have a genetic predisposition to a particular disease could occur through the raising of premiums by insurers to prohibitive levels, outright cancellation of insurance or unwillingness to provide coverage. We could experience a delay in market penetration or a reduction in the size of our potential serviceable market, which would adversely affect future revenue, if insurance discrimination were to become a significant barrier to testing acceptance. Similarly, employers could discriminate against employees with a genetic predisposition to a disease due to the increased risk for disease resulting in possible cost increases for health insurance and the potential for lost employment time. Any of these scenarios could cause us to experience a delay or reduction in test acceptance, which could materially adversely affect our business.

If we are not able to protect our proprietary technology, our business will be harmed and we may not remain competitive.

Our success will depend, in part, on our ability to obtain patent protection, both in the United States and in other countries, for genes we discover, for the function of the protein produced by the genes 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. The patent position of biotechnology firms generally is highly uncertain and involves complex legal and factual questions. To date there has not emerged from the United States Patent and Trademark Office, or PTO, or the courts a consistent policy regarding the breadth of claims allowed in biotechnology patents. Our or our licensors' 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.

Our products may also conflict with patents that have been or may be granted to others. As the biotechnology industry expands and more patent applications are filed and patents are issued, the risk increases that our products may give rise to a declaration of interference by the PTO, or to claims of patent infringement by other companies, institutions or individuals. 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 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. In addition, there is considerable pressure on academic institutions to publish discoveries in the genetic field. Such a publication by an academic collaborator of ours, prior to the filing of a patent application on this discovery, may compromise our ability to obtain U.S. and foreign patent protection for the discovery.

If a third party files a patent application with claims to a 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 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. 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 industry includes many organizations seeking to rapidly identify and characterize genes through the use of gene expression analysis and other technologies. To the extent any patents are issued to those organizations on partial or full-length genes or uses for such genes, the risk increases that the sale of our diagnostic products currently being marketed or under development, and any sales of therapeutic drugs developed by us or our collaborators, 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 gene products that are similar or identical to our products. Any of these patent applications may have priority over our patent applications. Any legal action against us or our collaborators claiming damages and seeking to enjoin commercial activities relating to the affected products and processes could, in addition to subjecting us to potential liability for damages, require us or our collaborators to obtain a license in order to continue to manufacture or market the affected products and processes or could enjoin us from continuing to manufacture or market the affected products and processes, thereby significantly increasing our costs associated with, and significantly delaying, product introduction and marketing. We or our collaborators may not prevail in any of these actions and any license required under any of these patents may not be available on commercially acceptable terms, if at all. 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.

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 molecular diagnostic testing and information business and may have a material adverse effect on our business.

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 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 two suppliers to provide our gene sequencing machines and reagents required in connection with our research. We believe that currently there are limited alternative suppliers of gene sequencing machines and reagents. The gene sequencing machines 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 or an adequate supply of reagents or other ingredients at commercially reasonable rates, our ability to continue to identify genes and perform molecular diagnostic testing would be adversely affected.

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 molecular diagnostic products, including possible misdiagnoses. Although we are insured against such risks up to a $13,000,000 annual aggregate limit in connection with the use of our products, 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 also may expose us to liability inherent in the testing, manufacturing and marketing of prospective therapeutic products. Liability claims may be asserted against us. We have obtained product liability and other related insurance, but we may not be able to maintain this insurance on acceptable terms.

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 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.

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

The market prices for securities of biotechnology and genomic 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. 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:

- quarterly fluctuations in operating results;
- announcements by us, our collaborative partners or our present or potential competitors;
- technological innovations or new commercial products or services;
- regulatory approval developments;
- developments or disputes concerning patent or proprietary rights; or
- public concern regarding the safety, efficacy or other implications of the products or services developed or to be developed by us or our collaborators.

CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and within the meaning of Section 21E of the Securiries Exchange Act of 1934. We have based these forward-looking statements on our current expectations and projections about future events. These forward-looking statements include, but are not limited to, statements concerning payments to be received under agreements with our collaborative partners, as well as our plans to:

- continue development of our current products under development;
- conduct clinical trials with respect to our products under development;
- utilize our capital resources and the net proceeds from this offering and the time periods related thereto;
- engage third-party manufacturers to supply our clinical trials and commercial requirements;
- seek regulatory approvals;
- establish a marketing and distribution capability for future therapeutic products that we independently develop; and
- evaluate additional products under development for subsequent clinical and commercial development.

In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "potential," "continue," "expects," "anticipates," "intends," "plans," "believes," "estimates" and similar expressions. These statements are based on our current beliefs, expectations and assumptions and are subject to a number of risks and uncertainties. Actual results and events may vary significantly from those discussed in the forward-looking statements. A description of certain risks that could cause our results to vary appears under the caption "Risk Factors" and elsewhere in this prospectus. These forward-looking statements are made as of the date of this prospectus. In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this prospectus might not occur.

TRADEMARKS

Myriad(R), our graphical logo device, BRACAnalysis(R), CardiaRisk(R), ProNet(R), ProTrap(TM), and COLARIS(TM) are trademarks of Myriad Genetics, Inc. Other trademarks used in this prospectus are the property of their respective owners. The domain names and website addresses "www.myriad.com" and "www.myriad-pronet.com," and all rights thereto, are registered in the name of and owned by Myriad Genetics, Inc.

SELLING STOCKHOLDER

The common stock offered in this prospectus was issued by us to the selling stockholder in a transaction exempt from the registration requirements of the Securities Act. The selling stockholder, including its transferees, pledgees or donees or their successors, may from time to time offer and sell any or all of the common stock.

The selling stockholder has represented to us that it purchased the common stock for its own account for investment only and not with a view toward selling or distributing the shares, except through sales registered under the Securities Act or exemptions. We agreed with the selling stockholder to file this registration statement to register the resale of the common stock. We agreed to prepare and file all necessary amendments and supplements to the registration statement to keep it effective until the earlier of (i) the date that all common stock covered by this registration statement has been sold or (ii) the date that all common stock covered by this registration statement can be sold without any restriction pursuant to Rule 144(k).

The following table shows information, as of November 9, 2000, with respect to the selling stockholder and the principal amounts of our common stock it beneficially owns and the number of shares that may be offered under this prospectus. The information is based on information provided by or on behalf of the selling stockholder.

The selling stockholder may offer all, some or none of the common stock. Thus, we cannot estimate the amount of the common stock that will be held by the selling stockholder upon termination of any sales. The selling stockholder has not had any material relationship with us or our affiliates within the past three years.

	SHARES OWNED PRIOR TO OFFERING		MAXIMUM NUMBER OF SHARES OFFERED	SHARES OWNED AFTER COMPLETION OF THE OFFERING (3)	
NAME OF SELLING STOCKHOLDER	NUMBER	PERCENT (2)		NUMBER	PERCENT
Acqua Wellington North American Equities Fund, Ltd. (1)	750,000	3.3%	400,000	350,000	1.5%

(1) Mr. Anthony L.M. Inder Rieden, a Director of Acqua Wellington North American Equities Fund, Ltd., has voting and investment power over the shares.

(2) Percentage of ownership prior to the offering is based on 22,745,459 shares of common stock outstanding on November 9, 2000.

(3) Number of shares and percentage after completion of the offering assumes that all of the shares held by the selling stockholder and being offered under this prospectus are sold, that the shares are sold to unaffiliated third parties and that the selling stockholder acquires no additional shares of common stock before completion of this offering.

PLAN OF DISTRIBUTION

We are registering the shares of common stock on behalf of the selling stockholder. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market prices, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected at various times in one or more of the following transactions, or in other kinds of transactions:

- transactions on the Nasdaq National Market or on any national securities exchange or U.S. inter-dealer system of a registered national securities association on which our common stock may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in private transactions and transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- in connection with short sales of the shares;
- by pledge to secure debt and other obligations;
- through the writing of options, whether the options are listed on an options exchange or otherwise;
- in connection with the writing of non-traded and exchange-traded call options, in hedge transactions and in settlement of other transactions in standardized or over-the-counter options; or
- through a combination of any of the above transactions.

The selling stockholder and its successors, including its transferees, pledgees or donees or their successors, may sell the common stock directly to purchasers or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling stockholder or the purchasers. These discounts, concessions or commissions as to any particular underwriter, broker-dealer or agent may be in excess of those customary in the types of transactions involved.

In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 of the Securities Act may be sold under Rule 144 rather than pursuant to this prospectus.

We entered into a registration rights agreement for the benefit of the selling stockholder to register our common stock under applicable federal and state securities laws. The registration rights agreement provides for cross-indemnification of the selling stockholder and us and our respective directors, officers and controlling persons against specific liabilities in connection with the offer and sale of the common stock, including liabilities under the Securities Act. We will pay substantially all of the expenses incurred by the selling stockholder incident to the offering and sale of the common stock.

LEGAL MATTERS

The validity of the shares of common stock offered in this prospectus will be passed upon for Myriad Genetics, Inc. by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. of Boston, Massachusetts. Certain attorneys at Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. beneficially own an aggregate of 2,000 shares of common stock of Myriad Genetics, Inc.

EXPERTS

The consolidated financial statements of Myriad Genetics, Inc. as of June 30, 2000 and 1999 and for each of the years in the three-year period ended June 30, 2000 have been incorporated by reference herein and in the registration statement in reliance on the report of KPMG LLP, independent certified public accountants, incorporated by reference herein, and upon the authority of said firm, as experts in accounting and auditing.

WHERE TO FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission, or SEC. You may read and copy any document we file a the public reference facilities of the SEC located at 450 Fifth Street, N.W., Washington, D.C. 20549. You may obtain information on the operation of the SEC's public reference facilities by calling the SEC at 1-800-SEC-0330. You can also access copies of such material electronically on the SEC's home page on the World Wide Web at http;//www.sec.gov. Reports, proxy statements and other information concerning us is also available for inspection at the National Association of Securties Dealers, Inc. at 1835 K Street, N.W., 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 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, or obtain a copy from the SEC upon payment of the fee prescribed by the SEC. You may also view the Registration Statement, including the exhibits and schedules, on the SEC's web site at www.sec.gov.

