UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

AMENDMENT NO. 2 ON FORM S-3 TO FORM S-1 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

IBIO, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State of Other Jurisdiction of Incorporation or Organization)

(Primary Standard Industrial Classification Code Number)

2834

9 Innovation Way, Suite 100, Newark, Delaware 19711 (Address of Principal Executive Offices, including Zip Code)

Robert B. Kay Chief Executive Officer 9 Innovation Way, Suite 100 Newark, Delaware 19711 (302) 355-0650 (Name, Address and Telephone Number of Agent for Service)

with copies to:

Andrew Abramowitz, Esq. Andrew Abramowitz, PLLC 565 Fifth Avenue 9th Floor New York, New York 10017 (212) 972-8883 (fax)

Approximate date of commencement of proposed sale to the public: From time to time 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:

26-2797813

(I.R.S. Employer Identification Number) If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: \boxtimes

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) 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. \Box

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 this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box:

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities pursuant to Rule 413(b) under the Securities Act, check the following box: \Box

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of "accelerated filer," "large accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer \Box

Accelerated filer \Box

Non-accelerated filer \Box

Smaller reporting company \boxtimes

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 Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY STATEMENT

This Amendment No. 2 on Form S-3 is a Pre-Effective Amendment to the Registration Statement on Form S-1, filed by the registrant on December 21, 2010, prior to the registrant becoming eligible to use Form S-3 for a secondary offering of securities.

This registration statement contains a prospectus to be used in connection with the potential resale by certain selling stockholders of:

- 1. 4,000,000 shares of common stock sold to investors in a private offering in October and November, 2010;
- 2. 4,000,000 shares of common stock issuable upon exercise of warrants issued to investors in the above offering;
- 3. 824,324 shares of common stock issuable upon exercise of warrants issued to service providers in 2010;
- 4. 2,848,696 shares of common stock issuable upon exercise of warrants issued to investors in a private offering in August 2008 (as adjusted to reflect anti-dilution adjustments made following our 2009 and 2010 offerings); and
- 5. 3,000,000 shares of common stock underlying stock options held by private investors to purchase shares currently held by E. Gerald Kay and Carl DeSantis, two of our significant stockholders.

Pursuant to Rule 429 of the Securities Act of 1933, the prospectus which is a part of this registration statement is a combined prospectus and includes all of the information currently required in a prospectus relating to the securities described in item 4 above, which were included in Registration Statement No. 333-162424, as well as the securities described in item 5 above, which were included in Registration Statement No. 333-167361, which was withdrawn before effectiveness. This registration statement also constitutes a Post-Effective Amendment to Registration Statement No. 333-162424.

The information in this prospectus is not complete and may be changed. We 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.

SUBJECT TO COMPLETION, DATED MARCH 7, 2011

PROSPECTUS

14,673,020 Shares



COMMON STOCK

This prospectus relates to the offer for sale of 14,673,020 shares of common stock, par value \$0.001 per share, by the existing holders of the securities named in this prospectus, referred to as selling stockholders throughout this prospectus. Of these shares, 7,673,020 are issuable upon the exercise of outstanding warrants. We will receive none of the proceeds from the sale, except upon exercise of the warrants.

The selling stockholders may sell the common stock from time to time on any stock exchange or automated interdealer quotation system on which the securities are listed, in the over-the-counter market, in privately negotiated transactions or otherwise, at fixed prices that may be changed, at market prices prevailing at the time of sale, at prices related to the prevailing market prices or at prices otherwise negotiated.

Our common stock is listed on the NYSE Amex market under the symbol "IBIO." On March 3, 2011, the last reported sales price of our common stock on the NYSE Amex market was \$3.31 per share.

The selling stockholders and intermediaries through whom the common stock is sold may be deemed "underwriters" within the meaning of the Securities Act of 1933 or the Securities Act with respect to the securities offered hereby, and any profits realized or commissions received may be deemed underwriting compensation. We have agreed to indemnify the selling stockholders against certain liabilities, including liabilities under the Securities Act.

Investing in our common stock involves a high degree of risk. We urge you to read carefully the section entitled "Risk Factors" beginning on page 2 of this prospectus, the section entitled "Risk Factors" in our Annual Report on Form 10-K for the year ended June 30, 2010, and all other information included or incorporated by reference into this prospectus in its entirety before purchasing any of our common stock offered under this prospectus.

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

The date of this prospectus is , 2011.

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You should rely only on the information contained or incorporated by reference in this prospectus. Neither we nor the selling stockholders has authorized anyone to provide you with additional or different information. If anyone provides you with additional, different, or inconsistent information, you should not rely on it. Neither we nor the selling stockholders are making an offer to sell securities in any jurisdiction in which the offer or sale is not permitted. You should assume that the information in this prospectus is accurate only as of the date on the front cover of this prospectus, and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, in each case, regardless of the time of delivery of this prospectus. Our business, financial condition, results of operations, and prospects may have changed since such date. In this prospectus, the "Company," "iBio", "we," "us" and "our" refer to iBio, Inc.

SUMMARY PROSPECTUS

This summary highlights information contained elsewhere in this prospectus or incorporated by reference herein. This summary is not complete and may not contain all of the information that you should consider before deciding whether or not you should purchase our common stock offered hereunder. You should read the entire prospectus carefully, including the section entitled "Risk Factors" beginning on page 2 of this prospectus and the section entitled "Risk Factors" in our Annual Report on Form 10-K for the year ended June 30, 2010, and all other information included or incorporated herein by reference in this prospectus before you decide whether to purchase our common stock.

Our Company

iBio, Inc. is a biotechnology company focused on commercializing its proprietary technology, the iBioLaunch[™] platform, for the production of biologics including vaccines and therapeutic proteins. Our strategy is to utilize our technology for development and manufacture of our own product candidates and to work with both corporate and government clients to reduce their costs during product development and meet their needs for low cost, high quality biologics manufacturing systems. Our near-term focus is to establish business arrangements for use of our technology by licensees for the development and production of products for both therapeutic and vaccine uses. Vaccine candidates presently being advanced on our proprietary platform are applicable to newly emerging strains of H1N1 swine-like influenza and H5N1 for avian influenza.

In order to attract appropriate licensees and increase the value of our share of such intended contractual arrangements, we engaged the Center for Molecular Biology of Fraunhofer USA, Inc. ("FhCMB") in 2003 to perform research and development activities to apply the platform to create our first product candidate. We selected a plant-based influenza vaccine for human use as the product candidate to exemplify the value of the platform. Based on research conducted by FhCMB, our proprietary technology is applicable to the production of vaccines for any strain of influenza including the newly-emerged strains of H1N1 swine-like influenza.

In connection with its research and development activities, FhCMB agreed to use its best efforts to obtain grants from governmental and non-governmental entities to fund additional development of our proprietary plant-based technology. Consequently, in addition to the funding we have provided, FhCMB has received funding from the Bill & Melinda Gates Foundation for development of various vaccines based upon our proprietary technology including an experimental vaccine for H5N1 avian influenza. Two of these vaccine candidates began a Phase 1 clinical trial during late calendar year 2010.

Our Corporate Information

We are a Delaware corporation. Our principal executive/administrative offices are located at 9 Innovation Way, Suite 100, Newark, Delaware 19711, and our telephone number is (302) 355-0650. Our website address is http://www.ibioinc.com. Information on or accessed through our website is not incorporated into this prospectus and is not a part of this prospectus. Our common stock is listed on the NYSE Amex market under the symbol "IBIO."

The Offering

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|--|---|
| Common stock offered by selling stockholders | 14,673,020 shares, consisting of 7,000,000 outstanding shares owned by selling stockholders and 7,673,020 shares issuable upon the exercise of certain warrants held by the selling stockholders. |
| Common stock outstanding before the offering | 32,292,254 shares. |
| Common stock outstanding after the offering | 39,965,274 shares. (1) |
| Proceeds to us | We will not receive any of the proceeds from the sale of the shares of common stock because they are being offered by the selling stockholders. We are not offering any shares for sale under this prospectus. However, we will receive the proceeds from any exercise of the warrants, which would be used for general corporate and working capital purposes. |
| Risk factors | See "Risk Factors" beginning on page 2 and the other information in this prospectus for a discussion of the factors you should consider before you decide to invest in the common stock. |
| | |

1 Assumes the exercise of warrants to purchase 7,673,020 shares held by selling stockholders.

RISK FACTORS

Our past experience may not be indicative of future performance, and as noted elsewhere in this prospectus and documents incorporated by reference into this prospectus, we have included forward-looking statements about our business, plans and prospects that are subject to change. In addition to the other risks or uncertainties contained in this prospectus and documents incorporated by reference into this prospectus, the following risks may affect our operating results, financial condition and cash flows. If any of these risks occur, either alone or in combination with other factors, our business, financial condition or operating results could be adversely affected. Moreover, readers should note this is not an exhaustive list of the risks we face; some risks are unknown or not quantifiable, and other risks that we currently perceive as immaterial may ultimately prove more significant than expected. Statements about plans, predictions or expectations should not be construed to be assurances of performance or promises to take a given course of action.

Risks Relating to our Business

Our plant-based technology platform has not previously been used by others to successfully develop commercial products, and if we are not able to establish licenses of the platform, we may not generate sufficient license revenues to fulfill our business plan.

If we are unable to convince others to adopt the use of the platform in addition to or instead of other methods to produce vaccines and therapeutic proteins, we will not generate the revenues presently contemplated by our business plan to support our continuing operations.

The majority of our product candidates are in the preclinical stage of development, and if we or our licensees are not able to successfully develop and commercialize them, we may not generate sufficient revenues to fulfill our business plan.

