ORTHOLOGIC CORP
Form S-8
June 13, 2006

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As filed with the Securities and Exchange Commission on June 13, 2006
Registration No. 333-_____

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form S-8
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933
ORTHOLOGIC CORP.
(Exact name of Registrant as specified in charter)

Delaware	**86-0585310**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**

1275 West Washington Street, Tempe, AZ 85281
(602) 286-5520
(Address, including zip code, and telephone number, including area code, of registrant s principal executive offices)
ORTHOLOGIC CORP.
2005 Equity Incentive Plan
(Full Title of the Plans)

John M. Holliman, III, Executive Chairman
OrthoLogic Corp.
1275 West Washington Street
Tempe, Arizona 85281
(602) 286-5520
(Name, address, including zip code, and telephone number, including area code, of agent for service)

The Commission is requested to send copies of all communications to:
Steven P. Emerick
Quarles & Brady Streich Lang LLP
One Renaissance Square
Two North Central Avenue
Phoenix, Arizona 85004-2391
(602) 229-5200

CALCULATION OF REGISTRATION FEE

Title of	**Amount to be**	**Proposed maximum offering price**	**Proposed maximum aggregate offering**	**Amount of registration**

securities to be registered	registered	per share	price	fee
Common Stock, par value $.0005 per share (with attached Preferred Stock Purchase Rights)	2,000,000 (1) (2)	$1.77 (3)	$3,540,000 (3)	$378.78 (4)

(1) Any additional shares of common stock to be issued as a result of stock splits, stock dividends, or similar transactions shall be covered by this registration statement as provided in Rule 416.

(2) Represents shares of common stock reserved for issuance under the OrthoLogic Corp. 2005 Equity Incentive Plan, including the 117,750 shares of common stock effectively issued prior to the date hereof under the OrthoLogic Corp. 2005 Equity Incentive Plan.

(3) Estimated pursuant to Rule 457(h)(1) and Rule 457(c) of the Securities Act of 1933, based on the average of the

high and low prices reported on the NASDAQ National Market on June 8, 2006, solely for the purpose of calculating the registration fee.

(4) The filing fee of $378.78 has been previously paid. In connection with our registration statement on Form S-3 filed August 9, 2005, as amended on August 17, 2005, Commission File No. 333-127356, OrthoLogic Corp. paid a total of $11,770 in filing fees. The offering was later withdrawn, no securities having been sold thereunder, leaving a balance of $11,770. We applied $708.91 of this balance to our registration statement on Form S-3 filed April 13, 2006, Commission File no. 333-133273 and $256.62 of this balance to our

registration statement on Form S-3 filed April 25, 2006, Commission File no. 333-133530, leaving a balance of $10,804.47. It is from this balance that we wish to pay the filing fee for this registration statement on Form S-8.

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EXPLANATORY NOTE

This registration statement on Form S-8 includes a reoffer prospectus prepared in accordance with Instruction C of Form S-8 and Part I of Form S-3. The reoffer prospectus relates solely to resales on a continuous or delayed basis in the future of up to an aggregate of 117,750 shares of the registrant s common stock that constitute restricted securities that were issued to certain of its officers, directors and other employees under the OrthoLogic Corp. 2005 Equity Incentive Plan prior to the filing of the registration statement.

The materials that follow Part I and precede Part II of this registration statement constitute a reoffer prospectus, prepared in accordance with the requirements of Part I of Form S-3, in accordance with General Instruction C of Form S-8.

PART I
INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The documents containing the information required by Part I of Form S-8 will be sent or given to the selling security holders as specified by Rule 428(b)(1) promulgated under the Securities Act. Such documents are not required to be and are not filed with the Securities and Exchange Commission (the Commission) either as part of this registration statement or as prospectuses or prospectus supplements pursuant to Rule 424 promulgated under the Securities Act. These documents and the documents incorporated by reference in this registration statement pursuant to Item 3 of Part II of this Form S-8, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

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REOFFER PROSPECTUS
117,750 Shares
OrthoLogic Corp.
Common Stock

This reoffer prospectus relates to the offer and sale from time to time of up to an aggregate of 117,750 shares of our common stock by the selling security holders identified in the section titled Selling Security Holders starting on page P-21 of this reoffer prospectus. These shares were issued under the OrthoLogic Corp. 2005 Equity Incentive Plan.