INCORPORATION OF DOCUMENTS BY REFERENCE

This prospectus is part of a Registration Statement on Form S-3 that we have filed with the SEC. The SEC permits us to "incorporate by reference" the information that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file with the SEC after the date of this prospectus will automatically update and supersede this information. We incorporate by reference the following documents filed by us with the SEC (File No. 0-26642). We also incorporate by reference any future filings made with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securties Exchange Act of 1934, after the date of this prospectus until the termination of this offering.

1. Amendment No.1 to Form 10-K on Form 10-K/A for the year ended June 30, 2000 filed November 15, 2000;

2. Annual Report on Form 10-K for the year ended June 30, 2000 filed on September 13, 2000;

3. Quarterly Report on Form 10-Q for the quarter ended September 30, 2000 filed on November 14, 2000;

4. Definitive Proxy Statement for Special Meeting of Stockholders, filed on July 27, 2000;

5. Definitive Proxy Statement for Annual Meeting of Stockholders, filed on October 13, 2000; and

6. The description of the common stock contained in our Registration Statement on Form 8-A filed with the SEC on August 17, 1995 including any amendments or reports filed for the purpose of updating such description.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the Company's estimates (other than the SEC registration fee) of the expenses in connection with the issuance and distribution of the shares of common stock being registered. None of the following expenses are being paid by the selling stockholder.

Item	Amount
SEC registration fee.....	$ 7,788
Financial printing expenses.....	$ 2,500
Legal fees and expenses.....	$25,000
Accounting fees and expenses.....	$ 4,500
Miscellaneous fees and expenses.....	$ 2,212
Total.....	$42,000

Item 15. Indemnification of Directors and Officers.

Section 145(a) of the General Corporation Law of the State of Delaware provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that he is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no cause to believe his conduct was unlawful.

Section 145(b) provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted under similar standards, except that no indemnification may be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the court in which such action or suit was brought shall determine that despite the adjudication of liability, such person is fairly and reasonably entitled to be indemnified for such expenses which the court shall deem proper.

Section 145 further provides that to the extent a director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsections (a) and (b) or in the defense of any claim, issue or matter therein, he shall be indemnified against expenses actually and reasonably incurred by him in connection therewith; that indemnification provided for by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and that the corporation may purchase and maintain insurance on behalf of a director or officer of the corporation against any liability asserted against him or incurred by him in any such capacity or arising out of his status as such whether or not the corporation would have the power to indemnify him against such liabilities under such Section 145.

The Restated Certificate of Incorporation, as amended, and Restated By-laws of the Company provide for indemnification of the Company's directors and officers to the fullest extent permitted by law. The Restated Certificate of Incorporation, as amended, and the Restated By-laws also permit the Board of Directors to authorize the Company to purchase and maintain insurance against any liability asserted against any director, officer, employee or agent of the Company arising out of his capacity as such. Insofar as indemnification for liabilities under the Securities Act may be permitted to directors, officers, or controlling persons of the Company pursuant to the Company's Restated Certificate of Incorporation, as amended, its Restated By-laws and the Delaware General Corporation Law, the Company has been informed that in the opinion of the Commission such indemnification is against public policy as expressed in such Act and is therefore unenforceable.

As permitted by Section 102(b)(7) of the Delaware General Corporation Law, the Company's Restated Certificate of Incorporation, as amended, provides that directors of the Company shall not be personally liable to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Company or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, relating to prohibited dividends or distributions or the repurchase or redemption of stock or (iv) for any transaction from which the director derives an improper personal benefit. As a result of this provision, the Company and its stockholders may be unable to obtain monetary damages from a director for breach of his or her duty of care.

Item 16. Exhibits.

Exhibit Number	Description
(4.1(a))***	Restated Certificate of Incorporation of the Registrant
(4.1(b))***	Certificate of Amendment of Restated Certificate of Incorporation of the Registrant
(4.2)**	Restated By-laws of the Company
(4.3)#	Form of Common Stock Certificate
(4.4)	Purchase Agreement dated as of October 27, 2000 between the Company and Acqua Wellington North America Equities Fund, Ltd.
(4.5)	Registration Rights Agreement dated as of October 27, 2000 between the Company and Acqua Wellington North America Equities Fund, Ltd.
(5.1)	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. regarding legality
(23.1)	Consent of KPMG LLP
(23.2)	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (see Exhibit 5.1)
(24.1)	Power of Attorney (included on signature page)

*** Previously filed and incorporated herein by reference from the Company's Form 10-K for the fiscal year ended June 30, 2000.
** Previously filed and incorporated herein by reference from the Company's Form 10-Q for the period ending September 30, 1995.
# Previously filed and incorporated herein by reference from the Company's Registration Statement on Form S-1, File No. 33-95970.

Item 17. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

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

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

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3 or Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered

therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) If the registrant is a foreign private issuer, to file a post-effective amendment to the registration statement to include any financial statements required by Item 8.A of Form 20-F at the start of any delayed offering or through a continuous offering. Financial statements and information otherwise required by Section 10(a)(3) of the Act need not be furnished, provided that the registrant includes in the prospectus, by means of a post-effective amendment, financial statements required pursuant to this paragraph (a)(4) and other information necessary to ensure that all other information in the prospectus is a least as current as the date of those financial statements. Notwithstanding the foregoing, with respect to registration statements on Form F-3, a post-effective amendment need not be filed to include financial statements and information required by Section 10(a)(3) of the Act or Item 8.A. of Form 20-F if such financial statements and information are contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the Form F-3.

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

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

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Salt Lake City, State of Utah on November 22, 2000.

Myriad Genetics, Inc.

By: /s/ Peter D. Meldrum

Peter D. Meldrum
President and Chief Executive Officer

POWER OF ATTORNEY

The registrant and each person whose signature appears below constitutes and appoints Peter D. Meldrum and Jay M. Moyes and each of them singly, his, her or its true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him, her or it and in his, her or its name, place and stead, in any and all capacities, to sign and file (i) any and all amendments (including post-effective amendments) to this Registration Statment, with all exhibits thereto, and other documents in connection therewith, and (ii) a registration statement, and any and all amendments thereto, relating to the offering covered hereby filed pursuant to Rule 462(b) under the Securities Act of 1933, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he, she, or it might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title(s)	Date
/s/ Peter D. Meldrum - --- Peter D. Meldrum	President, Chief Executive Officer and Director (principal executive officer)	November 22, 2000
/s/ Jay M. Moyes - --- Jay M. Moyes	Vice President of Finance and Chief Financial Officer (principal financial and accounting officer)	November 22, 2000
/s/ John J. Horan - --- John J. Horan	Chairman of the Board	November 22, 2000
/s/ Walter Gilbert, Ph.D - --- Walter Gilbert, Ph.D	Vice Chairman of the Board	November 22, 2000

/s/ Mark H. Skelnick, Ph.D. - ---------- Mark H. Skelnick, Ph.D.	Chief Scientific Officer and Director	November 22, 2000
/s/ Arthur H. Hayes, Jr., M.D. - ---------- Arthur H. Hayes, Jr., M.D.	Director	November 22, 2000
/s/ Dale A. Stringfellow, Ph.D. - ---------- Dale A. Stringfellow, Ph.D.	Director	November 22, 2000
/s/ Alan J. Main, Ph.D. - ---------- Alan J. Main, Ph.D.	Director	November 22, 2000
/s/ Michael J. Berendt, Ph.D. - ---------- Michael J. Berendt, Ph.D.	Director	November 22, 2000
/s/ Linda S. Wilson, Ph.D - ---------- Linda S. Wilson, Ph.D.	Director	November 22, 2000

EXHIBIT INDEX

Exhibit Number	Description
(4.1(a))***	Restated Certificate of Incorporation of the Registrant
(4.1(b))***	Certificate of Amendment of Restated Certificate of Incorporation of the Registrant
(4.2)**	Restated By-laws of the Company
(4.3)#	Form of Common Stock Certificate
(4.4)	Purchase Agreement dated as of October 27, 2000 between the Company and Acqua Wellington North America Equities Fund, Ltd.
(4.5)	Registration Rights Agreement dated as of October 27, 2000 between the Company and Acqua Wellington North America Equities Fund, Ltd.
(5.1)	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. regarding legality
(23.1)	Consent of KPMG LLP
(23.2)	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (see Exhibit 5.1)
(24.1)	Power of Attorney (included on signature page)

*** Previously filed and incorporated herein by reference from the Company's Form 10-K for the fiscal year ended June 30, 2000.

** Previously filed and incorporated herein by reference from the Company's Form 10-Q for the period ending September 30, 1995.

Previously filed and incorporated herein by reference from the Company's Registration Statement on Form S-1, File No. 33-95970.

Exhibit 4.4

PURCHASE AGREEMENT

This PURCHASE AGREEMENT (this "Agreement"), dated as of October 27, 2000, is entered into by and between Myriad Genetics Inc., a Delaware corporation with offices at 320 Wakara Way, Salt Lake City, Utah 84108 (the "Company"), and Acqua Wellington North American Equities Fund, Ltd., a company organized under the laws of the Commonwealth of the Bahamas, with offices c/o Fortis Fund Services (Bahamas) Ltd., Montague Sterling Centre, East Bay Street, P. O. Box SS-6238, Nassau, Bahamas (the "Purchaser"), for the purchase and sale of shares of the common stock, par value $0.01 per share (the "Common Stock"), of the Company by the Purchaser, in the manner, and upon the terms, provisions and conditions set forth in this Agreement.

WHEREAS, the parties desire that, upon the terms and subject to the conditions contained herein, the Company shall issue and sell to the Purchaser and Purchaser shall purchase shares of Common Stock; and

WHEREAS, such purchase and sale will be made in reliance upon the provisions of Section 4(2) and Rule 901 of Regulation S ("Regulation S") of the United States Securities Act of 1933, as amended and regulations promulgated thereunder (the "Securities Act"), or upon such other exemption from the registration requirements of the Securities Act as may be available with respect to any or all of the purchases of Common Stock to be made hereunder.

NOW, THEREFORE, in consideration of the representations, warranties and agreements contained herein and other good and valuable consideration, the receipt and legal adequacy of which is hereby acknowledged by the parties, the Company and the Purchaser hereby agree as follows:

1. Purchase Price.

(a) Upon the following terms and subject to the conditions contained herein, the Purchaser hereby agrees to purchase 400,000 shares of the Company's Common Stock (the "Shares") at a per share price of $102.50 and for an aggregate purchase price of $41,000,000 (the "Purchase Price").