We have internal product candidates and believe our technology to be applicable to the product candidates of other companies. Our success in establishing licenses to our platform will substantially depend on our or our clients' successful completion of clinical trials, and obtaining required regulatory approvals for our product candidates alone or with other persons. If the studies described above or any further studies fail, if we do not obtain required regulatory approvals, or if we fail to commercialize any of our product candidates alone or with licensees, we may be unable to generate sufficient revenues to attain profitability or continue our business operations, and our reputation in the industry and in the investment community would likely be significantly damaged, each of which would cause our stock price to decline and your holdings of our stock to lose most, if not all, of their value.

Our licensees will not be able to commercialize product candidates based on our platform technology if preclinical studies do not produce successful results or clinical trials do not demonstrate safety and efficacy in humans.

Preclinical and clinical testing is expensive, difficult to design and implement, can take many years to complete and has an uncertain outcome. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful, and interim results of a clinical trial do not necessarily predict final results. Our licensees may experience numerous unforeseen events during, or as a result of, preclinical testing and the clinical trial process that could delay or prevent the commercialization of product candidates based on our technology, including the following:

- Our licensees' preclinical or clinical trials may produce negative or inconclusive results, which may require additional preclinical testing or clinical trials or the abandonment of projects that we expect to be promising. For example, promising animal data may be obtained about the immunogenicity of a vaccine candidate and then human tests may result in no or inadequate immune responses. In addition, unexpected safety concerns may be encountered that would require further testing even if the vaccine candidate produced a very significant immune response in human subjects.
- Initial clinical results may not be supported by further or more extensive clinical trials. For example, a licensee may obtain data that suggest a desirable immune response from a vaccine candidate in a small human study, but when tests are conducted on larger numbers of people, the same extent of immune response may not occur. If the immune response generated by a vaccine is too low or occurs in too few treated individuals, then the vaccine will have no commercial value.
- Enrollment in our licensee's clinical trials may be slower than projected, resulting in significant delays. The cost of conducting a clinical trial increases as the time required to enroll adequate numbers of human subjects to obtain



meaningful results increases. Enrollment in a clinical trial can be a slower-than-anticipated process because of competition from other clinical trials, because the study is not of interest to qualified subjects, or because the stringency of requirements for enrollment limits the number of people who are eligible to participate in the clinical trial.

- Our licensee might have to suspend or terminate clinical trials if the participating patients are being exposed to unacceptable health risks. Animal tests do not always adequately predict potential safety risks to human subjects. The risk of any candidate product is unknown until it is tested in human subjects, and if subjects experience adverse events during the clinical trial, the trial may have to be suspended and modified or terminated entirely.
- Regulators or institutional review boards may suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements.
- Any regulatory approval ultimately obtained may be limited or subject to restrictions or post-approval commitments that render the product not commercially viable.
- The effects of our licensee's product candidates may not be the desired effects or may include undesirable side effects.

Significant clinical trial delays could allow our competitors to bring products to market before our licensees do and impair our ability to commercialize our technology platform or products or product candidates based on our technology platform. Poor clinical trial results or delays may make it impossible to license a product or so reduce its attractiveness to a licensing partner that we will be unable to successfully commercialize a product.

We will need substantial additional funding to execute our business plan and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our commercialization efforts.

We will need substantial additional funding and may be unable to raise capital when needed or may be unable to raise capital on attractive terms, which would force us to delay, reduce or eliminate our technology development programs or commercialization efforts.

We believe that our existing cash resources, which includes our \$8.0 million private placement of common stock that closed in November 2010, as described herein, will be sufficient to meet our projected operating requirements through the balance of calendar 2011. Our future funding requirements will depend on many factors, including:

- Our ability to advance product candidates based on our technology into development with licensees;
- The success of our anticipated commercial agreements with licensees;
- Our ability to establish and maintain additional development agreements or other alternative arrangements;
- The timing of, and the costs involved in, obtaining regulatory approvals;
- The cost of manufacturing activities;
- The cost of commercialization activities, including marketing, sales and distribution;
- The costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims and other patent-related costs, including, if necessary, litigation costs and the results of such litigation; and
- Potential acquisition or in-licensing of other products or technologies.

If we are unsuccessful in raising additional capital or other alternative financing, we might have to defer or abandon our efforts to commercialize the intellectual property and cease operations.

Our product development and commercialization involve a number of uncertainties, and we may never generate sufficient revenues from the sale of potential products to become profitable; therefore, we may raise funds which may be dilutive of our shareholders in the future.

We have generated no significant revenues to date. To generate revenue and to achieve profitability, we must successfully develop licenses for our platform and/or clinically test, market and sell our potential products. Even if we generate revenue and successfully achieve profitability, we cannot predict the level of that profitability or whether it will be sustainable. We expect that our operating results will fluctuate from period to period as a result of differences in when we incur expenses and receive revenues from sales of our potential products, business arrangements and other sources. Some of these fluctuations may be significant.

Until we can generate a sufficient amount of license and/or product revenue, if ever, we expect to finance future cash needs through public or private equity offerings, debt financings and corporate product or technology development agreements and licensing arrangements. If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Debt financing, if available, may involve restrictive covenants. Any debt financing or additional equity that we raise may contain terms, such as liquidation and other preferences that are not favorable to us or our stockholders. If we raise additional funds through development and licensing arrangements with third parties, it will be necessary to relinquish valuable rights to our technologies, research programs or product candidates or grant licenses on terms that may not be favorable to us.

Even if we or our potential licensees successfully complete clinical trials for our product candidates, there are no assurances that we will be able to submit, or obtain FDA approval of, a new drug application or biologics license application.

There can be no assurance that, if clinical trials for any product candidates are successfully completed, either we or our licensees will be able to submit a biologics license application (BLA), to the FDA or that any BLA submitted will be approved by the FDA in a timely manner, if at all. After completing clinical trials for a product candidate in humans, a dossier is prepared and submitted to the FDA as a BLA, and includes all preclinical and clinical trial data that clearly establish both short-term and long-term safety for a product candidate, and data that establishes the statistically significant efficacy of a product candidate, in order to allow the FDA to review such dossier and to consider a product candidate for approval for commercialization in the United States. If we are unable to submit a BLA with respect to any of our product candidates, or if any BLA we submit is not approved by the FDA, we will be unable to commercialize that product. The FDA can and does reject BLAs and requires additional clinical trials, even when product candidates perform well or achieve favorable results in large-scale Phase 3 clinical trials. If we or our licensees fail to commercialize any product candidates based on our technology, we may be unable to generate sufficient revenues to continue operations or attain profitability and our reputation in the industry and in the investment community would likely be damaged, each of which would cause our stock price to significantly decrease.

We face competition from many different sources, including pharmaceutical and biotechnology enterprises, academic institutions, government agencies and private and public research institutions, and such competition may adversely affect our ability to generate revenue from our products.

Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, clinical trials, regulatory approvals and marketing approved products than we do.

Other companies may also prove to be significant competitors, particularly through arrangements with large and established companies, and this may reduce the value of our platform technology for the purposes of establishing license agreements. For example, Novavax is developing vaccines for influenza, based on the use of cultured insect cells. Its candidate products are more advanced in development than ours are and have already demonstrated positive results in human clinical trials. Similarly, Medicago has announced preclinical experiments to produce influenza vaccines in green plants. Other companies, such as Vical, are attempting to develop vaccines based on the use of nucleic acids rather than proteins. If these efforts are successful in clinical trials, nucleic acid based vaccine technology may compete effectively against our technology platform and may potentially prevent us from being able to obtain commercial agreements or partnerships.

There are currently approved therapies for the diseases and conditions addressed by our vaccine and antibody candidates that are undergoing clinical trials and for the diseases and conditions that are subjects of our preclinical development program. Our commercial opportunities will be reduced or eliminated if our competitors develop and commercialize products based on other technology platforms that are safer, more effective, have fewer side effects or are less expensive than any products that we or our licensees may develop.

Finally, these third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies and technology licenses complementary to our programs or advantageous to our business.

We will depend significantly on arrangements with third parties to develop and commercialize our product candidates.



A key element of our business strategy is to establish arrangements with licensees to develop and commercialize product candidates. We and FhCMB currently are working within our business structure, which includes non-commercial arrangements as described above, to apply further our plant-based platform technology. Delays, withdrawals or other adverse changes to the current participants in our business structure might adversely affect our ability to develop and commercialize our product candidates.

We expect to rely upon our future business arrangements for support in advancing certain of our drug candidates and intend to rely on additional work under current and future arrangements during our efforts to commercialize our product candidates. Our contractors may be conducting multiple product development efforts within the same disease areas that are the subjects of their agreements with us. Our agreements might not preclude them from pursuing development efforts using a different approach from that which is the subject of our agreement with them. Any of our drug candidates, therefore, may be subject to competition with a drug candidate under development by a contractor.

The success of our business arrangements will depend heavily on the efforts and activities of the organizations which are party to these arrangements. Our future contractual arrangements may provide significant discretion in determining the efforts and resources available to these programs. The risks that we face in connection with these arrangements, and that we anticipate being subject to in future arrangements, include the following:

- Future agreements may be for fixed terms and subject to termination under various circumstances, including, in some cases, on short notice without cause.
- Our future licensees may develop and commercialize, either alone or with others, products and services that are similar to or competitive with the products that are the subject of the agreement with us.
- Our future licensees may underfund or not commit sufficient resources to the testing, marketing, distribution or other development of our products.
- Our future licensees may not properly maintain or defend our intellectual property rights, or they may utilize our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential liability.
- Our future licensees may change the focus of their development and commercialization efforts. Pharmaceutical and biotechnology companies historically have re-evaluated their priorities from time to time, including following mergers and consolidations, which have been common in recent years in these industries. The ability of our product candidates and products to reach their potential could be limited if our licensees or customers decrease or fail to increase spending relating to such products.