The selling security holders may offer the shares covered by this reoffer prospectus from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at other negotiated prices. The selling security holders may sell none, some or all of the shares offered by this reoffer prospectus. We will not receive any of the proceeds from any such offering. We are paying the expenses incurred in registering the shares, but all selling and other expenses incurred by the selling security holders will be borne by the selling security holders.

The shares of common stock included in this reoffer prospectus are restricted securities under the Securities Act of 1933, as amended, before their sale under this reoffer prospectus as such shares were not previously registered. This reoffer prospectus has been prepared for the purpose of registering the shares under the Securities Act to allow for future sales by the selling security holders, on a continuous or delayed basis, to the public without restriction (except for those shares sold on behalf of our executive officers and directors which must comply with Rule 144). The selling security holders and any broker-dealer or agents involved in the sale or resale of the common stock may be deemed to be underwriters within the meaning of the Securities Act. In addition, any commissions, discounts or concessions paid to any such broker-dealer or agent in connection with the sale or resale of the shares may be deemed to be underwriting commissions or discounts under the Securities Act. Please read Plan of Distribution.

Our common stock is quoted on The Nasdaq National Market under the symbol OLGC . The last reported sale price of our common stock on June 8, 2006 on The Nasdaq National Market was $1.80 per share. The mailing address of our principal executive office is 1275 West Washington Street, Tempe, Arizona, 85281. Our telephone number is (602) 286-5520.

INVESTING IN OUR COMMON STOCK INVOLVES RISKS. CONSIDER CAREFULLY THE RISK FACTORS BEGINNING ON PAGE P-3 OF THIS REOFFER PROSPECTUS.

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

The date of this reoffer prospectus is June 13, 2006.

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ABOUT THIS REOFFER PROSPECTUS

You should rely only on the information contained or incorporated by reference in this reoffer prospectus. We have not, and the selling security holders have not, authorized anyone to provide you with additional information or information different from that contained or incorporated by reference in this reoffer prospectus. This reoffer prospectus is not an offer to sell or solicitation of an offer to buy these shares of common stock in any circumstance under which the offer or solicitation is unlawful. You should assume that the information in this reoffer prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this reoffer prospectus or of any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

The information in this reoffer prospectus may not contain all of the information that may be important to you. You should read the entire reoffer prospectus as well as the documents incorporated by reference into this reoffer prospectus before making an investment decision. To obtain additional information that may be important to you, you should also read the exhibits to the registration statement of which this reoffer prospectus is a part and the additional information described below under the heading Where You Can Find More Information.

Unless the context otherwise requires, references to OrthoLogic, Company, we, our and us in this reoffer prospectus refer to OrthoLogic Corp.

The address and telephone number of our principal executive offices are 1275 West Washington Street, Tempe, Arizona 85281; telephone (602) 286-5520.

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RISK FACTORS AND FORWARD-LOOKING STATEMENTS

Risks Related to Our Business

We are a biopharmaceutical company with no revenue generating operations and high investment costs.

We expect to incur losses for a number of years as we continue our research and development projects. There is no assurance that our current level of funds will be sufficient to support all research expenses to achieve commercialization of any of our product candidates. On November 26, 2003, we sold all of our revenue generating operations. We are now focused on developing and testing the product candidates in our Chrysalin Product Platform and have allocated most of our resources to bringing these product candidates to the market. However, on February 27, 2006 we acquired the rights to AZX100, and we also intend to continue preclinical activities on AZX100 in 2006. We may invest in other peptide or small molecule-based therapeutics in the future, but there can be no assurance that opportunities of this nature will occur at acceptable terms, conditions or timing. We currently have no pharmaceutical products being sold or ready for sale and do not expect to be able to introduce any pharmaceutical products for at least several years. As a result of our significant research and development, clinical development, regulatory compliance and general and administrative expenses and the lack of any products to generate revenue, we expect to incur losses for at least the next several years and expect our losses will increase as we continue our research and development activities and incur significant expenses for clinical trials. Our cash reserves, including the cash received from the sale of our bone growth stimulation device business in November 2003, are the primary source of our working capital. There can be no assurance that our cash resources will be sufficient to cover our future operating requirements, or should there be a need, other sources of cash will be available, or if available, at acceptable terms.

We do not expect to receive any revenue from product sales until we receive regulatory approval and begin commercialization of our product candidates. We cannot predict when that will occur or if it will occur.

We caution that our future cash expenditure levels are difficult to forecast because the forecast is based on assumptions about the number of research projects we pursue, the pace at which we pursue them, the quality of the data collected and the requests of the FDA to expand, narrow or conduct additional clinical trials and analyze data. Changes in any of these assumptions can change significantly our estimated cash expenditure levels.