(b) The Company has authorized and has reserved and covenants to continue to reserve, free of preemptive rights and other similar contractual rights of stockholders, a sufficient number of its authorized but unissued shares of its Common Stock, to effect the issuance of the Shares.

(c) The closing under this Agreement shall take place at the offices of the Parker Chapin LLP, The Chrysler Building, 405 Lexington Avenue, New York, New York 10174 at 1:00 p.m. (eastern time) upon the satisfaction of each of the conditions set forth in Section 5 hereof (the "Closing Date").

2. Representations, Warranties and Covenants of the Purchaser. The Purchaser represents and warrants to the Company, and covenants for the benefit of the Company, as follows:

(a) This Agreement has been duly authorized, validly executed and delivered by the Purchaser and is a valid and binding agreement and obligation of the Purchaser enforceable against the Purchaser in accordance with its terms, subject to limitations on enforcement by general principles of equity and by bankruptcy or other laws affecting the enforcement of creditors' rights generally, and the Purchaser has full power and authority to execute and deliver this Agreement and the other agreements and documents contemplated hereby and to perform its obligations hereunder and thereunder.

(b) The Purchaser has received and carefully reviewed copies of the Public Document (as hereinafter defined). The Purchaser understands that no Federal, state, local or foreign governmental body or regulatory authority has made any finding or determination relating to the fairness of an investment in any of the Shares and that no Federal, state, local or foreign governmental body or regulatory authority has recommended or endorsed, or will recommend or endorse, any investment in any of the Shares. The Purchaser, in making the decision to purchase the Shares, has relied upon independent investigation made by it and has not relied on any information or representations made by third parties.

(c) The Purchaser understands that the Shares are being offered and sold to it in reliance on specific provisions of Federal and state securities laws and that the Company is relying upon the truth and accuracy of the representations, warranties, agreements, acknowledgments and understandings of the Purchaser set forth herein for purposes of qualifying for exemptions from registration under the Securities Act, and applicable state securities laws.

(d) The Purchaser is not a "U.S. Person" (as defined in Rule 902(k) of Regulation S) and is not acquiring any of the Shares for the account or benefit of any U.S. Person.

(e) The Shares were not offered to the Purchaser in the United States and at the time of execution of this Agreement and the time of any offer to the Purchaser to purchase the Shares, the Purchaser was physically outside of the "United States" (as defined in Rule 902(l) of Regulation S). The offer leading to the sale evidenced hereby was made in an "offshore transaction" (as defined in Rule 902(h) of Regulation S).

(f) The Purchaser is and will be acquiring the Shares for such Purchaser's own account, and not with a view to any resale or distribution of the Shares in whole or in part, in violation of the Securities Act or any applicable securities laws.

(g) The offer and sale of the Shares is intended to be exempt from registration under the Securities Act, by virtue of Section 4(2) and Regulation S promulgated under the Securities Act. The Purchaser understands that the Shares purchased hereunder have not been,

and may never be, registered under the Securities Act and that none of the Shares can be sold, transferred, assigned, pledged, subjected to any lien or security interest or otherwise conveyed to a U.S. Person or for the account or benefit of a U.S. Person unless in accordance with the provisions of Regulation S, pursuant to registration of the Shares under the Securities Act and such state and other securities laws as may be applicable or in the opinion of counsel for the Company an exemption from registration under the Securities Act is available (and then the Shares may be sold, transferred, assigned, pledged, subjected to a lien or security interest or otherwise conveyed only in compliance with such exemption and all applicable state and other securities laws).

(h) The Purchaser (i) has such knowledge, experience and sophistication in financial and business matters as to be capable of evaluating the merits and risks of an investment in the Company and the Shares; (ii) recognizes that such Purchaser's investment in the Company involves a high degree of risk; and (iii) is capable of bearing the entire loss of its investment in the Shares.

(i) The Purchaser agrees not to engage in hedging transactions with regard to the Shares unless in compliance with the Securities Act.

(j) The Purchaser is neither a registered broker-dealer nor an affiliate of a registered broker-dealer.

3. Representations, Warranties and Covenants of the Company. The Company represents and warrants to the Purchaser, and covenants for the benefit of the Purchaser, as follows:

(a) The Company has been duly incorporated and is validly existing and in good standing under the laws of the state of Delaware, with full corporate power and authority to own, lease and operate its properties and to conduct its business as currently conducted, and is duly registered and qualified to conduct its business and is in good standing in each jurisdiction or place where the nature of its properties or the conduct of its business requires such registration or qualification, except where the failure to register or qualify would not shave a Material Adverse Effect. For purposes of this agreement, "Material Adverse Effect" shall mean any effect on the business, results of operations, assets or financial condition of the Company that is material and adverse to the Company and its subsidiaries, taken as a whole and/or any condition, circumstance, or situation that would prohibit the Company from entering into and performing any of its obligations under this Agreement in any material respect.

(b) The Company has furnished the Purchaser with copies of the Company's most recent Annual Report on Form 10-K for the fiscal year ended June 30, 2000 filed with the Commission (the "Public Document"), provided, that the Purchaser acknowledges that the Company intends to file an amendment to such Public Document. The Public Document at the time of its filing did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements contained therein, in light of the circumstances under which they were made, not misleading. As used herein, "Commission

Documents" means all reports, schedules, forms, statements and other documents filed by the Company with the Commission pursuant to the reporting requirements of the Exchange Act, including material filed pursuant to Section 13(a) or 15(d) of the Exchange Act.

(c) The Shares have been duly authorized by all necessary corporate action and, when paid for by the Purchaser and issued in accordance with the terms hereof, the Shares shall be validly issued, will be fully paid and non-assessable.

(d) Each of this Agreement and the Registration Rights Agreement attached hereto as Exhibit A (the "Registration Rights Agreement") has been duly authorized, validly executed and delivered on behalf of the Company and is a valid and binding agreement and obligation of the Company enforceable against the Company in accordance with its terms, subject to limitations on enforcement by general principles of equity and by bankruptcy or other laws affecting the enforcement of creditors' rights generally, and the Company has full power and authority to execute and deliver this Agreement and the other agreements and documents contemplated hereby and to perform its obligations hereunder and thereunder.

(e) The execution and delivery of this Agreement and the Registration Rights Agreement, the issuance of any of the Shares and the consummation of the transactions contemplated by this Agreement and the Registration Rights Agreement by the Company, will not (i) conflict with or result in a breach of or a default under any of the terms or provisions of, (A) the Company's certificate of incorporation or by-laws, or (B) of any material provision of any indenture, mortgage, deed of trust or other material agreement or instrument to which the Company is a party or by which it or any of its material properties or assets is bound, (ii) result in a violation of any material provision of any law, statute, rule, regulation, or any existing applicable decree, judgment or order by any court, Federal or state regulatory body, administrative agency, or other governmental body having jurisdiction over the Company, or any of its material properties or assets or (iii) result in the creation or imposition of any material lien, charge or encumbrance upon any material property or assets of the Company or any of its subsidiaries pursuant to the terms of any agreement or instrument to which any of them is a party or by which any of them may be bound or to which any of their property or any of them is subject except in the case of clauses (i)(B) or (iii) for any such conflicts, breaches, or defaults or any liens, charges, or encumbrances which would not have a Material Adverse Effect.

(f) The sale and issuance of the Shares in accordance with the terms and on the basis of the representations and warranties set forth in this Agreement will be exempt from the registration requirements of the Securities Act.

(g) No consent, approval or authorization of or designation, declaration or filing with any governmental authority on the part of the Company is required in connection with the valid execution and delivery of this Agreement or the offer, sale or issuance of the Shares or the consummation of any other transaction contemplated by this Agreement (other than any filings which may be required to be made by the Company with the Securities and Exchange Commission, or Nasdaq or pursuant to any state or "blue sky" securities laws subsequent to the Closing, and, any registration statement which may be filed pursuant to this Agreement).

(h) There is no action, suit, claim or proceeding before or by any court or governmental agency or body, domestic or foreign, now pending against or affecting the Company, or any of its properties, which questions the validity of the Agreement, the Registration Rights Agreement or the transactions contemplated thereby or any action taken or to be take pursuant thereto. There is no action, suit, claim or proceeding before or by any court or governmental agency or body, domestic or foreign, now pending against or affecting the Company, or any of its properties, which, if adversely determined, is reasonably likely to result in a Material Adverse Effect.

(i) Subsequent to the dates as of which information is given in the Public Document, except as contemplated herein, the Company has not incurred any material liabilities or material obligations, direct or contingent, or entered into any material transactions not in the ordinary course of business.

(j) The Company has sufficient title and ownership of all trademarks, service marks, trade names, copyrights, patents, trade secrets and other proprietary rights ("Intellectual Property") necessary for its business as
---
now conducted and as proposed to be conducted as described in the Public Document or the Commission Documents except for any of the foregoing, the absence of which would not reasonably be likely to result in a Material Adverse Effect and, to its knowledge without any conflict with or infringement of the rights of others. Except as set forth in the Public Documents or the Commission Documents, there are no material outstanding options, licenses or agreements of any kind relating to the Intellectual Property, nor is the Company bound by or party to any material options, licenses or agreements of any kind with respect to the Intellectual Property of any other person or entity.

(k) The Company has complied and will comply with all applicable federal and state securities laws in connection with the offer, issuance and sale of the Shares hereunder. Neither the Company nor anyone acting on its behalf, directly or indirectly, has or will sell, offer to sell or solicit offers to buy any of the Shares, or similar securities to, or solicit offers with respect thereto from, or enter into any preliminary conversations or negotiations relating thereto with, any person, or has taken or will take any action so as to bring the issuance and sale of any of the Shares under the registration provisions of the Securities Act and any other applicable federal and state securities laws. Neither the Company nor any of its affiliates, nor any person acting on its or their behalf, has engaged in any form of general solicitation or general advertising in connection with any of the Shares.

(l) Neither this Agreement or the Schedules hereto nor the Registration Rights Agreement contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements made herein or therein, in the light of the circumstances under which they were made herein or therein, not misleading.