Business arrangements with pharmaceutical companies and other third parties often are terminated or allowed to expire by the other party. Such terminations or expirations would adversely affect us financially and could harm our business reputation.

We have no experience in the sales, marketing and distribution of pharmaceutical products or in commercial technology transfer operations.

If we fail to establish commercial licenses for our platform technology or fail to enter into arrangements with partners with respect to the sales and marketing of any of our future potential product candidates, we would need to develop a sales and marketing organization with supporting distribution capability in order to directly market our technology and/or related products. Significant additional expenditures would be required for us to develop such an in-house sales and marketing organization.

We may not be successful in establishing additional arrangements with third parties, which could adversely affect our ability to discover, develop and commercialize products.

We engaged FhCMB to perform research and development activities to apply our platform technology to create product candidates. We currently do not have other similar agreements with third parties. If we are able to obtain such agreements, however, these arrangements may not be scientifically or commercially successful. If we are unable to reach new agreements with suitable third parties, we may fail to meet our business objectives for the affected product or program. We face significant competition in seeking appropriate companies with which to create additional similar business structures. Moreover, these arrangements are complex to negotiate and time-consuming to document. We may not be successful in our efforts to establish



additional alternative arrangements. The terms of any additional arrangements that we establish may not be favorable to us. Moreover, these arrangements may not be successful.

If third parties on whom we or our licensees will rely for clinical trials do not perform as contractually required or as we expect, we may not be able to obtain regulatory approval for or commercialize our product candidates, and our business may suffer.

We do not have the ability to independently conduct the clinical trials required to obtain regulatory approval for our products. We have not yet contracted with any third parties to conduct our clinical trials. We will depend on licensees or on independent clinical investigators, contract research organizations and other third party service providers to conduct the clinical trials of our product candidates and expect to continue to do so. We will rely heavily on these parties for successful execution of our clinical trials but will not control many aspects of their activities. For example, the investigators may not be our employees. However, we will be responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Third parties may not complete activities on schedule, or may not conduct our clinical trials in accordance with regulatory requirements or our stated protocols. The failure of these third parties to carry out their obligations could delay or prevent the development, approval and commercialization of our product candidates.

We face substantial uncertainty in our ability to protect our patents and proprietary technology.

Our ability to commercialize our products will depend, in part, on our ability to obtain patents, to enforce those patents and preserve trade secrets, and to operate without infringing on the proprietary rights of others.

The patent positions of biotechnology companies like us are highly uncertain and involve complex legal and factual questions.

We currently hold four U.S. patents and one international patent. Additionally, we have twelve U.S. and seventy-one international patent applications pending. The latter includes numerous foreign countries including Australia, Brazil Canada, China, Hong Kong, India, Japan, New Zealand, and several countries in Europe. We continue to prepare patent applications relating to our expanding technology in the U.S. and abroad.

There can be no assurance that:

- Patent applications owned by or licensed to us will result in issued patents;
- Patent protection will be secured for any particular technology;
- Any patents that have been or may be issued to us will be valid or enforceable;
- Any patents will provide meaningful protection to us;
- Others will not be able to design around the patents; or
- Our patents will provide a competitive advantage or have commercial application.

The failure to obtain and maintain adequate patent protection would have a material adverse effect on us and may adversely affect our ability to enter into, or affect the terms of, any arrangement for the marketing of any product. Please see "Business – Intellectual Property" for more information.

We cannot assure you that our patents will not be challenged by others.

There can be no assurance that patents owned by or licensed to us will not be challenged by others. We currently hold one issued U.S. patent for methods of inducing gene silencing in plants and one U.S. patent application for which we have received a notice of allowance, describing systems for expression of vaccine antigens in plants. Please see "Business – Intellectual Property" for more information on our current patents and patent applications. We could incur substantial costs in proceedings, including interference proceedings before the United States Patent and Trademark Office and comparable proceedings before similar agencies in other countries in connection with any claims that may arise in the future. These proceedings could result in adverse decisions about the patentability of our or our licensors' inventions and products, as well as about the enforceability, validity or scope of protection afforded by the patents. Any adverse decisions about the patentability of our product candidates could cause us to either lose rights to develop and commercialize our product candidates or to license such rights at substantial

cost to us. In addition, even if we were successful in such proceedings, the cost and delay of such proceedings would most likely have a material adverse effect on our business.

Confidentiality agreements with employees and others may not adequately prevent disclosure of trade secrets and other proprietary information, may not adequately protect our intellectual property, and will not prevent third parties from independently discovering technology similar to or in competition with our intellectual property.

We rely on trade secrets and other unpatented proprietary information in our product development activities. To the extent we rely on trade secrets and unpatented know-how to maintain our competitive technological position, there can be no assurance that others may not independently develop the same or similar technologies. We seek to protect trade secrets and proprietary knowledge, in part, through confidentiality agreements with our employees, consultants, advisors, collaborators and contractors. Nevertheless, these agreements may not effectively prevent disclosure of our confidential information and may not provide us with an adequate remedy in the event of unauthorized disclosure of such information. If our employees, scientific consultants, advisors, collaborators or contractors develop inventions or processes independently that may be applicable to our technologies, product candidates or products, disputes may arise about ownership of proprietary rights to those inventions and processes. Such inventions and processes will not necessarily become our property, but may remain the property of those persons or their employers. Protracted and costly litigation could be necessary to enforce and determine the scope of our proprietary rights. If we fail to obtain or maintain trade secret protection for any reason, the competition we face could increase, reducing our potential revenues and adversely affecting our ability to attain or maintain profitability.

If we infringe or are alleged to infringe intellectual property rights of third parties, it will adversely affect our business.

Our research, development and commercialization activities, as well as any product candidates or products resulting from these activities, may infringe or be claimed to infringe patents or patent applications under which we do not hold licenses or other rights. Third parties may own or control these patents and patent applications in the United States and abroad. These third parties could bring claims against us or our customers, collaborators or licensees that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages. Further, if a patent infringement suit were brought against us or our collaborators, we or they could be forced to stop or delay research, development, manufacturing or sales of the product or product candidate that is the subject of the suit.

As a result of patent infringement claims, or in order to avoid potential claims, we or our customers, collaborators or licensees may choose to seek, or be required to seek, a license from the third party and would most likely be required to pay license fees or royalties or both. These licenses may not be available on acceptable terms, or at all. Even if we or our customers, collaborators or licensees were able to obtain a license, the rights may be nonexclusive, which would give our competitors access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations if, as a result of actual or threatened patent infringement claims, we or our customers, collaborators or licensees are unable to enter into licenses on acceptable terms. This could harm our business significantly.

There have been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical and biotechnology industries. In addition to infringement claims against us, we may become a party to other patent litigation and other proceedings, including interference proceedings declared by the United States Patent and Trademark Office and opposition proceedings in the European Patent Office, regarding intellectual property rights with respect to our products and technology. The cost to us of any patent litigation or other proceedings, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time.

There is a substantial risk of product liability claims in our business. If we are unable to obtain sufficient insurance, a product liability claim against us could adversely affect our business.

Clinical trial and product liability insurance is volatile and may become increasingly expensive. As a result, we may be unable to obtain sufficient insurance or increase our existing coverage at a reasonable cost to protect us against losses that could have a material adverse effect on our business. An individual may bring a product liability claim against us if one of our products or



product candidates causes, or is claimed to have caused, an injury or is found to be unsuitable for consumer use. Any product liability claim brought against us, with or without merit, could result in:

- Liabilities that substantially exceed our product liability insurance, which we would then be required to pay from other sources, if available;
- An increase of our product liability insurance rates or the inability to maintain insurance coverage in the future on acceptable terms, or at all;
- Withdrawal of clinical trial volunteers or patients;
- Damage to our reputation and the reputation of our products, resulting in lower sales of any future commercialized product which we may have;
- Regulatory investigations that could require costly recalls or product modifications;
- Litigation costs; or
- The diversion of management's attention from managing our business.

Our inability to obtain adequate insurance coverage at an acceptable cost could prevent or inhibit the commercialization of our products. If third parties were to bring a successful product liability claim or series of claims against us for uninsured liabilities or in excess of insured liability limits, our business, financial condition and results of operations could be materially harmed.

The agreements we entered into with Integrated BioPharma in connection with the distribution could restrict our operations.

In connection with the August 2008 spin-off transaction that resulted in our becoming a separate, publicly-traded company, we and our former parent, Integrated BioPharma, entered into a number of agreements that govern the spin-off and our future relationship. Each of these agreements were entered into in the context of our relationship to Integrated BioPharma as a subsidiary and our spin-off from Integrated BioPharma and, accordingly, the terms and provisions of these agreements may be less favorable to us than terms and provisions we could have obtained in arm's-length negotiations with unaffiliated third parties. These agreements commit us to take actions, observe commitments and accept terms and conditions that are or may be advantageous to Integrated BioPharma but are or may be disadvantageous to us.

The terms of these agreements include obligations and restrictive provisions include, but are not limited to, agreement to indemnify Integrated BioPharma, its affiliates, and each of their respective directors, officers, employees, agents and representatives from certain liabilities arising out of any litigation we are involved in and all liabilities that arise from our breach of, or performance under, the agreements we are entered into with Integrated BioPharma in connection with the distribution and for any of our liabilities.

Current economic conditions may cause a decline in business spending which could adversely affect our business and financial performance.