Our product candidates are in various stages of development and may not be successfully developed or commercialized.

If we fail to commercialize our product candidates, we will not be able to generate revenue. We currently do not sell any products. Our product candidates are at the following stages of development:

Acceleration of Fracture Repair	Phase 3 / Phase 2b human clinical trials
Diabetic Foot Ulcer Healing	Phase 1/2 human clinical trials
Spine Fusion	Phase 1/2 pilot human clinical trials
Cartilage Defect Repair	Late stage pre-clinical trials
Tendon Repair	Early stage pre-clinical trials
Cardiovascular Repair	Pre-clinical trials
Dental Bone Repair	Pre-clinical trials
AZX100	Pre-clinical testing

We are subject to the risk that:

- the FDA finds some or all of our product candidates ineffective or unsafe;
- we do not receive necessary regulatory approvals;
- we are unable to get some or all of our product candidates to market in a timely manner;
- we are not able to produce our product candidates in commercial quantities at reasonable costs;
- our products undergo post-market evaluations resulting in marketing restrictions or withdrawal of our products; or

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the patients, insurance and/or physician community does not accept our products.

In addition, our product development programs may be curtailed, redirected or eliminated at any time for many reasons, including:

adverse or ambiguous results;

undesirable side effects which delay or extend the trials;

inability to locate, recruit, qualify and retain a sufficient number of patients for our trials;

regulatory delays or other regulatory actions;

difficulties in obtaining sufficient quantities of the particular product candidate or any other components needed for our pre-clinical testing or clinical trials;

change in the focus of our development efforts; and

re-evaluation of our clinical development strategy.

We cannot predict whether we will successfully develop and commercialize any of our product candidates. If we fail to do so, we will not be able to generate revenue.

Certain results from a Phase 3 clinical trial showed that the differences in the primary endpoint analyses between our lead compound, Chrysalin, and the placebo were not statistically significant.

On March 15, 2006, the Company reported results of an analysis of topline data from its Phase 3 clinical trial of the novel synthetic peptide Chrysalin® (TP508) in subjects who sustained unstable, displaced distal radius (wrist) fractures. Treatment with 10µg Chrysalin did not demonstrate a statistically significant benefit compared to placebo in the primary efficacy endpoint of time to removal of immobilization.

Within the secondary endpoints, radiographic evidence of time to radial cortical bridging, showed a statistically significant benefit for Chrysalin treated subjects ($p = 0.046$). This benefit mirrored findings from the Phase 1/2 clinical trial that provided part of the foundation for the Phase 3 study. A statistically significant difference between Chrysalin treatment and placebo in the functional secondary endpoints was not observed. From a safety perspective, there were no adverse events related to Chrysalin reported in this Phase 3 trial, nor were there any differences in adverse event rates observed between the Chrysalin and placebo treated subject. These results may make it more difficult to achieve regulatory approval of Chrysalin.

The Company is currently assessing Chrysalin in a Phase 2b human clinical trial in distal radius fracture, which is a double-blind, randomized placebo controlled trial that explores a wider dose range of Chrysalin, including 1 µg, 3 µg, 10 µg, or 30 µg doses. At March 15, 2006, the Company temporarily interrupted enrollment in its Phase 2b fracture repair dosing clinical trial to perform an interim analysis of the subjects enrolled up to that date. The Company plans to announce the results of the interim analysis and its future fracture repair indication plans by the 3rd Quarter of 2006.

The results of our late stage clinical trials may be insufficient to obtain FDA approval, which could result in a substantial delay in our ability to generate revenue.

Positive results from pre-clinical studies and early clinical trials do not ensure positive results in more advanced clinical trials. If we are unable to demonstrate that a product candidate will be safe and effective in advanced clinical trials involving larger numbers of patients, we will be unable to submit the NDA necessary to receive approval from the FDA to commercialize that product.

On March 15, 2006, as discussed in the risk factor above, the Company reported results of an analysis of topline data from its Phase 3 clinical trial of the novel synthetic peptide Chrysalin® (TP508) in subjects who sustained unstable, displaced distal radius (wrist) fractures. Treatment with 10µg Chrysalin did not demonstrate a statistically significant benefit compared to placebo in the primary efficacy endpoint of time to removal of immobilization.