(m) The authorized capital stock of the Company and the shares thereof issued and outstanding as of the date hereof are set forth on Schedule 3(m) attached hereto. All of the outstanding shares of the Company's
- -------------
Common Stock have been duly and validly authorized, and

are fully paid and non-assessable. Except as set forth in this Agreement, the Public Documents the Commission Documents or on Schedule 3(m) attached hereto, as of the date hereof, no shares of Common Stock are entitled to preemptive rights or registration rights and there are no outstanding options, warrants, scrip, rights to subscribe to, call or commitments of any character whatsoever relating to, or securities or rights convertible into, any shares of capital stock of the Company. Furthermore, except as set forth in this Agreement, in the Public Documents, the Commission Documents or on Schedule 3(m) as of the date hereof, there are no contracts, commitments, understandings, or arrangements by which the Company is or may become bound to issue additional shares of the capital stock of the Company or options, securities or rights convertible into shares of capital stock of the Company. Except as disclosed in the Commission Documents and except for customary transfer restrictions contained in agreements entered into by the Company in order to sell restricted securities, as of the date hereof, the Company is not a party to any agreement granting registration rights to any person with respect to any of its equity or debt securities. The Company is not a party to, and it has no knowledge of, any agreement restricting the voting or transfer of any shares of the capital stock of the Company. The offer and sale of all capital stock, convertible securities, rights, warrants, or options of the Company issued prior to the Closing complied with all applicable federal and state securities laws, and no stockholder has a right of rescission or damages with respect thereto which is reasonably likely to have a Material Adverse Effect. The Company has furnished or made available to the Purchaser true and correct copies of the Company's Certificate of Incorporation as in effect on the date hereof (the "Certificate"), and the Company's Bylaws as in effect on the date hereof (the "Bylaws").

(n) In connection with the offer and sale of the Shares, no distributor or any affiliates or any person acting on behalf of the Company or any affiliate of the Company or any distributor has engaged in any "directed selling efforts" (as such term is defined in Rule 902(c) of Regulation S) nor conducted any general solicitation relating to the offer to persons residing within the United States or to "U.S. Persons" (as such term is defined in Rule 902(o) of Regulation S).

(o) Prior to the effectiveness of the Registration Statement (as defined in the Registration Rights Agreement), the Company will use its best efforts to list the Shares for trading on the Nasdaq National Market system or any relevant market or system, if applicable, and will comply in all material respects with the Company's reporting, filing and other obligations under the bylaws or rules of the NASD and NASDAQ system or any relevant market or system.

(p) The Company may not issue a press release or otherwise make a public statement or announcement with respect to the transaction contemplated hereby prior to the Closing Date. In the event that the Company is required by law or regulations to issue a press release or otherwise make a public statement or announcement with respect to this Agreement after the Closing Date, the Company shall consult with the Purchaser on the form and substance of such press release or other disclosure.

4. Conditions Precedent: The obligations hereunder of both the Company and the Purchaser to enter into this Agreement is subject to their satisfaction or waiver, at or before the Closing, of each of the conditions set forth below. These conditions are for the Company's and the Purchaser's sole benefit respectively, and they may waive their own rights at any time in their sole discretion.

(a) The parties shall have executed and delivered this Agreement and the Registration Rights Agreement.

(b) The Company shall have delivered certificates evidencing the Shares to the Purchaser.

(c) Upon receipt of the certificates evidencing the Shares, the Purchaser shall have delivered to the Company immediately available funds as payment in full of the Purchase Price for the Shares.

(d) The Purchaser shall have received a legal opinion in substantially the form annexed hereto as Exhibit A.

5. Legends. Unless otherwise provided below, each certificate representing the Shares shall be stamped or otherwise imprinted with a legend substantially in the following form (the "Legend"):

"THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY STATE SECURITIES LAWS AND MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED, HYPOTHECATED OR OTHERWISE DISPOSED OF UNLESS IN ACCORDANCE WITH REGULATION S OF THE SECURITIES ACT, REGISTERED UNDER THE SECURITIES ACT AND UNDER APPLICABLE STATE SECURITIES LAWS OR MYRIAD GENETICS INC. (THE "COMPANY") SHALL HAVE RECEIVED AN OPINION, IN FORM, SCOPE AND SUBSTANCE REASONABLY ACCEPTABLE TO THE COMPANY, OF COUNSEL WHO IS REASONABLY ACCEPTABLE TO THE COMPANY THAT REGISTRATION OF SUCH SECURITIES UNDER THE SECURITIES ACT AND UNDER THE PROVISIONS OF APPLICABLE FEDERAL AND STATE SECURITIES LAWS IS NOT REQUIRED.

HEDGING TRANSACTIONS INVOLVING THE SECURITIES REPRESENTED HEREBY MAY NOT BE CONDUCTED UNLESS IN COMPLIANCE WITH THE SECURITIES ACT."

6. Fees and Expenses. Except as otherwise set forth in this Agreement and the Registration Rights Agreement, each of the Company and the Purchaser shall pay its respective fees and expenses related to the transactions contemplated by this Agreement and the Registration Rights Agreement.

7. Indemnification.

(a) The Company hereby agrees to indemnify and hold harmless the Purchaser and its officers, directors, shareholders, employees, agents and attorneys against any and all losses, claims, damages, liabilities and reasonable expenses incurred by each such person in connection with defending or investigating any such claims or liabilities, whether or not resulting in any liability to such person, to which any such indemnified party may become subject, insofar as such losses, claims, demands, liabilities and expenses arise out of or are based upon any breach of any representation or warranty made by the Company in this Agreement.

(b) The Purchaser hereby agrees to indemnify and hold harmless the Company and its officers, directors, shareholders, employees, agents and attorneys against any and all losses, claims, damages, liabilities and expenses incurred by each such person in connection with defending or investigating any such claims or liabilities, whether or not resulting in any liability to such person, to which any such indemnified party may become subject under the Securities Act, or under any other statute, at common law or otherwise, insofar as such losses, claims, demands, liabilities and expenses arise out of or are based upon (i) any untrue statement or alleged untrue statement of a material fact made by the Purchaser, (ii) any omission or alleged omission of a material fact with respect to the Purchaser or (iii) any breach of any representation, warranty or agreement made by the Purchaser in this Agreement.

8. Governing Law; Consent to Jurisdiction. This Agreement shall be governed by and interpreted in accordance with the laws of the State of New York without giving effect to the rules governing the conflicts of laws. Each of the parties consents to the exclusive jurisdiction of the Federal courts whose districts encompass any part of the County of New York located in the City of New York in connection with any dispute arising under this Agreement and hereby waives, to the maximum extent permitted by law, any objection, including any objection based on forum non conveniens, to the bringing of any such proceeding in such jurisdictions. Each party waives its right to a trial by jury. Each party to this Agreement irrevocably consents to the service of process in any such proceeding by the mailing of copies thereof by registered or certified mail, postage prepaid, to such party at its address set forth herein or its agent. Nothing herein shall affect the right of any party to serve process in any other manner permitted by law.

9. Notices. All notices and other communications provided for or permitted hereunder shall be made in writing by hand delivery, express overnight courier, registered first class mail, or telecopier, initially to the address set forth below, and thereafter at such other address, notice of which is given in accordance with the provisions of this Section.

(a) if to the Company:

Myriad Genetics Inc.
320 Wakara Way
Salt Lake City, Utah 84108
Tel. No.: (801) 584-3600
Fax No.: (801) 584-3640
Attn: President

with a copy to:

Lewis J. Geffen, Esq.
Mintz Levin Cohn Ferris Glovsky and Popeo PC
One Financial Center
Boston, Massachusetts 02111
Tel. No.: (617) 542-6000
Fax No.: (617) 542-2241

(b) if to the Purchaser:

Acqua Wellington North American Equities Fund, Ltd.
c/o Fortis Fund Services (Bahamas) Ltd.
Montague Sterling Centre
East Bay Street, P. O. Box SS-6238
Nassau, Bahamas
Attention: Anthony L.M. Inder Rieden
Tel. No.: (242) 394-2700
Fax No.: (242) 394-9667

with a copy to:

Parker Chapin LLP
The Chrysler Building
405 Lexington Avenue
New York, New York 10174
Attention: Christopher S. Auguste
Tel. No.: (212) 704-6000
Fax No.: (212) 704-6288

All such notices and communications shall be deemed to have been duly given: when delivered by hand, if personally delivered; when receipt is acknowledged, if telecopied; or when actually received or refused if sent by other means.

10. Entire Agreement. This Agreement and the Registration Rights Agreement constitute the entire understanding and agreement of the parties with respect to the subject matter hereof and supersedes all prior and/or contemporaneous oral or written proposals or agreements relating thereto all of which are merged herein. This Agreement may not be amended or any provision hereof waived in whole or in part, except by a written amendment signed by both of the parties.

11. Counterparts. This Agreement may be executed by facsimile signature and in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[end of page]

IN WITNESS WHEREOF, this Agreement was duly executed on the date first written above.

MYRIAD GENETICS INC.

By: /s/ Peter D. Meldrum
Name: Peter D. Meldrum
Title: President and C.E.O.

ACQUA WELLINGTON NORTH AMERICAN EQUITIES FUND, LTD.

By: /s/ Helen A. Forbes
Name: Helen A. Forbes
Title: Secretary

EXHIBIT A TO THE
COMMON STOCK PURCHASE AGREEMENT
OPINION OF COUNSEL

1. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full power and authority (corporate and other) to conduct its business as presently conducted by it and to enter into and perform the Purchase Agreement and the Registration Rights Agreement and to carryout the transactions contemplated thereby. There are no jurisdictions in which, to our knowledge, the nature of the Company's properties or the transaction of its business, makes the Company's qualification to do business as a foreign corporation necessary, except for those jurisdictions in which the Company is qualified, to our knowledge, to do business as a foreign corporation or those jurisdictions in which failure to be so qualified would not have a Material Adverse Effect.

2. The execution, delivery and performance by the Company of the Purchase Agreement and the Registration Rights Agreement have been duly authorized by all necessary corporate action of the Company, and each of the Purchase Agreement and the Registration Rights Agreement has been duly executed and delivered by the Company. The Purchase Agreement and the Registration Rights Agreement each constitutes a valid and binding obligation of the Company enforceable in accordance with its terms.

3. The issuance, sale and delivery of the Shares in accordance with the Purchase Agreement have been duly authorized by all necessary corporate action on the part of the Company and, when delivered against payment in full as provided in the Purchase Agreement, will be validly issued, fully paid and nonassessable. To our knowledge, the Shares are free and clear of all liens, charges, restrictions, claims and encumbrances imposed by or through the Company. Neither the issuance, sale or delivery of the Shares is subject to any preemptive right of stockholders of the Company arising under law or the Certificate of Incorporation or By-laws of the Company, each as amended to date.