Our operating results are impacted by the health of the North American economies. Our business and financial performance, including collection of our accounts receivable, recoverability of assets including investments, may be adversely affected by current and future economic conditions, such as a reduction in the availability of credit, financial market volatility and recession. Additionally, we may experience difficulties in scaling our operations to react to economic pressures in the U.S.

Our independent registered public accounting firm identified a material weakness in our internal control over financial reporting.

Our independent registered public accounting firm, J.H. Cohn LLP ("JHC"), communicated to our audit committee on February 10, 2010 that a material weakness existed in our internal control over financial reporting. This weakness was comprised of financial accounting and disclosure deficiencies and financial reporting deficiencies for non-routine, complex transactions. This weakness resulted in us not implementing the guidance in ASC 815-40, "Derivative and Hedging – Contracts in an Entity's Own Equity" in a timely manner, which required the restatement of our financial statements as of and for the quarter ended September 30, 2009, and additions and corrections to disclosures in our Form 10-Q. If we fail in the remediation



of future material weaknesses, if any, it could diminish our future ability to meet our financial reporting obligations in an accurate and timely manner.

Risks Relating to our Common Stock

We have a history of losses and may not be able to generate sufficient revenue and/or obtain adequate amounts of financing in the future to support operations and/or achieve profitability.

We have incurred losses since inception. To date, our expenses have primarily consisted of research and development and general and administrative expenses related to the development and commercialization of our proprietary technology. Our financial statements have been prepared assuming that we will continue as a going concern.

We intend to continue to finance the development and commercialization of our proprietary technology through revenue generated from licensing fees and services provided to our clients and collaborators and/or raise additional funds.

If we are unable to generate revenues and/or raise funds when required or on acceptable terms, we may have to: a) Significantly delay, scale back, or discontinue the development and/or commercialization of one or more product candidates; b) Seek collaborators for product candidates at an earlier stage than would otherwise be desirable and/or on terms that are less favorable than might otherwise be available; or c) Relinquish or otherwise dispose of rights to technologies, product candidates, or products that we would otherwise seek to develop or commercialize ourselves and/or cease operations.

Our operating results may vary significantly in the future which may adversely affect the price of our common stock.

It is possible that our operating results may vary significantly in the future and that period-to-period comparisons of our operating results are not necessarily meaningful indicators of the future. You should not rely on the results of one quarter as an indication of our future performance. It is also possible that in some future quarters, our operating results will fall below our expectations or the expectations of market analysts and investors. If we do not meet these expectations, the price of our common stock may decline significantly.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable.

Provisions of our certificate of incorporation, bylaws and provisions of applicable Delaware law may discourage, delay or prevent a merger or other change in control that a stockholder may consider favorable. Pursuant to our certificate of incorporation, our board of directors may issue additional shares of common or preferred stock. Any additional issuance of common stock could have the effect of impeding or discouraging the acquisition of control of us by means of a merger, tender offer, proxy contest or otherwise, including a transaction in which our stockholders would receive a premium over the market price for their shares, and thereby protects the continuity of our management. Specifically, if in the due exercise of his/her or its fiduciary obligations, the board of directors were to determine that a takeover proposal was not in our best interest, shares could be issued by our board of directors without stockholder approval in one or more transactions that might prevent or render more difficult or costly the completion of the takeover by:

- Diluting the voting or other rights of the proposed acquirer or insurgent stockholder group,
- Putting a substantial voting block in institutional or other hands that might undertake to support the incumbent board of directors, or
- Effecting an acquisition that might complicate or preclude the takeover.

Our certificate of incorporation also allows our board of directors to fix the number of directors in the by-laws. Cumulative voting in the election of directors is specifically denied in our certificate of incorporation. The effect of these provisions may be to delay or prevent a tender offer or takeover attempt that a stockholder may determine to be in his, her or its best interest, including attempts that might result in a premium over the market price for the shares held by the stockholders.

We also are subject to Section 203 of the Delaware General Corporation Law. In general, these provisions prohibit a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless the transaction in which the person became an interested



stockholder is approved in a manner presented in Section 203 of the Delaware General Corporation Law. Generally, a "business combination" is defined to include mergers, asset sales and other transactions resulting in financial benefit to a stockholder. In general, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years, did own, 15% or more of a corporation's voting stock. This statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us.

We do not anticipate paying cash dividends for the foreseeable future, and therefore investors should not buy our stock if they wish to receive cash dividends.

We have never declared or paid any cash dividends or distributions on our capital stock. We currently intend to retain our future earnings to support operations and to finance expansion and therefore we do not anticipate paying any cash dividends on our common stock in the foreseeable future.

A significant number of our shares will be eligible for sale and their sale or potential sale may depress the market price of our common stock.

Sales of a significant number of shares of our common stock in the public market could harm the market price of our common stock. This prospectus covers 14,673,020 shares of our common stock, including shares of our common stock underlying currently outstanding warrants, representing (assuming exercise of such warrants) approximately 36.7% of our outstanding shares of our common stock. As additional shares of our common stock become available for resale in the public market pursuant to this offering, and otherwise, the supply of our common stock will increase, which could decrease its price. Some or all of the shares of common stock may be offered from time to time in the open market pursuant to Rule 144, and these sales may have a depressive effect on the market for our shares of common stock. Subject to certain restrictions, a person who has held restricted shares for a period of six months may sell common stock into the market.

FORWARD-LOOKING STATEMENTS

This prospectus contains or incorporates by reference forward-looking statements that involve risks and uncertainties. These forward-looking statements are not historical facts but rather are plans and predictions based on current expectations, estimates and projections about our industry, our beliefs and assumptions. We use words such as "anticipate," "expect," "intend," "plan," "believe," "seek," "estimate" and variations of these words and similar expressions to identify forward-looking statements. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and other factors, some of which are beyond our control, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements. These risks and uncertainties include those described in the section above entitled "Risk Factors." You should not place undue reliance on these forward-looking statements, which reflect our view only as of the date of this prospectus.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the common stock by any selling stockholders. All proceeds from the sale of the common stock will be paid directly to the selling stockholders. We may receive proceeds from the exercise of the warrants. The holders of the warrants are not obligated to exercise the warrants and we cannot assure that the holders of the warrants will choose to exercise all or any of the warrants.

We intend to use the estimated net proceeds received upon exercise of the warrants, if any, for working capital and general corporate purposes.

SHARES REGISTERED FOR RESALE

This prospectus covers the following securities registered for resale:

- 4,000,000 shares of our common stock, plus an additional 4,000,000 shares of common stock issuable upon exercise of warrants, sold to investors in a private offering in October and November 2010;
- 824,324 shares of common stock issuable upon exercise of warrants issued to service providers in 2010;
- 2,848,696 shares of common stock issuable upon exercise of warrants issued to investors in a private offering in August 2008 (as adjusted to reflect anti-dilution adjustments made following our 2009 and 2010 offerings); and

• 3,000,000 shares of common stock underlying stock options held by private investors to purchase shares currently held by E. Gerald Kay and Carl DeSantis, two of our significant stockholders. See "Selling Stockholders."

SELLING STOCKHOLDERS

The following table sets forth the name of each of the selling stockholders, the number of shares beneficially owned by each of the selling stockholders as of January 14, 2011, the number of shares that may be offered under this prospectus and the number of shares of our common stock owned by each of the selling stockholders after the offering is completed. The information concerning the selling stockholders may change from time to time, which changed information will be set forth in supplements to this prospectus if and when necessary. Because the selling stockholders may offer all or some of the common stock held, we can only give an estimate as to the amount of common stock that will be held by the selling stockholders upon the termination of this offering.

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting and investment power with respect to securities. To our knowledge, except as set forth in the footnotes to this table and subject to applicable community property laws, each person named in this table has sole voting and investment power with respect to the shares shown as beneficially owned by him or her.

As of January 14, 2011, 2010, 32,292,254 shares of our common stock were outstanding. In computing the number of shares beneficially owned by a person and the percentage of ownership of that person, shares of common stock issuable upon the exercise of warrants and options that are currently exercisable or exercisable within 60 days of January 14, 2011, are deemed to be outstanding and beneficially owned by the person holding the options, but are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Under this prospectus, the selling stockholders and any of their respective transferees, assignees, donees, distributees, pledgees or other successors in interest to the common stock covered by this prospectus may offer and sell from time to time an aggregate of up to 14,673,020 shares of common stock.

On May 21, 2010, two of our significant stockholders, E. Gerald Kay and Carl DeSantis, entered into agreements with two private investors, Kobus Investments, LLC and BioMed Investments, LLC, affiliates of Noble International Investments, Inc., described below, pursuant to which such investors obtained an option to purchase up to 3,000,000 shares of our common stock from such stockholders, with the shares purchased upon each exercise to be sold in equal amounts by Mr. Kay and Mr. DeSantis (or an affiliate of Mr. DeSantis). Such shares may be purchased at certain times during the 270-day period commencing with the effective date of the registration statement of which this prospectus is part. For each of the two agreements, the exercise price at which these LLCs may purchase such shares ranges from \$0.50 per share for the first 250,000 shares purchased by each investor to \$1.75 per share for the last 250,000 shares subject to the option, with an average exercise price of \$1.125 per share. The right to purchase the lowest-priced shares (\$0.50 and \$0.75) subject to the option expires 180 days after the effective date of the registration statement, followed by the mid-priced shares (\$1.00 and \$1.25), for which the right expires 270 days after the effective date of the registration statement, followed by the highest-priced shares (\$1.50 and \$1.75), for which the right expires 270 days after the effective date of the registration statement.