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The majority of our product candidates are based on the same chemical peptide, Chrysalin. If one of our Chrysalin product candidates reveals safety or fundamental inefficacy issues in clinical trials, it could impact the development path for all our other current Chrysalin product candidates.

The development of each of our product candidates in the Chrysalin Product Platform is based on our knowledge and understanding of how the human thrombin molecule contributes to the repair of soft tissue and bone. While there are important differences in each of the product candidates in terms of their purpose (fracture repair, diabetic foot ulcer, etc.), each product candidate is focused on accelerating the repair of soft tissue and bone and is based on the ability of Chrysalin to mimic specific attributes of the human thrombin molecule to stimulate the body s natural healing processes.

Since we are developing the product candidates in the Chrysalin Product Platform in parallel, we expect to learn from the results of each trial and apply some of our findings to the development of the other product candidates in the platform. The fact that the results from the Phase 3 fracture repair human clinical trial showed no statistical significance between Chrysalin and the placebo for the primary endpoint in the study will likely impact the development path or future development of the other product candidates in the platform, the impact of which will depend on the results of our interim analysis. In addition, if we find that one of our biopharmaceutical product candidates is unsafe in the future, it could impact the development of our other product candidates in clinical trials.

Patients may discontinue their participation in our clinical studies, which may negatively impact the results of these studies and extend the timeline for completion of our development programs.

As with all clinical trials, we are subject to the risk that patients enrolled in our clinical studies may discontinue their participation at any time during the study as a result of a number of factors, including, withdrawing their consent or experiencing adverse clinical events, which may or may not be judged related to our product candidates under evaluation. We are subject to the risk that if a large number of patients in any one of our studies discontinue their participation in the study, the results from that study may not be positive or may not support an NDA for regulatory approval of our product candidates.

In addition, the time required to complete clinical trials is dependent upon, among other factors, the rate of patient enrollment. Patient enrollment is a function of many factors, including:

- the size of the patient population;
- the nature of the clinical protocol requirements;
- the diversion of patients to other trials or marketed therapies;
- our ability to recruit and manage clinical centers and associated trials;
- the proximity of patients to clinical sites; and

the patient eligibility criteria for the study.

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Even if we obtain marketing approval, our products will be subject to ongoing regulatory oversight, which may affect our ability to successfully commercialize any products we may develop.

Even if we receive regulatory approval of a product candidate, the approval may be subject to limitations on the indicated uses for which the product is marketed or require costly post-marketing follow-up studies. After we obtain marketing approval for any product, the manufacturer and the manufacturing facilities for that product will be subject to continual review and periodic inspections by the FDA and other regulatory agencies. The subsequent discovery of previously unknown problems with the product, or with the manufacturer or facility, may result in restrictions on the product or manufacturer, including withdrawal of the product from the market.

If we fail to comply with applicable regulatory requirements, we may be subject to fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

If we cannot protect the Chrysalin patents, the AZX100 license and patents, or our intellectual property generally, our ability to develop and commercialize our products will be severely limited.

Our success will depend in part on our ability to maintain and enforce patent protection for Chrysalin and AZX100 and each product resulting from Chrysalin or AZX100. Without patent protection, other companies could offer substantially identical products for sale without incurring the sizable discovery, development and licensing costs that we have incurred. Our ability to recover these expenditures and realize profits upon the sale of products would then be diminished.

Chrysalin and AZX100 are patented and there have been no successful challenges to the patents. However, if there were to be a challenge to these patents or any of the patents for product candidates, a court may determine that the patents are invalid or unenforceable. Even if the validity or enforceability of a patent is upheld by a court, a court may not prevent alleged infringement on the grounds that such activity is not covered by the patent claims. Any litigation, whether to enforce our rights to use our or our licensors patents or to defend against allegations that we infringe third party rights, will be costly, time consuming, and may distract management from other important tasks.

As is commonplace in the biotechnology and pharmaceutical industry, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. To the extent our employees are involved in research areas which are similar to those areas in which they were involved at their former employers, we may be subject to claims that such employees and/or we have inadvertently or otherwise used or disclosed the alleged trade secrets or other proprietary information of the former employers. Litigation may be necessary to defend against such claims, which could result in substantial costs and be a distraction to management and which may have a material adverse effect on us, even if we are successful in defending such claims.