4. The execution and delivery of the Purchase Agreement and the Registration Rights Agreement and the performance by the Company of its obligations thereunder, do not (A) violate any provision of the Certificate of Incorporation or By-laws of the Company, each as amended to date, (B) violate, conflict with or constitute a default under any material contract, commitment, trust or agreement of any kind known to us to which the Company is a party or by which it is bound or (C) violate the Delaware General Corporation Law or any U.S. federal statute, regulation or rule or, to our knowledge, any judgment, decree, writ, order or injunction of any arbitrator, court or governmental authority binding upon the Company.

5. To our knowledge, there is no action, suit, proceeding or arbitration pending against or threatened against or affecting the Company before any court or arbitrator or

any governmental body, agency or official which, if adversely determined, is reasonably likely to result in a Material Adverse Effect, or which in any manner questions the validity of the Purchase Agreement and the issuance of the Shares pursuant thereto, or the Registration Rights Agreement

6. To our knowledge, all authorizations, consents, approvals and clearances of all governmental agencies and authorities and of third parties required in order to permit the issuance by the Company of the Shares pursuant to the Purchase Agreement (other than any filings which may be required to be made by the Company with the Commission, or Nasdaq subsequent to the Closing, and, any registration statement which may be filed pursuant to the Purchase Agreement or the Registration Rights Agreement) have been obtained.

7. Subject to the truth and accuracy of the representations and warranties of the Purchaser set forth in Section 2 of the Purchase Agreement, the offer, issuance and sale of the Shares pursuant to the Purchase Agreement will be exempt from registration under the Securities Act of 1933, as amended, pursuant to Rule 4(2) and Regulation S promulgated thereunder.

REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement is made and entered into as of October 27, 2000 (this "Agreement"), by and between Myriad Genetics Inc., a Delaware corporation (the "Company"), and Acqua Wellington North American Equities Fund, Ltd., a limited liability company organized under the laws of the Commonwealth of the Bahamas (the "Purchaser")

This Agreement is being entered into pursuant to the Purchase Agreement, dated as of the date hereof, by and between the Company and the Purchaser (the "Purchase Agreement").

The Company and the Purchaser hereby agree as follows:

1. Definitions.

Capitalized terms used and not otherwise defined herein shall have the meanings given such terms in the Purchase Agreement. As used in this Agreement, the following terms shall have the following meanings:

Capitalized terms used and not otherwise defined herein shall have the meanings given such terms in the Purchase Agreement. As used in this Agreement, the following terms shall have the following meanings:

"Advice" shall have the meaning set forth in Section 3(m).

"Affiliate" means, with respect to any Person, any other Person that directly or indirectly controls or is controlled by or under common control with such Person. For the purposes of this definition, "control," when used with respect to any Person, means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise; and the terms of "affiliated," "controlling" and "controlled" have meanings correlative to the foregoing.

"Blackout Period" shall have the meaning set forth in Section 3(n).

"Board" shall have the meaning set forth in Section 3(n).

"Business Day" means any day except Saturday, Sunday and any day which shall be a legal holiday or a day on which banking institutions in the state of New York generally are authorized or required by law or other government actions to close.

"Commission" means the Securities and Exchange Commission.

"Common Stock" means the Company's Common Stock, par value $0.01 per share.

"Effectiveness Date" means with respect to the Registration Statement
the earlier of the 90th day following the Closing Date, before which the Company will use its best efforts to cause the registration statement to become effective, and the date which is within five (5) Business Days of the date on which the Commission informs the Company that the Commission (i) will not review the Registration Statement or (ii) that the Company may request the acceleration of the effectiveness of the Registration Statement.

"Effectiveness Period" shall have the meaning set forth in Section 2.

"Event" shall have the meaning set forth in Section 7(e).

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Filing Date" means the date the Registration Statement is filed which
date shall be no later than the 30th day following the Closing Date.

"Holder" or "Holders" means the holder or holders, as the case may be,
from time to time of Registrable Securities including, including without limitation, the Purchaser and its assignees.

"Indemnified Party" shall have the meaning set forth in Section 5(c).

"Indemnifying Party" shall have the meaning set forth in Section 5(c).

"Liquidated Damages" shall have the meaning set forth in Section 7(e).

"Losses" shall have the meaning set forth in Section 5(a).

"Nasdaq" shall mean the Nasdaq National Market.

"Person" means an individual or a corporation, partnership, trust,
incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or political subdivision thereof) or other entity of any kind.

"Proceeding" means an action, claim, suit, investigation or proceeding
(including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

"Prospectus" means the prospectus included in the Registration
Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A promulgated under the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by the Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference in such Prospectus.

"Registrable Securities" means (i) the shares of Common Stock issued
pursuant to the Purchase Agreement (the "Common Shares") and upon any stock split, stock dividend, recapitalization or similar event with respect to such Common Shares, and (ii) any other dividend or other distribution with respect to, conversion or exchange of, or in replacement of, Registrable Securities.

"Registration Statement" means the registration statement and any additional registration statements contemplated by Section 2, including (in each case) the Prospectus, amendments and supplements to such registration statement or Prospectus, including pre- and post-effective amendments, all exhibits thereto, and all material incorporated by reference in such registration statement.

"Rule 144" means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"Rule 158" means Rule 158 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"Rule 415" means Rule 415 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"Securities Act" means the Securities Act of 1933, as amended.

"Special Counsel" means any special counsel to the Holders, for which the Holders will be reimbursed by the Company pursuant to Section 4.

2. Registration. On or prior to the Filing Date, the Company shall prepare and file with the Commission a "shelf" Registration Statement covering all Registrable Securities for an offering to be made on a continuous basis pursuant to Rule 415. The Registration Statement shall be on Form S-3 (except if the Company is not then eligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form in accordance herewith). The Company shall use its best efforts to cause the Registration Statement to be declared effective under the Securities Act (including filing with the Commission a request for acceleration of effectiveness in accordance with Rule 12dl-2 promulgated under the Exchange Act within five (5) Business Days of the date that the Company is notified (orally or in writing, whichever is earlier) by the Commission that a Registration Statement will not be "reviewed," or not be subject to further review) as soon as possible after the filing thereof, but in any event prior to the Effectiveness Date, and to keep such Registration Statement continuously effective under the Securities Act until such date as is the earlier of (x) the date when all Registrable Securities covered by such Registration Statement have been sold or (y) the date on which the Registrable Securities may be sold without any restriction pursuant to Rule 144(k) as determined by the counsel to the Company pursuant to a written opinion letter, addressed to the Company's transfer agent to such effect (the "Effectiveness Period").

3. Registration Procedures.

In connection with the Company's registration obligations hereunder, the Company shall:

(a) Prepare and file with the Commission on or prior to the Filing Date, a Registration Statement on Form S-3 (or if the Company is not then eligible to register for resale the Registrable Securities on Form S-3 such registration shall be on another appropriate form in accordance herewith) in accordance with the method or methods of distribution thereof as specified by the Holders (except if otherwise directed by the Holders), and use its best efforts to cause the Registration Statement to become effective and remain effective as provided herein; provided, however, that not less than three (3) Business Days prior to the filing of the Registration Statement or any related Prospectus or any amendment or supplement thereto (including any document that would be incorporated therein by reference), the Company shall (i) furnish to the Holders and any Special Counsel, copies of all such documents proposed to be filed, which documents (other than those incorporated by reference) will be subject to the review of such Holders and such Special Counsel, and (ii) at the request of any Holder cause its officers and directors, counsel and independent certified public accountants to respond to such inquiries as shall be necessary, in the reasonable opinion of counsel to such Holders, to conduct a reasonable investigation within the meaning of the Securities Act. The Company shall not file the Registration Statement or any such Prospectus or any amendments or supplements thereto containing information about the Holders or the distribution of securities owned by the Holders ("Holder Information") if the Holders of a majority of the Registrable Securities or any Special Counsel shall reasonably object in writing within three (3) Business Days of their receipt thereof to any of the Holder Information unless the Company has received an opinion of counsel to the effect that such disclosure is required by applicable law, rules or regulations (including Nasdaq regulations).

(b) Prepare and file with the Commission such amendments, including post-effective amendments, to the Registration Statement as may be necessary to keep the Registration Statement continuously effective as to the applicable Registrable Securities for the Effectiveness Period and prepare and file with the Commission such additional Registration Statements in order to register for resale under the Securities Act all of the Registrable Securities; (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement, and as so supplemented or amended to be filed pursuant to Rule 424 (or any similar provisions then in force) promulgated under the Securities Act; (iii) respond as promptly as practicable to any comments received from the Commission with respect to the Registration Statement or any amendment thereto and as promptly as practicable provide the Holders true and complete copies of all correspondence from and to the Commission relating to the Registration Statement; and (iv) comply in all material respects with the provisions of the Securities Act and the Exchange Act with respect to the disposition of all Registrable Securities covered by the Registration Statement during the applicable period in accordance with the intended methods of disposition by the Holders thereof set forth in the Registration Statement as so amended or in such Prospectus as so supplemented.

(c) Notify the Holders of Registrable Securities to be sold and any Special Counsel as promptly as practicable (and, in the case of (i)(A) below, not less than three (3) Business Days prior to such filing) and (if requested by any such Person) confirm such notice in writing no later than one (1) Business Day following the day (i)(A) when a Prospectus or any Prospectus supplement or post-effective amendment to the Registration Statement is proposed to be filed; (B) when the Commission notifies the Company whether there will be a "review" of such Registration Statement and whenever the Commission comments in writing on such Registration Statement and (C) with respect to the Registration Statement or any post-effective amendment, when the same has become effective; (ii) of any request by the Commission or any other Federal or state governmental authority for amendments or supplements to the Registration Statement or Prospectus or for additional information with respect to the Registration Statement or the Prospectus; (iii) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement covering any or all of the Registrable Securities or the initiation of any Proceedings for that purpose; (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose; and (v) of the occurrence of any event that makes any statement made in the Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to the Registration Statement, Prospectus or other documents so that, in the case of the Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

The Company shall promptly furnish to Special Counsel, without charge, (i) any correspondence from the Commission or the Commission's staff to the Company or its representatives relating to any Registration Statement and (ii) promptly after the same is prepared and filed with the Commission, a copy of any written response to the correspondence received from the Commission.