In a private placement conducted in October and November of 2010, we sold 4,000,000 shares of common stock at a purchase price of \$2.00 per share, and issued to the investors warrants to purchase an additional 4,000,000 shares of common stock with an exercise price of \$2.20, for gross proceeds of \$8,000,000. We are registering the shares of common stock sold to investors, along with the shares of common stock issuable upon exercise of the warrants, for the 2010 private placement investors identified in the selling stockholder table pursuant to a Registration Rights Agreement with the investors to (i) file a registration statement with respect to the resale of shares of the common stock sold to the investors with the Securities and Exchange Commission within 30 days after the final closing date of November 22, 2010; (ii) use our reasonable best efforts to have the registration statement declared effective by the SEC as soon as possible after the initial filing; and (iii) use our reasonable best efforts to keep the registration statement effective until the earlier of the time when all shares registered thereunder have been sold or the shares covered by the registration statement may be sold without volume restrictions pursuant to Rule 144.

Certain selling stockholders including Nico Pronk, Wayne Horne and and Shawn Titcomb are affiliates of Noble International Investments, Inc., a FINRA registered broker-dealer that served as the Placement Agent in the 2010 private placement. We paid Noble International approximately \$530,000 and issued it five-year cashless exercise warrants to purchase 249,324 shares of common stock at exercise prices ranging from \$2.16 to \$2.93 per share, based on our closing stock price on the date of each closing of the private placement, pursuant to a Placement Agent Agreement, dated October 27, 2010, between us and Noble

International. The warrants are transferable to Noble International's employees and affiliates. Noble International received one time piggyback registration rights with respect to the common stock underlying the warrants.

Noble International also entered into a two-year Advisory Agreement with us effective July 13, 2010. Under the Advisory Agreement, we pay Noble International a \$15,000 per month financial advisory fee. Also we issued it five-year warrants to purchase 500,000 shares of our common stock, exercisable at \$1.10 per share, subject to vesting at a rate of 20,000 shares per month. The warrants are transferable to Noble International's employees and affiliates and carry one-time piggyback registration rights for the common stock underlying such warrants.

There are currently no agreements, arrangements or understandings with respect to the sale of any of the resale shares held by the selling stockholders, except for that certain Registration Rights Agreement, between the Company and certain of the selling stockholders enumerated below, the Placement Agent Agreement, the Advisory Agreement and the Option Agreements.

| Name | Shares of Common Stock Beneficially Owned Before the Offering | Shares of Common Stock Registered in this Offering | Shares of Common Stock Owned After Offering | Percentage of Outstanding Common Stock Beneficially Owned After the Offering |
|--|---|---|---|---|
| Ethel and Philip Adelman Charitable Foundation, Inc. (1) | 500,000 | 500,000 | 0 | * |
| Ayer Capital Partners Kestrel Fund, LP (2) | 45,634 | 45,634 | 0 | * |
| Ayer Capital Partners Master Fund, L.P. (3) | 1,329,312 | 1,329,312 | 0 | * |
| Arron Banks | 200,000 | 200,000 | 0 | * |
| Jeffrey Benison | 147,000 | 50,000 | 97,000 | * |
| Vernon Ross Biggers | 25,000 | 25,000 | 0 | * |
| BioMed Investments, LLC (4) | 1,500,000 | 1,500,000 | 0 | * |
| Alberta Bove | 25,000 | 25,000 | 0 | * |
| Joseph D. Bove Jr. | 25,000 | 25,000 | 0 | * |
| Brio Capital L.P. (5) | 100,000 | 100,000 | 0 | * |
| CD Financial, LLC (6) | 5,551,419 | 500,000 | 5,051,419 | 15.6% |
| Michael Cerisano | 40,000 | 20,000 | 20,000 | * |
| Michael and Patricia Cerisano (as Tenants in Common) | 30,000 | 20,000 | 10,000 | * |
| Patricia Cerisano | 44,000 | 28,000 | 16,000 | * |
| Cranshire Capital, LP (7) | 95,000 | 95,000 | 0 | * |
| T. Wayne Davis | 143,360 | 74,066 | 69,294 | * |
| Tine W. Davis Foundation (8) | 100,000 | 100,000 | 0 | * |
| Robert W. Doherty | 380,000 | 80,000 | 300,000 | * |
| Epworth-Ayer Capital (9) | 125,054 | 125,054 | 0 | * |
| John Brent Evans | 25,000 | 25,000 | 0 | * |
| Christopher E. Fay Martin J. Ferkin | 300,000 | 300,000 | 0 | * |
| | 50,000 | 50,000 | 0 | * |
| Tony D. Fiest | 25,000 | 25,000 | 0 | |

| John Joseph Flanagan, Jr. | 801,378 | 384,868 | 416,510 | 1.2% |
|---|-----------|-----------|---------|------|
| Louis Fohn | 50,000 | 50,000 | 0 | * |
| Larry J. Fox | 226,722 | 113,948 | 112,774 | * |
| Freestone Advantage Partners, LP (10) | 5,000 | 5,000 | 0 | * |
| The Richard S. Friedman 2008 Revocable Trust | 200,000 | 200,000 | 0 | * |
| Thomas and Kathleen Fuchs | 100,000 | 100,000 | 0 | * |
| Patrick A. Gerschel Living Trust DTD 9/23/1997 | 100,000 | 100,000 | 0 | * |
| Growth Ventures, Inc. (11) | 345,000 | 100,000 | 245,000 | * |
| Growth Ventures, Inc. Roth 401(k) (12) | 345,000 | 100,000 | 245,000 | * |
| High Speed Aggregate, Inc. (13) | 200,000 | 200,000 | 0 | * |
| James T. Hill (14) | 80,000 | 30,000 | 50.000 | * |
| Robert K. Hoecker | 110,275 | 56,973 | 53,302 | * |
| Mark Horan | 55,136 | 28,486 | 26,650 | * |
| IRA FBO Lynn Horne | 100,000 | 50,000 | 50,000 | * |
| Wayne Horne (4) | 587,904 | 100,000 | 487,904 | 1.5% |
| David H. Hughes | 210,278 | 56,976 | 153,302 | * |
| Jaguar-Portland Holdings LLC (15) | 500,000 | 500,000 | 0 | * |
| Samuel Jonas | 50,000 | 50,000 | 0 | * |
| Steven and Carisa Jones Defined Benefit Plan & Trust, | , | , | | |
| UAD 1/1/06 | 40,000 | 40,000 | 0 | * |
| Steven and Carisa Jones 401K Plan & Trust, UAD | | | | |
| 1/1/06 | 35,000 | 35,000 | 0 | * |
| Norman W. Joslyn | 25,000 | 25,000 | 0 | * |
| Kearney Holdings, LLC (16) | 100,000 | 100,000 | 0 | * |
| Michael Kelly | 25,000 | 25,000 | 0 | * |
| Howard Kent | 25,000 | 25,000 | 0 | * |
| SEP FBO Howard Kent | 75,000 | 75,000 | 0 | * |
| Kirby Enterprise Fund LLC (17) | 200,000 | 200,000 | 0 | * |
| Kobus Investments, LLC (4) | 1,500,000 | 1,500,000 | 0 | * |
| Cheryl A.G. Kozloff Revocable Trust (18) | 686,898 | 213,948 | 472,950 | 1.5% |
| Zarko Kraljevic | 1,112,781 | 569,734 | 543,047 | 1.7% |
| Lincoln Park Capital Fund, LLC (19) | 100,000 | 100,000 | 0 | * |
| Robert Lombardi | 25,000 | 25,000 | 0 | * |
| Michael R. Malec | 50,000 | 50,000 | 0 | * |
| Market Development Consulting Group, Inc. (20) | 75,000 | 75,000 | 0 | * |
| Candace McKey | 427,916 | 185,460 | 242,456 | * |
| John D. McKey, Jr. (14) (21) | 769,299 | 199,408 | 569,891 | 1.8% |
| McNamara of New Smyrna LP (22) | 260,278 | 56,976 | 203,302 | * |
| McNamara of Orlando LP (23) | 210,278 | 56,976 | 153,302 | * |
| | | | | |

| Dennis C. McNamara, Sr., F.L.P. | 260,278 | 56,976 | 203,302 | * |
|--|-----------|---------|---------|------|
| Barry Moores | 50,000 | 50,000 | 0 | * |
| Natalie Moores | 25,000 | 25,000 | 0 | * |
| W. Douglas Moreland | 100,000 | 100,000 | 0 | * |
| Noble International Investments, Inc. (24) | 1,099,911 | 749,324 | 350,587 | 1.1% |
| OPB Limited Partnership (25) | 992,479 | 512,761 | 479,718 | 1.5% |
| Francisco Penafiel | 15,000 | 15,000 | 0 | * |
| George H. Patten Pettway, Jr. | 12,671 | 11,394 | 1,277 | * |
| George H. Pettway | 285,075 | 142,436 | 142,639 | * |
| Thomas Prasil Trustee UTD | 125,000 | 100,000 | 25,000 | * |
| Dirk Pronk | 94,000 | 67,000 | 27,000 | * |
| Nico Pronk (4) | 574,854 | 100,000 | 474,854 | 1.5% |
| John L. Quinn | 50,000 | 50,000 | 0 | * |
| John R. Raphael Revocable Trust UAD 7/6/07 | 50,000 | 50,000 | 0 | * |
| Michael Raphael 2008 Trust | 25,000 | 25,000 | 0 | * |
| Tara Raphael 2005 Trust | 25,000 | 25,000 | 0 | * |
| Patrick M. Reidy | 20,000 | 20,000 | 0 | * |
| Rheney Living Trust | 110,278 | 56,976 | 53,302 | * |
| Bruce C. Rosetto and Roxanne S. Rosetto (as Tenants by | | | | |
| the Entirety) | 25,000 | 25,000 | 0 | * |
| Dan Rudden | 100,000 | 100,000 | 0 | * |
| Pierre Schoenheimer | 50,000 | 50,000 | 0 | * |
| Seaway Two Corp. (26) | 100,000 | 100,000 | 0 | * |
| Charles Seergy, Jr. | 71,707 | 71,217 | 490 | * |
| F. Treadway Shurling | 235,278 | 81,976 | 153,302 | * |
| Kevin Smith | 237,845 | 171,217 | 66,628 | * |
| Stephenson Partners LLC (27) | 907,692 | 600,000 | 307,692 | * |
| J. Yancey Stribling, Jr. | 210,278 | 56,976 | 153,302 | * |
| Ted Tedesco | 25,000 | 25,000 | 0 | * |
| TH Capital Holdings, LLC (28) | 220,552 | 113,948 | 106,604 | * |
| Shawn M. Titcomb (4) | 93,614 | 20,000 | 73,614 | * |
| John Williams | 25,000 | 25,000 | 0 | * |
| Ivan L. Wolff | 25,000 | 25,000 | 0 | * |
| World Ventures, LLC (29) | 25,000 | 25,000 | 0 | * |
| | | | | |