We also rely in our business on trade secrets, know-how and other proprietary information. We seek to protect this information, in part, through the use of confidentiality agreements with employees, consultants, advisors and others. Nonetheless, we cannot assure that those agreements will provide adequate protection for our trade secrets, know-how or other proprietary information and prevent their unauthorized use or disclosure. The risk that other parties may breach confidentiality agreements or that our trade secrets become known or independently discovered by competitors, could adversely affect us by enabling our competitors, who may have greater experience and financial resources, to copy or use our trade secrets and other proprietary information in the advancement of their products, methods or technologies.

Our success also depends on our ability to operate and commercialize products without infringing on the patents or proprietary rights of others.

Third parties may claim that we or our licensors or suppliers are infringing their patents or are misappropriating their proprietary information. In the event of a successful claim against us or our licensors or suppliers for infringement of the patents or proprietary rights of others, we may be required to, among other things:

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pay substantial damages;

stop using our technologies;

stop certain research and development efforts;

develop non-infringing products or methods; and

obtain one or more licenses from third parties.

A license required under any such patents or proprietary rights may not be available to us, or may not be available on acceptable terms. If we or our licensors or suppliers are sued for infringement, we could encounter substantial delays in, or be prohibited from, developing, manufacturing and commercializing our product candidates.

Some of our product candidates are in early stages of development and may never be commercialized.

Research, development and pre-clinical testing are long, expensive and uncertain processes. Other than indications for fracture repair, spine fusion, and diabetic ulcer healing, none of our other Chrysalin or AZX100 product candidates has reached clinical trial testing. Our development of Chrysalin for the repair of cartilage defects, tendons and cardiovascular repair is currently in pre-clinical testing or the research stage and AZX100 is currently in the pre-clinical testing stage. Our future success depends, in part, on our ability to complete pre-clinical development of these and other product candidates and advance them to the clinical trials.

If we are unsuccessful in advancing our early stage product candidates into clinical testing for any reason, our business prospects will be harmed.

Acquisition of New Class of Molecules, ICARMs

On February 23, 2006, we entered into an agreement to purchase certain assets and assume certain liabilities of AzERx, Inc. for $390,000 in cash and the issuance of 1,355,000 shares of our common stock, with a market value of $7.7 million determined by the closing share price on the date the agreement was entered into. The transaction was completed (closed) on February 27, 2006. Under the terms of the transaction, OrthoLogic acquired an exclusive license for the core intellectual property relating to AZX100, and will continue to develop the new class of compounds in the field of smooth muscle relaxation called Intracellular Actin Relaxing Molecules, or ICARMs , based on the unique technology developed by AzERx. The acquisition provides us with a new technology platform that diversifies the portfolio, and may provide more than one potential product. AzERx s lead compound is AZX100, a 24-amino acid synthetic peptide. AZX100 is currently being investigated for medically important and commercially significant applications such as the treatment of vasospasm associated with subarachnoid hemorrhage, prevention of keloid scarring, and the treatment of asthma. Preclinical and human *in vitro* studies have shown that this novel compound has the ability to relax smooth muscle in multiple tissue types. While we performed a reasonable level of due diligence on AZX100 and the rights acquired, there can be no assurances that we will recover the costs of our investment from the future development of AZX100 or that commercially significant applications will be developed.

The loss of our key management and scientific personnel may hinder our ability to execute our business plan.

As a small company our success depends on the continuing contributions of our management team and scientific personnel, and maintaining relationships with the network of medical and academic centers in the United States that conduct our clinical trials. The resignation or retirement of members of senior management or scientific personnel could materially adversely affect our business prospects.

Reliance on Outside Suppliers and Consultants

We rely on outside suppliers and consultants for the manufacture of Chrysalin and AZX100 and technical assistance in our research and development efforts. The inability of our suppliers to meet our production quality requirements in a timely manner, or the lack of availability of experienced consultants to assist in our research and development efforts, could have a material effect on our ability to perform research or clinical trials.

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We face an inherent risk of liability in the event that the use or misuse of our products results in personal injury or death.

The use of our product candidates in clinical trials, and the sale of any approved products, may expose us to product liability claims, which could result in financial losses. Our clinical liability insurance coverage may not be sufficient to cover claims that may be made against us. In addition, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts or scope to protect us against losses. Any claims against us, regardless of their merit, could severely harm our financial condition, strain our management and other resources and adversely impact or eliminate the prospects for commercialization of the product which is the subject of any such claim.

Risks of our Industry

We are in a highly regulated field with high investment costs and high risks.