(d) Use its best efforts to avoid the issuance of, or, if issued, obtain the withdrawal of, (i) any order suspending the effectiveness of the Registration Statement or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, at the earliest practicable moment.

(e) If requested by the Holders of a majority in interest of the Registrable Securities, (i) promptly incorporate in a Prospectus supplement or post-effective amendment to the Registration Statement such information as the Company reasonably agrees should be included therein and (ii) make all required filings of such Prospectus supplement or such post-effective amendment as soon as practicable after the Company has received notification of the matters to be incorporated in such Prospectus supplement or post-effective amendment.

(f) Furnish to each Holder and any Special Counsel, without charge, at least one conformed copy of each Registration Statement and each amendment thereto, including financial statements and schedules, all documents incorporated or deemed to be incorporated therein by reference, and all exhibits to the extent requested by such Person (including those

previously furnished or incorporated by reference) as soon as practicable after the filing of such documents with the Commission.

(g) Promptly deliver to each Holder and any Special Counsel, without charge, as many copies of the Registration Statement, Prospectus or Prospectuses (including each form of prospectus) and each amendment or supplement thereto as such Persons may reasonably request; and the Company hereby consents to the lawful use of such Prospectus and each amendment or supplement thereto by each of the selling Holders in connection with the offering and sale of the Registrable Securities covered by such Prospectus and any amendment or supplement thereto.

(h) Prior to any public offering of Registrable Securities, use its best efforts to register or qualify or cooperate with the selling Holders and any Special Counsel in connection with the registration or qualification (or exemption from such registration or qualification) of such Registrable Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions within the United States as any Holder requests in writing, to keep each such registration or qualification (or exemption therefrom) effective during the Effectiveness Period and use its commercially reasonable best efforts to do any and all other acts or things reasonably necessary or advisable to enable the disposition in such jurisdictions of the Registrable Securities covered by a Registration Statement; provided, however, that the Company shall
not be required to qualify generally to do business in any jurisdiction where it is not then so qualified or to take any action that would subject it to general service of process in any such jurisdiction where it is not then so subject or subject the Company to any tax in any such jurisdiction where it is not then so subject.

(i) Cooperate with the Holders to facilitate the timely preparation and delivery of certificates representing Registrable Securities to be sold pursuant to a Registration Statement, which certificates shall be free of all restrictive legends, and to enable such Registrable Securities to be in such denominations and registered in such names as any Holder may request at least two (2) Business Days prior to any sale of Registrable Securities.

(j) Upon the occurrence of any event contemplated by Section 3(c)(v), as promptly as practicable, prepare a supplement or amendment, including a post-effective amendment, to the Registration Statement or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, neither the Registration Statement nor such Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(k) Use its best efforts to cause all Registrable Securities relating to such Registration Statement to be listed on Nasdaq and any other securities exchange, quotation system, market or over-the-counter bulletin board, if any, on which the same securities issued by the Company are then listed as and when required pursuant to the Purchase Agreement, and will comply in all material respects with the Company's reporting, filing and other obligations under the bylaws or rules of the National Association of Securities Dealers, Inc. and the Nasdaq system or any other applicable market or system.

(l) Comply in all material respects with all applicable rules and regulations of the Commission and make generally available to its security holders earning statements satisfying the provisions of Section 11(a) of the Securities Act and Rule 158 not later than forty-five (45) days after the end of any twelve (12)-month period (or ninety (90) days after the end of any twelve (12)-month period if such period is a fiscal year) commencing on the first day of the first fiscal quarter of the Company after the effective date of the Registration Statement, which statement shall conform to the requirements of Rule 158.

The Purchaser and each selling Holder whose shares are covered by a Registration Statement shall furnish to the Company information regarding such Holder and the distribution of such Registrable Securities as is required by law to be disclosed in the Registration Statement, and the Company may exclude from such registration the Registrable Securities of any such Holder who fails to furnish such information within a reasonable time prior to the filing of each Registration Statement, supplemented Prospectus and/or amended Registration Statement. If any Registration Statement or Prospectus refers to any Holder by name or otherwise as the Holder of any securities of the Company, then such Holder shall promptly notify the Company of any fact of which the Holder becomes aware and the happening of any event which relates to the Holder or distribution of such securities owned by such Holder which results in the Registration Statement or the Prospectus included in such Registration Statement containing an untrue statement of material fact or omitting to state a material fact required to be stated therein or necessary to make the statements therein not misleading and shall provide to the Company such information as shall be necessary to enable the Company to prepare a supplement or post-effective Amendment to such Registration Statement or Prospectus or any document incorporated therein by reference or file any other document required so that the Registration Statement or Prospectus will not contain an untrue statement of material fact or omit to state a material fact required to be stated therein.

If the Registration Statement refers to any Holder by name or otherwise as the holder of any securities of the Company, then such Holder shall have the right to require (if such reference to such Holder by name or otherwise is not required by the Securities Act or any similar federal statute then in force) the deletion of the reference to such Holder in any amendment or supplement to the Registration Statement filed or prepared subsequent to the time that such reference ceases to be required.

Each Holder covenants and agrees that (i) it will not sell any Registrable Securities under the Registration Statement until it has received copies of the Prospectus as then amended or supplemented as contemplated in Section 3(g) and notice from the Company that such Registration Statement and any post-effective amendments thereto have become effective as contemplated by Section 3(c) and (ii) it and its officers, directors or Affiliates, if any, will comply with the prospectus delivery requirements of the Securities Act as applicable to them in connection with sales of Registrable Securities pursuant to the Registration Statement.

Each Holder agrees by its acquisition of such Registrable Securities that, upon receipt of a notice from the Company of the occurrence of any event of the kind described in Section 3(c)(ii), 3(c)(iii), 3(c)(iv) or 3(c)(v), such Holder will forthwith discontinue disposition of such Registrable Securities under the Registration Statement until such Holder's receipt of the copies of the supplemented Prospectus and/or amended Registration Statement contemplated by

Section 3(j), or until it is advised in writing (the "Advice") by the Company
that the use of the applicable Prospectus may be resumed, and, in either case, has received copies of any additional or supplemental filings that are incorporated or deemed to be incorporated by reference in such Prospectus or Registration Statement.

(m) If (i) there is material non-public information regarding the Company which the Company's Board of Directors (the "Board") reasonably determines not to be in the Company's best interest to disclose and which the Company is not otherwise required to disclose, or (ii) there is a significant business opportunity (including, but not limited to, the acquisition or disposition of assets (other than in the ordinary course of business) or any merger, consolidation, tender offer or other similar transaction) available to the Company which the Board reasonably determines not to be in the Company's best interest to disclose and which the Company would be required to disclose under the Registration Statement, then the Company may suspend effectiveness of a registration statement and suspend the sale of Registrable Securities under a Registration Statement for a period not to exceed thirty (30) consecutive days, provided that the Company may not suspend its obligation under this Section 3(m) for more than forty-five (45) days in the aggregate during any twelve (12) month period (each, a "Blackout Period"); provided, however, that no such suspension shall be permitted for consecutive thirty (30) day periods, arising out of the same set of facts, circumstances or transactions.

(n) Within two (2) business days after the Registration Statement which includes the Registrable Securities is ordered effective by the Commission, the Company shall deliver, and shall cause legal counsel for the Company to deliver, to the transfer agent for such Registrable Securities (with copies to the Holders whose Registrable Securities are included in such Registration Statement) confirmation that the Registration Statement has been declared effective by the Commission in the form attached hereto as Exhibit A.

4. Registration Expenses.

All fees and expenses incident to the performance of or compliance with this Agreement by the Company shall be borne by the Company whether or not the Registration Statement is filed or becomes effective and whether or not any Registrable Securities are sold pursuant to the Registration Statement. The fees and expenses referred to in the foregoing sentence shall include, without limitation the following: (i) all registration and filing fees (including, without limitation, fees and expenses (A) with respect to filings required to be made with the Nasdaq and each other securities exchange or market on which Registrable Securities are required hereunder to be listed, (B) with respect to filings required to be made with the Commission, and (C) in compliance with state securities or Blue Sky laws (including, without limitation, fees and disbursements of one counsel for the Holders in connection with Blue Sky qualifications of the Registrable Securities and determination of the eligibility of the Registrable Securities for investment under the laws of such jurisdictions as the Holders of a majority of Registrable Securities may designate subject to the maximum fee of $2,500), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities and of printing prospectuses if the printing of prospectuses is requested by the holders of a majority of the Registrable Securities included in the Registration Statement), (iii) messenger, telephone and delivery expenses, (iv) Securities Act liability insurance, if the Company so desires such insurance, and (v) fees and expenses of all other Persons retained by

the Company in connection with the consummation of the transactions contemplated by this Agreement, including, without limitation, the Company's independent public accountants (including the expenses of any comfort letters or costs associated with the delivery by independent public accountants of a comfort letter or comfort letters); provided that the Company shall not be responsible for the fees and expenses of the Special Counsel. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit, the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder.

5. Indemnification.

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify and hold harmless each Holder, the officers, directors, agents, brokers (including brokers who offer and sell Registrable Securities as principal as a result of a pledge or any failure to perform under a margin call of Common Stock), investment advisors and employees of each of them, each Person who controls any such Holder (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, agents and employees of each such controlling Person, and the respective successors, assigns, estate and personal representatives of each of the foregoing, to the fullest extent permitted by applicable law, from and against any and all claims, losses, damages, liabilities, penalties, judgments, costs (including, without limitation, costs of investigation) and expenses (including, without limitation, reasonable attorneys' fees and expenses) (collectively, "Losses"), as incurred, arising out of or relating to any untrue or alleged untrue statement of a material fact contained in the Registration Statement, any Prospectus or any preliminary prospectus or in any amendment or supplement thereto, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or preliminary prospectus or supplement thereto, in the light of the circumstances under which they were made) not misleading, except to the extent, but only to the extent, that such untrue statements or omissions are based solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, which information was reasonably relied on by the Company for use therein or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in the Registration Statement, such Prospectus or such form of Prospectus or in any amendment or supplement thereto; and provided, further, that with respect to any amended or supplemented Prospectus, the foregoing indemnity agreement shall not apply or inure to the benefit of any Holder from whom the Person asserting any Loss, purchased shares, or any Person controlling such Holder, if, copies of an amended or supplemented Prospectus were timely delivered to the Holder pursuant to this Agreement and a copy of the Prospectus (as then amended or supplemented if the Company shall have furnished any amendment or supplements thereto) was not sent or given by or on behalf of such Holder to such Person, if required by law so to have been delivered, and if the Prospectus (as so amended or supplemented) would have cured the defect giving rise to such Loss. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of an

Indemnified Party (as defined in Section 5(c) hereof) and shall survive the transfer of the Registrable Securities by the Holders.