* less than 1%

(1) Seymour Flug is the director of Ethel and Philip Adelman Charitable Foundation, Inc., which is the registered holder of the shares of common stock. Seymour Flug, as director of Ethel and Philip Adelman Charitable Foundation, Inc, has voting and disposition power over the shares owned by Ethel and Philip Adelman Charitable Foundation Inc.

(2) Jay Venkatesan is the managing member of Ayer Capital Partners Kestrel Fund, LP, which is the registered holder of the shares of common stock. Jay Venkatesan, as managing member of Ayer Capital Partners Kestrel Fund LP, has voting and disposition power over the shares owned by Ayer Capital Partners Kestrel Fund, LP.

(3) Jay Venkatesan is the managing member of Ayer Capital Partners Master Fund, LP, which is the registered holder of the shares of common stock. Jay Venkatesan, as managing member of Ayer Capital Partners Master Fund LP, has voting and disposition power over the shares owned by Ayer Capital Partners Master Fund, LP.

(4) A principal or affiliate of the Placement Agent (see note 24 below). BioMed is controlled by Wayne Horne and Kobus is controlled by Nico Pronk.

(5) Shaye Hirsch is the managing partner of Brio Capital, LP, which is the registered holder of the shares of common stock. Shaye Hirsch, as the managing partner of Brio Capital, LP, has voting and disposition power over the shares owned by Brio Capital, LP.

(6) Carl DeSantis is the manager of CD Financial, LLC, which is the registered holder of the shares of common stock. Carl DeSantis, as the manager of CD Financial, LLC, has voting and disposition power over the shares owned by CD Financial, LLC. The shares listed as beneficially owned by the stockholder includes shares held by affiliates of the stockholder and of Mr. DeSantis.

(7) Downsview Capital, Inc. ("Downsview") is the general partner of Cranshire Capital, L.P. ("Cranshire") and consequently has voting control and investment discretion over securities held by Cranshire. Mitchell P. Kopin ("Mr. Kopin"), President of Downsview, has voting control over Downsview. As a result of the foregoing, each of Mr. Kopin and Downsview may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the shares of common stock beneficially owned by Cranshire.

(8) T. Wayne Davis is the Chairman and CEO of Tine W. Davis Family Foundation, which is the registered holder of the shares of common stock. T. Wayne Davis, as Chairman and CEO of Tine W. Davis Family Foundation, has voting and disposition power over the shares owned by Tine W. Davis Family Foundation.

(9) Jay Venkatesan is the managing member of the investment advisor of Epworth-Ayer Capital, which is the registered holder of the shares of common stock. Jay Venkatesan, as managing member of the investment advisor of Epworth-Ayer Capital, has voting and disposition power over the shares owned by Epworth-Ayer Capital.

(10) Downsview Capital, Inc. ("Downsview") is the investment manager for a managed account of Freestone Advantage Partners, LP and consequently has voting control and investment discretion over securities held in such account. Mitchell P. Kopin ("Mr. Kopin"), President of Downsview, has voting control over Downsview. As a result, each of Mr. Kopin and Downsview may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the shares held in such account which are being registered hereunder.

(11) Gary J. McAdam is the president of Growth Ventures, Inc., which is the registered holder of the shares of common stock. Gary J. McAdam, as the president of Growth Ventures, Inc., has voting and disposition power over the shares owned by Growth Ventures, Inc.

(12) Gary J. McAdam is the trustee of Growth Ventures, Inc Roth 401(k), which is the registered holder of the shares of common stock. Gary J. McAdam, as the trustee of Growth Ventures, Inc Roth 401(k), has voting and disposition power over the shares owned by Growth Ventures, Inc Roth 401(k).

(13) Lance J. Baller is the CFO and vice president of High Speed Aggregate, Inc., which is the registered holder of the shares of common stock. Lance J. Baller, as the CFO and vice president of High Speed Aggregate, Inc., has voting and disposition power over the shares owned by High Speed Aggregate, Inc.

(14) A member of the Company's Board of Directors.

(15) William Natbony is the manager of the managing member of Jaguar-Portland Holdings LLC, which is the registered holder of the shares of common stock. William Natbony, as the manager of the managing member of Jaguar-Portland Holdings LLC, has voting and disposition power over the shares owned by Jaguar-Portland Holdings LLC.

(16) Charles Kirby is the managing member of Kearney Holdings, LLC, which is the registered holder of the shares of common stock. Charles Kirby, as the managing member of Kearney Holdings, LLC, has voting and disposition power over the shares owned by Kearney Holdings, LLC.

(17) Charles Kirby is the managing member of Kirby Enterprise Fund LLC, which is the registered holder of the shares of common stock. Charles Kirby, as the managing member of Kirby Enterprise Fund LLC, has voting and disposition power over the shares owned by Kirby Enterprise Fund LLC.

(18) Shares listed as beneficially owned by the stockholder include shares held by Cheryl A.G. Kozloff in her individual capacity.

(19) Joshua Scheinfeld is the president of Lincoln Park Capital Fund, LLC, which is the registered holder of the shares of common stock. Joshua Scheinfeld, as the president of Lincoln Park Capital Fund, LLC, has voting and disposition power over the shares owned by Lincoln Park Capital Fund, LLC.

(20) David E. Casteneda is the President of Market Development Consulting Group, Inc, which is the registered holder of the shares of common stock. David E. Casteneda, as President of Market Development Consulting Group Inc., has voting and disposition power over the shares owned by Market Development Consulting Group, Inc.

(21) Does not include shares beneficially owned by Candace McKey, Mr. McKey's spouse, which are listed separately.

- (22) Dennis C. McNamara, Jr. is the general partner of McNamara of New Smyrna LP, which is the registered holder of the shares of common stock. Dennis C. McNamara, Jr., as general partner of McNamara of New Smyrna LP, has voting and disposition power over the shares owned by McNamara of New Smyrna LP.
- (23) Hal McNamara is the general partner of McNamara of Orlando LP, which is the registered holder of the shares of common stock. Hal McNamara, as general partner of McNamara of Orlando LP, has voting and disposition power over the shares owned by McNamara of Orlando LP.
- (24) Noble International Investments, Inc., a FINRA registered broker-dealer, served as the Placement Agent in the Private Placement.
- (25) Bradley Hoecker is the general partner of OPB Limited Partnership, which is the registered holder of the shares of common stock. Bradley Hoecker, as general partner of OPB Limited Partnership, has voting and disposition power over the shares owned by OPB Limited Partnership.
- (26) T. Gene Prescott is the chairman of Seaway Two Corp., which is the registered holder of the shares of common stock. T. Gene Prescott,

as chairman of Seaway Two Corp., has voting and disposition power over the shares owned by Seaway Two Corp.

(27) Paul W. Stephenson is the managing member of Stephenson Partners LLC, which is the registered holder of the shares of common stock. Paul W. Stephenson, as managing member of Stephenson Partners LLC, has voting and disposition power over the shares owned by Stephenson Partners LLC.

(28) Michael Cirillo is the vice president of TH Capital Holdings, LLC, which is the registered holder of the shares of common stock. Michael Cirillo, as vice president of TH Capital Holdings, LLC, has voting and disposition power over the shares owned by TH Capital Holdings, LLC.

(29) Robert A. Strahl is the managing partner of World Ventures, LLC, which is the registered holder of the shares of common stock. Robert A. Strahl, as managing partner of World Ventures, LLC, has voting and disposition power over the shares owned by World Ventures, LLC.

DESCRIPTION OF SECURITIES

Capital Stock

We are authorized to issue 100,000,000 shares of common stock, par value \$0.001 per share, following an amendment to our Certificate of Incorporation approved by our stockholders on December 9, 2010, of which 28,272,655 shares were issued and outstanding as of September 30, 2010, and 1,000,000 shares of preferred stock, no par value, of which no shares were issued and outstanding as of September 30, 2010.

Common Stock

Holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders and are not entitled to cumulative voting for the election of directors. Holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the Board of Directors out of funds legally available therefor subject to the rights of preferred stockholders. We do not intend to pay any cash dividends to the holders of common stock and anticipate reinvesting our earnings. In the event of liquidation, dissolution or winding up of our company, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities and the preferences of preferred stockholders. Shares of common stock have no preemptive, conversion or other subscription rights. There are no redemption or sinking fund provisions applicable to common stock.