(b) Indemnification by Holders. Each Holder shall, notwithstanding any termination of this Agreement, severally and not jointly, indemnify and hold harmless the Company, and its directors, officers, agents and employees, each Person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents or employees of such controlling Persons, and the respective successors, assigns, estate and personal representatives of each of the foregoing, to the fullest extent permitted by applicable law, from and against all Losses, as incurred, arising out of, relating to, or based upon any untrue or alleged untrue statement of a material fact contained in the Registration Statement, any Prospectus, or any preliminary prospectus or in any amendment or supplement thereto, or arising out of, relating to, or based upon any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or preliminary prospectus or supplement thereto, in the light of the circumstances under which they were made) not misleading, to the extent, but only to the extent, that such untrue statement or omission is contained in or omitted from any information so furnished in writing by such Holder to the Company specifically for inclusion in the Registration Statement or such Prospectus and that such information was reasonably relied upon by the Company for use in the Registration Statement, such Prospectus or such preliminary prospectus or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in the Registration Statement, such Prospectus or such preliminary Prospectus Supplement. Notwithstanding anything to the contrary contained herein, the Holder shall be liable under this Section 5(b) for only that amount as does not exceed the net proceeds to such Holder as a result of the sale of Registrable Securities pursuant to such Registration Statement.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "Indemnified Party"), such Indemnified Party promptly shall notify the Person from whom indemnity is sought (the "Indemnifying Party) in writing, and the Indemnifying Party shall assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all fees and expenses incurred in connection with defense thereof; provided, that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have proximately and materially adversely prejudiced the Indemnifying Party.

An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Parties unless: (1) the Indemnifying Party has agreed in writing to pay such fees and expenses; or (2) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding; or (3) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the

Indemnifying Party, and such Indemnified Party shall have been advised by counsel reasonably acceptable to the Indemnifying Party that a conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof on behalf of the Indemnified Party and such counsel shall be at the expense of the Indemnifying Party). The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld. No Indemnifying Party shall, without the prior written consent of the Indemnified Party (which consent shall not be unreasonably withheld), effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding.

All fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within ten (10) Business Days of written notice thereof to the Indemnifying Party (regardless of whether it is ultimately determined that an Indemnified Party is not entitled to indemnification hereunder; provided, that the Indemnifying Party may require
---
such Indemnified Party to undertake to reimburse all such fees and expenses to the extent it is finally judicially determined that such Indemnified Party is not entitled to indemnification hereunder).

(d) Contribution. If a claim for indemnification under Section 5(a)
---
or 5(b) is unavailable to an Indemnified Party because of a failure or refusal of a governmental authority to enforce such indemnification in accordance with its terms (by reason of public policy or otherwise), then each Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by such Indemnified Party as a result of such Losses, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying, Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in Section 5(c), any reasonable attorneys' or other reasonable fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms. Notwithstanding anything to the contrary contained herein, the Holder shall be liable or required to contribute under this Section 5(c) for only that amount as does not exceed the net proceeds to such Holder as a result of the sale of Registrable Securities pursuant to such Registration Statement.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 5(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. No Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation.

The indemnity and contribution agreements contained in this Section are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties

6. Rule 144.

As long as any Holder owns Registrable Securities the Company covenants to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to Section 13(a) or 15(d) of the Exchange Act and to promptly furnish the Holders with true and complete copies of all such filings. As long as any Holder owns Registrable Securities, if the Company is not required to file reports pursuant to Section 13(a) or 15(d) of the Exchange Act, it will prepare and furnish to the Holders and make publicly available in accordance with Rule 144(c) promulgated under the Securities Act annual and quarterly financial statements, together with a discussion and analysis of such financial statements in form and substance substantially similar to those that would otherwise be required to be included in reports required by Section 13(a) or 15(d) of the Exchange Act, as well as any other information required thereby, in the time period that such filings would have been required to have been made under the Exchange Act. The Company further covenants that it will take such further action as any Holder may reasonably request, all to the extent required from time to time to enable such Person to sell Common Stock without registration under the Securities Act within the limitation of the exemptions provided by Rule 144 promulgated under the Securities Act, including providing any legal opinions of counsel to the Company referred to in the Purchase Agreement. Upon the request of any Holder, the Company shall deliver to such Holder a written certification of a duly authorized officer as to whether it has complied with such requirements.

7. Miscellaneous.

(a) Remedies. In the event of a breach by the Company or by a Holder, of any of their obligations under this Agreement, each Holder or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, will be entitled to specific performance of its rights under this Agreement. The Company and each Holder agree that monetary damages would not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agrees that, in the event of any action for specific performance in respect of such breach, it shall waive the defense that a remedy at law would be adequate.

(b) No Inconsistent Agreements. Neither the Company nor any of its subsidiaries has, as of the date hereof entered into and currently in effect, nor shall the Company or any of its subsidiaries, on or after the date of this Agreement, enter into any agreement with

respect to its securities that is inconsistent with the rights granted to the Holders in this Agreement or otherwise conflicts with the provisions hereof. Except as disclosed in the Commission Documents, neither the Company nor any of its subsidiaries has previously entered into any agreement currently in effect granting any registration rights with respect to any of its securities to any Person. Without the written consent of the Holders of a majority of the then outstanding Registrable Securities, the Company shall not grant to any Person the right to request the Company to register any securities of the Company under the Securities Act unless the rights so granted are subject in all respects to the prior rights in full of the Holders set forth herein, and are not otherwise in conflict with the provisions of this Agreement.

(c) Piggy-Back Registrations. If at any time during the Effectiveness
---

Period when there is not an effective Registration Statement covering Common Shares, the Company shall determine to prepare and file with the Commission a registration statement relating to an offering for its own account or the account of others under the Securities Act of any of its equity securities, other than on Form S-4 or Form S-8 (each as promulgated under the Securities Act) or its then equivalents relating to equity securities to be issued solely in connection with any acquisition of any entity or business or equity securities issuable in connection with stock option or other employee benefit plans, the Company shall send to each holder of Registrable Securities written notice of such determination and, if within ten (10) days after receipt of such notice, any such holder shall so request in writing (which request shall specify the Registrable Securities intended to be disposed of by the Holders), the Company will use its best efforts to cause the registration under the Securities Act of all Registrable Securities which the Company has been so requested to register by the holder, to the extent requisite to permit the disposition of the Registrable Securities so to be registered, provided that if at any time after giving written notice of its intention to register any securities and prior to the effective date of the registration statement filed in connection with such registration, the Company shall determine for any reason not to register or to delay registration of such securities, the Company may, at its election, give written notice of such determination to such holder and, thereupon, (i) in the case of a determination not to register, shall be relieved of its obligation to register any Registrable Securities in connection with such registration (but not from its obligation to pay expenses in accordance with Section 4 hereof), and (ii) in the case of a determination to delay registering, shall be permitted to delay registering any Registrable Securities being registered pursuant to this Section 7(d) for the same period as the delay in registering such other securities. The Company shall include in such registration statement all or any part of such Registrable Securities such holder requests to be registered; provided, however, that the Company shall not be required to register any
- -------- -------

Registrable Securities pursuant to this Section 7(d) that are eligible for sale pursuant to Rule 144(k) of the Securities Act. In the case of an underwritten public offering, if the managing underwriter(s) or underwriter(s) should reasonably object to the inclusion of the Registrable Securities in such registration statement, then if the Company after consultation with the managing underwriter should reasonably determine that the inclusion of such Registrable Securities, would materially adversely affect the offering contemplated in such registration statement, and based on such determination recommends inclusion in such registration statement of fewer or none of the Registrable Securities of the Holders, then (x) the number of Registrable Securities of the Holders included in such registration statement shall be reduced pro-rata among such Holders (based upon the number of Registrable Securities requested to be included in the registration), if the Company after consultation with the underwriter(s) recommends the inclusion of fewer Registrable Securities, or (y) none of the Registrable Securities of the Holders

shall be included in such registration statement, if the Company after consultation with the underwriter(s) recommends the inclusion of none of such Registrable Securities.

(d) Failure to File Registration Statement and Other Events. The Company and the Holders agree that the Holders will suffer damages if the Registration Statement is not filed or confidentially submitted on or prior to the Filing Date and not declared effective by the Commission on or prior to the Effectiveness Date and maintained in the manner contemplated herein during the Effectiveness Period or if certain other events occur. The Company and the Holders further agree that it would not be feasible to ascertain the extent of such damages with precision. Accordingly, if (I) the Registration Statement is not filed or confidentially submitted on or prior to the Filing Date, or is not declared effective by the Commission on or prior to the Effectiveness Date (or in the event an additional Registration Statement is filed or confidentially submitted because the actual number of Common Shares exceeds the number of shares of Common Shares initially registered is not filed and declared effective within the time periods set forth in Section 2), or (II) the Company fails to file with the Commission a request for acceleration in accordance with Rule 12d l-2 promulgated under the Exchange Act within five (5) days of the date that the Company is notified (orally or in writing, whichever is earlier) by the Commission that a Registration Statement will not be "reviewed," or not subject to further review, or (III) the Registration Statement is filed with and declared effective by the Commission but thereafter ceases to be effective as to all Registrable Securities at any time prior to the expiration of the Effectiveness Period, without being succeeded by a subsequent Registration Statement filed with and declared effective by the Commission, or (IV) trading in the Common Stock shall be suspended for any reason for more than three (3) Business Days in the aggregate, or (V) the Company has breached Section 3(n) of this Agreement (any such failure or breach being referred to as an "Event"), the Company shall pay in cash as liquidated damages for such failure and not as a penalty (the "Liquidated Damages") to each Holder an amount equal to 2% of the aggregate purchase price of all of the Registrable Securities then held by such Holder for each thirty (30) day period following such Event until the applicable Event has been cured, which amount shall be pro rated for any periods less than thirty (30) days (the "Periodic Amount"). Payments to be made pursuant to this Section 7(d) shall be due and payable immediately upon demand at the option of the Holders in cash. The parties agree that the Periodic Amount represents a reasonable estimate on the part of the parties, as of the date of this Agreement, of the amount of damages that may be incurred by the Holders if the Registration Statement is not filed on or prior to the Filing Date or has not been declared effective by the Commission on or prior to the Effectiveness Date and maintained in the manner contemplated herein during the Effectiveness Period or if any other Event as described herein has occurred.

(e) Specific Enforcement, Consent to Jurisdiction.

(i) The Company and the Holders acknowledge and agree that irreparable damage would occur in the event that any of the provisions of this Registration Rights Agreement or the Purchase Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to enforce specifically the terms and provisions of the registration rights agreement or the purchase agreement; provided, however, that with respect to any provision with respect to which the Buyer entitled to receive Liquidated Damages, the sole remedy of the Buyer will be to enforce specifically its right to receive such Liquidated Damages.

(ii) Both the Company and the Purchaser (i) hereby irrevocably submits to the jurisdiction of the United States District Court for the Southern District of New York and the courts of the State of New York located in New York county for the purposes of any suit, action or proceeding arising out of or relating to this Agreement or the Purchase Agreement and (ii) hereby waives, and agrees not to assert in any such suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of such court, that the suit, action or proceeding is brought in an inconvenient forum or that the venue of the suit, action or proceeding is improper. Both the Company and the Purchaser consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing in this Section 7(e) shall affect or limit any right to serve process in any other manner permitted by law.

(f) Amendments and Waivers. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given, unless the same shall be in writing and signed by the Company and each of the Holders. Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of Holders and that does not directly or indirectly affect the rights of other Holders may be given by Holders of at least a majority of the Registrable Securities to which such waiver or consent relates; provided, however, that the provisions of this sentence may not be amended, modified, or supplemented except in accordance with the provisions of the immediately preceding sentence.

(g) Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed to have been duly given: when delivered by hand, if personally delivered; when receipt is acknowledged, if telecopied; or when actually received or refused if sent by other means.

(x) if to the Company:

Myriad Genetics Inc.
320 Wakara Way
Salt Lake City, Utah 84108
Tel. No.: (801) 584-3600
Fax No.: (801) 584-3640
Attn: President

with a copy to:

Lewis J. Geffen, Esq.
Mintz Levin Cohn Ferris Glovsky and Popeo PC
One Financial Center
Boston, Massachusetts 02111
Tel. No.: (617) 542-6000
Fax No.: (617) 542-2241

(y) if to the Purchaser:

Acqua Wellington North American Equities Fund, Ltd.
c/o Fortis Fund Services (Bahamas) Ltd.
Montague Sterling Centre
East Bay Street, P. O. Box SS-6238
Nassau, Bahamas
Tel. No.: (242) 394-2700
Fax No.: (242) 394-9667
Attention: Anthony L.M. Inder Rieden

or to such other address or addresses or facsimile number or numbers as any such party may most recently have designated in writing to the other parties hereto by such notice.

(h) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns and shall inure to the benefit of each Holder and its successors and assigns. The Company may not assign this Agreement or any of its rights or obligations hereunder without the prior written consent of each Holder which consent will not be unreasonably withheld. Each Purchaser may assign its rights hereunder in the manner and to the Persons as permitted under the Purchase Agreement.

(i) Assignment of Registration Rights. The rights of each Holder hereunder, including the right to have the Company register for resale Registrable Securities in accordance with the terms of this Agreement, shall be automatically assignable by each Holder to any transferee of such Holder of all or at least 50,000 shares of Registrable Securities if: (i) the Holder agrees in writing with the transferee or assignee to assign such rights, and a copy of such agreement is furnished to the Company within a reasonable time after such assignment, (ii) the Company is, within a reasonable time after such transfer or assignment, furnished with written notice of (a) the name and address of such transferee or assignee, and (b) the securities with respect to which such registration rights are being transferred or assigned, (iii) following such transfer or assignment the further disposition of such securities by the transferee or assignees is restricted under the Securities Act and applicable state securities laws, (iv) at or before the time the Company receives the written notice contemplated by clause (ii) of this Section, the transferee or assignee agrees in writing (in form and substance reasonably satisfactory to the Company) with the Company to be bound by all of the provisions of this Agreement, and (v) such transfer shall have been made in accordance with the applicable requirements of the Purchase Agreement. In addition, each Holder shall have the right to assign its rights hereunder to any other Person with the prior written consent of the Company, which consent shall not be unreasonably withheld. The rights to assignment shall apply to the Holders (and to subsequent) successors and assigns.

(j) Counterparts. This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and, all of which taken together shall constitute one and the same Agreement. In the event that any signature is delivered by facsimile transmission, such signature shall create a valid binding obligation of the

party executing (or on whose behalf such signature is executed) the same with the same force and effect as if such facsimile signature were the original thereof.

(k) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to principles of conflicts of law thereof. This Agreement shall not be interpreted or construed with any presumption against the party causing this Agreement to be drafted.

(l) Severability. If any term, provision, covenant or restriction of this Agreement is held to be invalid, illegal, void or unenforceable in any respect, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

(m) Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have caused this Registration Rights Agreement to be duly executed by their respective authorized persons as of the date first indicated above.

MYRIAD GENETICS INC.

By: /s/ Peter D. Meldrum

Name: Peter D. Meldrum
Title: President and C.E.O.

ACQUA WELLINGTON NORTH AMERICAN EQUITIES FUND, LTD.

By: /s/ Helen A. Forbes

Name: Helen A. Forbes
Title: Secretary

EXHIBIT A

FORM OF NOTICE OF EFFECTIVENESS
OF REGISTRATION STATEMENT

[TRANSFER AGENT]
[ADDRESS]

Attn: _____

Re: Myriad Genetics Inc.

Ladies and Gentlemen:

We are counsel to Myriad Genetics Inc., a Delaware corporation (the "Company"), and have represented the Company in connection with that certain Common Stock Purchase Agreement (the "Purchase Agreement"), dated as of October __, 2000, by and between the Company and the Purchaser named therein pursuant to which the Company issued to the Purchaser shares (the "Common Stock") of its Common Stock, no par value (the "Common Stock"). Pursuant to the Purchase Agreement, the Company has also entered into a Registration Rights Agreement with the Purchaser (the "Registration Rights Agreement"), dated as of October __, 2000, pursuant to which the Company agreed, among other things, to register the Registrable Securities (as defined in the Registration Rights Agreement), including the Common Stock, under the Securities Act of 1933, as amended (the "1933 Act"). In connection with the Company's obligations under the Registration Rights Agreement, on _____, 2000, the Company filed a Registration Statement on Form ___ (File No. 333-_____) (the "Registration Statement") with the Securities and Exchange Commission (the "SEC") relating to the resale of the Registrable Securities which names each of the present Holders as a selling stockholder thereunder.

In connection with the foregoing, we advise you that a member of the SEC's staff has advised us by telephone that the SEC has entered an order declaring the Registration Statement effective under the 1933 Act at [ENTER TIME OF EFFECTIVENESS] on [ENTER DATE OF EFFECTIVENESS] and we have no knowledge that any stop order suspending its effectiveness has been issued or that any proceedings for that purpose are pending before, or threatened by, the SEC and, accordingly, the Registrable Securities are available for resale under the 1933 Act in the manner specified in, and pursuant to the terms of the Registration Statement for so long as such Registration Statement remains effective and current.

Very truly yours,

By:

cc: Acqua Wellington North American Equities, Ltd.

Exhibit 5.1

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

One Financial Center
Boston, Massachusetts 02111

November 22, 2000

Myriad Genetics, Inc.
320 Wakara Way
Salt Lake City, UT 84108

Ladies and Gentlemen:

We have acted as counsel to Myriad Genetics, Inc., a Delaware corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission (the "Commission") of a Registration Statement on Form S-3 (the "Registration Statement"), pursuant to which the Company is registering under the Securities Act of 1933, as amended, 400,000 shares of the Company's common stock, $.01 par value per share (the "Shares"), for resale to the public. The Shares, if and when sold, will be sold by certain security holders of the Company. This opinion is being rendered in connection with the filing of the Registration Statement. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement.

In connection with this opinion, we have examined the Company's Restated Certificate of Incorporation, as amended, and Restated By-laws, both as currently in effect, such other records of the corporate proceedings of the Company and certificates of the Company's officers as we have deemed relevant, and the Registration Statement and the exhibits thereto.

In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, photostatic or facsimile copies and the authenticity of the originals of such copies.

Our opinion is limited to the General Corporation Law of the State of Delaware (including the applicable provisions of the Delaware Constitution and the reported judicial decisions interpreting the laws) and the federal laws of the United States of America, and we express no opinion with respect to the laws of any other jurisdiction. No opinion is expressed herein with respect to the qualification of the Shares under the securities or blue sky laws of any state or foreign jurisdiction.

Based upon and subject to the foregoing assumptions, limitations and qualifications, we are of the opinion that (i) the Shares have been duly and validly authorized by the Company and (ii) the Shares, when sold, will have been duly and validly issued, fully paid and non-assessable shares of the Common Stock, free of preemptive rights.

It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

The foregoing opinion is rendered as of the date hereof. We assume no obligation to update such opinion to reflect any facts or circumstances which may hereafter come to our attention or changes in the law which may hereafter occur. We hereby consent to (i) the reference to this firm under the under the caption "Legal Matters" in the Prospectus forming a part of the Registration Statement and (ii) the filing of this opinion as an exhibit to the Registration Statement.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

MINTZ, LEVIN, COHN, FERRIS,
GLOVSKY AND POPEO, P.C.

Exhibit 23.1

Consent of Independent Auditors

The Board of Directors
Myriad Genetics, Inc.

We consent to incorporation by reference in Amendment No. 1 to the registration statement on Form S-3 of Myriad Genetics, Inc. of our report dated August 22, 2000, related to the consolidated balance sheets of Myriad Genetics, Inc. and subsidiaries as of June 30, 2000 and 1999 and the related consolidated statements of operations, stockholders' equity and comprehensive loss and cash flows for each of the years in the three-year period ended June 30, 2000, which report appears in the June 30, 2000 annual report on Form 10-K of Myriad Genetics, Inc., and the reference to our firm under the heading "Experts" in the registration statement.

KPMG LLP

Salt Lake City, Utah
November 22, 2000