Preferred Stock

We are authorized to issue 1,000,000 shares of preferred stock, with no par value, and the Board of Directors is authorized to create one or more series of preferred stock, and to designate the rights, privileges, restrictions, preferences and limitations of any given series of preferred stock. Accordingly, the Board of Directors may, without stockholder approval, issue shares of preferred stock with dividend, liquidation, conversion, voting or other rights that could adversely affect the voting power or other rights of the holders of common stock.

NYSE Amex Listing

Our common stock is listed on the NYSE Amex market under the symbol "IBIO."

Stock Transfer Agent

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company located at 17 Battery Place, New York, NY 10004.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Our Certificate of Incorporation will provide for indemnification of our officers and directors to the extent permitted by Delaware law, which generally permits indemnification for actions taken by officers or directors as our representatives if the officer or director acted in good faith and in a manner he or she reasonably believed to be in the best interest of the corporation.

As permitted under Delaware law, our By-laws contain a provision indemnifying directors against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by them in connection with an action, suit or proceeding if they acted in good faith and in a manner they reasonably believed to be in or not opposed to the best interests of our company, and, with respect to any criminal action or proceeding, had no reasonable cause to believe their conduct was unlawful.

The separation and distribution agreement that we have entered into with Integrated BioPharma provides for indemnification by us of Integrated BioPharma and its directors, officers and employees for some liabilities, including liabilities under the Securities Act and the Securities Exchange Act of 1934 in connection with the distribution, and a mutual indemnification of each other for product liability claims arising from their respective businesses, and also requires that we indemnify Integrated BioPharma for various liabilities of iBio, and for any tax that may be imposed with respect to the distribution and which result from our actions or omissions in that regard.

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

PLAN OF DISTRIBUTION

The selling stockholders and any of their pledgees, donees, transferees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits investors;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- an underwritten offering;
- privately negotiated transactions;
- to cover short sales made after the date that this Registration Statement is declared effective by the Commission;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

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

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

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

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealers or agents that are involved in selling the shares, including, as described in further detail below, E. Gerald Kay, Carl DeSantis, Kobus Investments, LLC and BioMed Investments, LLC, may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Discounts, concessions, commissions and similar selling expenses, if any, that can be attributed to the sale of Securities will be paid by the selling stockholder and/or the purchasers. Each selling stockholder has represented and warranted to us that it acquired the securities subject to this registration statement in the ordinary course of such selling stockholder's business and, at the time of its purchase of such securities such selling stockholder had no agreements or understandings, directly or indirectly, with any person to distribute any such securities.

As described in "Selling Stockholders" above, on May 21, 2010, two of our significant stockholders, E. Gerald Kay and Carl DeSantis, entered into agreements with two private investors, Kobus Investments, LLC and BioMed Investments, LLC, affiliates of Noble International Investments, Inc., a registered broker-dealer that served as the placement agent in the 2010 private placement, pursuant to which such investors obtained an option to purchase up to 3,000,000 shares of our common stock from such stockholders, with the shares purchased upon each exercise to be sold in equal amounts by Mr. Kay and Mr. DeSantis (or an affiliate of Mr. DeSantis). We facilitated this transaction and agreed to register the resale of the 3,000,000 shares underlying the stock options, because we made a determination that, as a normal part of our growth as a public company, we should develop a more diversified ownership base preferably including institutional investors, and the movement of shares from our two largest shareholders to the public float would be useful in that regard. E. Gerald Kay and Carl DeSantis, the grantors of the stock options, are each currently beneficial owners of more than 15% of our common stock, and neither is an officer or director of our company. Therefore, we have encouraged Messrs. Kay and DeSantis to make some of their holdings available for purchase by others and have involved the option holders to facilitate an efficient distribution of the shares to a variety of other investors particularly including institutional investors. Upon the grant and exercise of the options, no commissions, fees or proceeds were or will be earned or paid to Messrs. Kay or DeSantis (other than the proceeds from the exercise of the options themselves) or to the option holders or their affiliates.

We have advised each selling stockholder that it may not use shares offered by this prospectus to cover short sales of common stock made

prior to the date of this prospectus. If a selling stockholder uses this prospectus for any sale of the common stock, it will be subject to the prospectus delivery requirements of the Securities Act. The selling stockholders will be responsible to

comply with the applicable provisions of the Securities Act and the Securities Exchange Act of 1934, and the rules and regulations thereunder promulgated, including, without limitation, Regulation M, as applicable to such selling stockholders in connection with resales of their respective shares under this prospectus.

We are required to pay all fees and expenses incident to the registration of the shares, but we will not receive any proceeds from the sale of the common stock. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

LEGAL MATTERS

The legality of the securities offered hereby has been passed on for us by Andrew Abramowitz, PLLC, New York, New York.

EXPERTS

The financial statements iBio, Inc. as of June 30, 2010 and for the year then ended have been audited by J.H. Cohn LLP, independent registered public accounting firm, as set forth in their report incorporated by reference herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

The financial statements iBio, Inc. as of June 30, 2009 and for the year then ended have been audited by Amper, Politziner & Mattia, LLP, independent registered public accounting firm, as set forth in their report incorporated by reference herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a Registration Statement on Form S-3 under the Securities Act covering the sale of the securities offered by this prospectus. This prospectus, which is a part of the Registration Statement, does not contain all of the information in the Registration Statement and the exhibits filed with it, portions of which have been omitted as permitted by the SEC rules and regulations. For further information concerning us and the securities offered by this prospectus, please refer to the Registration Statement and to the exhibits filed therewith.

The Registration Statement, including all exhibits, may be inspected without charge at the SEC's Public Reference Room at the SEC's principal office at Room 1580, 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of this public reference room by calling 1-800-SEC-0330. The Registration Statement, including all exhibits and schedules and amendments, has been filed with the SEC through the Electronic Data Gathering Analysis and Retrieval system and is available to the public from the SEC's web site at http://www.sec.gov.

INFORMATION INCORPORATED BY REFERENCE

We disclose important information to you by referring you to documents that we have previously filed with the SEC or documents that we will file with the SEC in the future. The information incorporated by reference is considered to be part of this prospectus. Information in documents that we file later with the SEC will automatically update and supersede information in this prospectus. We hereby incorporate by reference into this prospectus the documents listed below, and any future filings made by us with the SEC under Section 13(a), 13(c), 14, or 15(d) or the Exchange Act until we close this offering, including all filings made after the date of the registration statement. We hereby incorporate by reference the following documents; provided, however, that we are not incorporating any information contained in any Current Report on Form 8-K that is furnished but not filed with the SEC:

- 1. Our Annual Report on Form 10-K for the year ended June 30, 2010 filed with the SEC on October 13, 2010 (as amended on November 24, 2010).
- 2. Our Definitive Proxy Statement on Schedule 14A filed on November 10, 2010.
- 3. Our Quarterly Reports on Form 10-Q for the quarter ended September 30, 2010 filed with the SEC on November 15, 2010, and for the quarter ended December 31, 2010 filed with the SEC on February 14, 2011.
- 4. Our Current Reports on Form 8-K filed on October 29, 2010, November 3, 2010 and December 15, 2010.
- 5. Our Registration Statement on Form S-1 filed on December 21, 2010.



6. All documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus is modified or superseded for purposes of the prospectus to the extent that a statement contained in this prospectus or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein modifies or supersedes such statement.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any or all of the foregoing documents incorporated herein by reference (other than exhibits unless such exhibits are specifically incorporated by reference in such documents). Requests for such documents should be made to us at the following address or telephone number:

iBio, Inc. 9 Innovation Way, Suite 100 Newark, Delaware 19711 (302) 355-0650 Attention: Corporate Secretary

PROSPECTUS

Until , 2011, all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

IBIO, INC.

14,673,020 Shares of Common Stock

,2011

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses that will be paid by us in connection with the securities being registered. With the exception of the SEC registration fee, all amounts shown are estimates:

| Registration Fees | \$ 1,652.28 |
|------------------------------|--------------|
| Legal Fees and Expenses | 35,000.00 |
| Printing Expenses | 15,000.00 |
| Accounting Fees and Expenses | 50,000.00 |
| Miscellaneous | -0- |
| | |
| Total | \$101,652.28 |

We will pay all expenses incurred in connection with the registration of the shares covered by this prospectus. Brokerage commissions, underwriters' fees, discounts and commissions and similar selling expenses, if any, attributable to the sale of the shares covered by the alternate prospectus will be borne by the selling stockholders.

Item 15. Indemnification of Directors and Officers.

Our Certificate of Incorporation will provide for indemnification of our officers and directors to the extent permitted by Delaware law, which generally permits indemnification for actions taken by officers or directors as our representatives if the officer or director acted in good faith and in a manner he or she reasonably believed to be in the best interest of the corporation. We have entered into indemnification agreements with our officers and directors to specify the terms of our indemnification obligations. In general, these indemnification agreements provide that we will:

- indemnify our directors and officers to the fullest extent now permitted under current law and to the extent the law later is amended to increase the scope of permitted indemnification;
- advance payment of expenses to a director or officer incurred in connection with an indemnifiable claim, subject to repayment if it is later determined that the director or officer was not entitled to be indemnified;
- reimburse the director or officer for any expenses incurred by the director or officer in seeking to enforce the indemnification agreement; and
- have the opportunity to participate in the defense of any indemnifiable claims against the director or officer.

As permitted under Delaware law, the By-laws contain a provision indemnifying directors against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by them in connection with an action, suit or proceeding if they acted in good faith and in a manner they reasonably believed to be in or not opposed to the best interests of our Company, and, with respect to any criminal action or proceeding, had no reasonable cause to believe their conduct was unlawful.

The separation and distribution agreement that we have entered into with Integrated BioPharma provides for indemnification by us of Integrated BioPharma and its directors, officers and employees for some liabilities, including liabilities under the Securities Act and the Securities Exchange Act of 1934 in connection with the distribution, and a mutual indemnification of each other for product liability claims arising from their respective businesses, and also requires that we indemnify Integrated BioPharma for various liabilities of iBio, and for any tax that may be imposed with respect to the distribution and which result from our actions or omissions in that regard.

Item 16. Exhibits

Exhibits filed with this Registration Statement on Form S-3 or incorporated by reference from other filings are as follows:

| Number | Description |
|--------|---|
| 3.1 | Form of Certificate of Incorporation of iBio, Inc. (3) |
| 3.2 | Form of Bylaws of iBio, Inc. (8) |
| 4.1 | Form of Common Stock Certificate (3) |
| 4.2 | Form of Warrant to Purchase Common Stock of iBio, Inc. for each Investor (2008 Private Placement) (5) |
| 4.3 | Form of Warrant to Purchase Common Stock of iBio, Inc. for each Investor (2010 Private Placement) (10) |
| 5.1 | Opinion of Andrew Abramowitz, PLLC (11) |
| 10.1 | Separation and Distribution Agreement, dated as of November 14, 2007, between Integrated BioPharma, Inc. and the Registrant. (1) |
| 10.2 | Indemnification and Insurance Matters Agreement between Integrated BioPharma, Inc., and the Registrant (5) |
| 10.3 | Transitional Services Agreement between Integrated BioPharma, Inc. and the Registrant. (5) |
| 10.4 | Tax Allocation Agreement between Integrated BioPharma, Inc. and the Registrant. (5) |
| 10.5 | Form of Securities Purchase Agreement between various purchasers and the Registrant (2008 Private Placement) (4) |
| 10.6 | Technology Transfer Agreement, dated as of January 1, 2004, between the Registrant and Fraunhofer USA Center for Molecular Biotechnology, Inc. (3) |
| 10.7 | Non-Standard Navy Cooperative Research and Development Agreement, dated August 17, 2004, between the Registrant and Fraunhofer USA Center for Molecular Biotechnology, Inc. (2) |
| 10.8 | Supply License Agreement, dated as of March 22, 2006, between the Registrant and Mannatech, Inc. (2) |
| 10.9 | Form of Registration Rights Agreement with iBio, Inc. for each Investor (2008 Private Placement) (6) |
| 10.10 | Conversion Agreement, dated August 19, 2008, by and between iBio, Inc. and Integrated BioPharma, Inc. (6) |
| 10.11 | Form of Subscription Agreement between various purchasers and the Registrant (2009 Private Placement) (7) |
| 10.12 | Form of Registration Rights Agreement with iBio, Inc. for each purchaser (2009 Private Placement) (7) |
| 10.13 | Employment Agreement, dated February 25, 2010, between iBio, Inc. and Vidadi Yusibov, Ph.D. (9) |
| 10.14 | Form of Securities Purchase Agreement between various purchasers and the Registrant (2010 Private Placement) (10) |
| 10.15 | Form of Registration Rights Agreement with iBio, Inc. for each purchaser (2010 Private Placement) (10) |
| 10.16 | Placement Agent Agreement, dated October 27, 2010, between iBio, Inc. and Noble Financial Capital Markets (2010 |

Private Placement) (10)

- 23.1 Consent of J.H. Cohn LLP (12)
- 23.2 Consent of Amper, Politziner & Mattia, LLP (12)
- 23.3 Consent of Andrew Abramowitz, PLLC (included in Exhibit 5.1)
- 24.1 Power of Attorney (11)

(1) Incorporated herein by reference to the Company's Form 10-12G filed with the Commission on March 7, 2008

(2) Incorporated herein by reference to the Company's Form 10-12G filed with the Commission on June 18, 2008

(3) Incorporated herein by reference to the Company's Form 10-12G filed with the Commission on July 11, 2008

- (4) Incorporated herein by reference to the Company's Form 10-12G filed with the Commission on July 17, 2008
- (5) Incorporated herein by reference to the Company's Current Report on Form 8-K filed with the SEC on August 15, 2008.
- (6) Incorporated herein by reference to the Company's Current Report on Form 8-K filed with the SEC on August 21, 2008.
- (7) Incorporated herein by reference to the Company's Current Report on Form 8-K filed with the SEC on September 15, 2009.
- (8) Incorporated herein by reference to the Company's Current Report on Form 8-K filed with the SEC on August 14, 2009.
- (9) Incorporated herein by reference to the Company's Current Report on Form 8-K filed with the SEC on March 3, 2010.
- (10) Incorporated herein by reference to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 15, 2010.
- (11) Incorporated herein by reference to the Company's Registration Statement on Form S-1 filed with the SEC on December 21, 2010.
- (12) Filed herewith.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

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

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

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent posteffective 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 20% change in the maximum aggregate offering price set forth in 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 1(i), 1(ii) and 1(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in 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, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of 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) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(6) 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 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 this 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.

(7) 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.

(8) That, for purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(9) That, for purposes of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus 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 Newark, State of Delaware on March 7, 2011.

IBIO, INC.

By: /s/ Robert B. Kay

Robert B. Kay Chief Executive Officer

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

| Chief Executive Officer and Director (Principal Executive Officer) | |
|---|--|
| | March 7, 2011 |
| | |
| Chief Financial Officer (Principal Financial and Accounting Officer) | March 7, 2011 |
| | |
| Director | March 7, 2011 |
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| Director | March 7, 2011 |
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| Director | March 7, 2011 |
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| Director | March 7, 2011 |
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| Director | March 7, 2011 |
| _ | |
| | |
| | Chief Financial Officer (Principal Financial and Accounting Officer) Director Director Director Director Director |

Robert B. Kay Under Power of Attorney

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Amendment No. 2 to the Form S-1 Registration Statement filed on Form S-3 (File No. 333-171315) of iBio, Inc., of our report dated October 13, 2010, except for the matters discussed in Note 12b, as to which the date is November 22, 2010, on our audit of the financial statements of iBio, Inc. as of June 30, 2010 and for the year then ended. We also consent to the reference to us under the caption "Experts".

/s/ J.H. Cohn LLP

March 7, 2011 Eatontown, NJ

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Prospectus constituting a part of Amendment No. 2 on Form S-3 to Form S-1 Registration Statement of iBio, Inc., of our report dated September 28, 2009, relating to the financial statements of iBio, Inc. as of June 30, 2009 and for the year then ended, which also are incorporated by reference.

We also consent to the reference to us under the heading "Experts" in such Prospectus.

/s/ Amper, Politziner & Mattia, LLP

March 7, 2011 Edison, NJ **iBio, Inc.** 9 Innovation Way, Suite 100 Newark, Delaware 19711

March 7, 2011

VIA EDGAR

U.S. Securities and Exchange Commission 100 F Street, N.E. Washington, D.C. 20549

> Re: iBio, Inc. Amendment No. 2 on Form S-3 to Registration Statement on Form S-1 File No. 333-171315

Ladies and Gentlemen:

iBio, Inc. (the "Company") hereby submits in electronic format for filing with the U.S. Securities and Exchange Commission (the "SEC") one complete copy of Amendment No. 2 on Form S-3 (the "Amendment") to the captioned Registration Statement on Form S-1, File No. 333-171315, filed with the SEC on December 21, 2010, as amended by Amendment No. 1 thereto, filed with the SEC on January 27, 2011 (as amended, the "Registration Statement"), for the registration of shares of the Company's common stock to be offered by holders of common stock and warrants to purchase common stock, including one complete copy of the exhibits listed in the Amendment as filed therewith.

The Amendment responds to the comments received from the staff of the SEC by letter dated February 23, 2011.

To facilitate the staff's review, we have set forth the text of the single comment from the letter in italics, followed by the Company's response.

<u>Comment 1</u>: Please expand your disclosure on page 17 under the heading "Plan of Distribution" to specifically identify Messrs. Kay and DeSantis, Kobus Investments, LLC and BioMed Investments, LLC as underwriters. As it currently reads, you have not differentiated the other selling stockholders from Messrs. Kay and DeSantis, Kobus Investments, LLC and BioMed Investments, LLC each of which have been determined to be underwriters. Further, please identify the material relationship between you and each of the underwriters. This disclosure should include the description of the arrangements made by the company to facilitate and encourage the sale of the options from Messrs. Kay and DeSantis to Kobus Investments, LLC as described in your January 27 response letter. Your discussion should also disclose any

commissions, fees or proceeds to be earned by or paid to Messrs. Kay or DeSantis pursuant to the sale or exercise of the options.

The Company has revised the Registration Statement in response to the staff's comment. See page 18 of the Amendment.

Concluding Notes

A request for acceleration of the effectiveness of the Registration Statement will be submitted by the Company as soon as the SEC has reviewed this letter and its enclosures and has advised the Company that no further issues remain outstanding. At the time of the request, the Company will furnish a letter acknowledging the SEC's position with respect to declaration of effectiveness and staff comments.

Should any member of the SEC's staff have any questions concerning the enclosed materials or desire any further information or clarification in respect of the Registration Statement, please do not hesitate to contact me at (609) 802-6466, or our counsel, Andrew Abramowitz, at (212) 972-8882.

Very truly yours,

iBio, Inc. Frederick Larcombe Chief Financial Officer

Enclosures

cc: Jeffrey Riedler, Esq.
 Assistant Director, Division of Corporation Finance
 Karen Ubell, Esq.
 Staff Attorney, Division of Corporation Finance

Mr. Robert B. Kay