Our Chrysalin Product Platform is currently in the human testing phase for three potential products and earlier pre-clinical testing phases for two other potential products. AZX100 is currently in pre-clinical testing. The FDA and comparable agencies in many foreign countries impose substantial limitations on the introduction of new pharmaceuticals through costly and time-consuming laboratory and clinical testing and other procedures. The process of obtaining FDA and other required regulatory approvals is lengthy, expensive and uncertain. Chrysalin and AZX100 are new drugs and subject to the most stringent level of FDA review.

Even after we have invested substantial funds in the development of our three Chrysalin products and AZX100 and even if the results of our current clinical trials are favorable, there can be no guarantee that the FDA will grant approval of Chrysalin and/or AZX100 for the indicated uses or that it will do so in a timely manner.

If we successfully bring one or more products to market, there is no assurance that we will be able to successfully manufacture or market the products or that potential customers will buy them if, for example, a competitive product has greater efficacy or is deemed more cost effective. In addition, the market in which we will sell any such products is dominated by a number of large corporations that have vastly greater resources than we have, which may impact our ability to successfully market our products or maintain any technological advantage we might develop. We also would be subject to changes in regulations governing the manufacture and marketing of our products, which could increase our costs, reduce any competitive advantage we may have and/or adversely affect our marketing effectiveness.

The pharmaceutical industry is subject to stringent regulation, and failure to obtain regulatory approval will prevent commercialization of our products.

Our research, development, pre-clinical and clinical trial activities and the manufacture and marketing of any products that we may successfully develop are subject to an extensive regulatory approval process by the FDA and other regulatory agencies in the United States and abroad. The process of obtaining required regulatory approvals for drugs is lengthy, expensive and uncertain, and any such regulatory approvals may entail limitations on the indicated usage of a drug, which may reduce the drug s market potential.

In order to obtain FDA approval to commercialize any drug product candidate, an NDA must be submitted to the FDA demonstrating, among other things, that the product candidate is safe and effective for use in humans for each target indication. Our regulatory submissions may be delayed, or we may cancel plans to make submissions for product candidates for a number of reasons, including:

negative or ambiguous pre-clinical or clinical trial results;

changes in regulations or the adoption of new regulations;

unexpected technological developments; and

developments by our competitors that are more effective than our product candidates.

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Consequently, we cannot assure that we will make our submissions to the FDA in the timeframe that we have planned, or at all, or that our submissions will be approved by the FDA. Even if regulatory clearance is obtained, post-market evaluation of our products, if required, could result in restrictions on a product s marketing or withdrawal of a product from the market as well as possible civil and criminal sanctions.

Clinical trials are subject to oversight by institutional review boards and the FDA to ensure compliance with the FDA s good clinical practice regulations, as well as other requirements for good clinical practices. We depend, in part, on third-party laboratories and medical institutions to conduct pre-clinical studies and clinical trials for our products and other third-party organizations, usually universities, to perform data collection and analysis, all of which must maintain both good laboratory and good clinical practices. If any such standards are not complied with in our clinical trials, the FDA may suspend or terminate such trial, which would severely delay our development and possibly end the development of a product candidate.

We also currently and in the future will depend upon third party manufacturers of our products, which are and will be required to comply with the applicable FDA Good Manufacturing Practice regulations. We cannot be certain that our present or future manufacturers and suppliers will comply with these regulations. The failure to comply with these regulations may result in restrictions in the sale of, or withdrawal of the products from the market. Compliance by third parties with these standards and practices are outside of our direct control.

In addition, we are subject to regulation under state and federal laws, including requirements regarding occupational safety, laboratory practices, environmental protection and hazardous substance control, and may be subject to other local, state, federal and foreign regulation. We cannot predict the impact of such regulations on us, although they could impose significant restrictions on our business and require us to incur additional expenses to comply.

If our competitors develop and market products that are more effective than ours, or obtain marketing approval before we do, our commercial opportunities will be reduced or eliminated.

Competition in the pharmaceutical and biotechnology industries is intense and is expected to increase. Several biotechnology and pharmaceutical companies, as well as academic laboratories, universities and other research institutions, are involved in research and/or product development for various treatments for or involving fracture repair, diabetic ulcer healing, and smooth muscle relaxation. Many of our competitors have significantly greater research and development capabilities, experience in obtaining regulatory approvals and manufacturing, marketing, financial and managerial resources than we have.

Our competitors may succeed in developing products that are more effective than the ones we have under development or that render our proposed products or technologies noncompetitive or obsolete. In addition, certain of such competitors may achieve product commercialization before we do. If any of our competitors develops a product that is more effective than one we are developing or plan to develop, or is able to obtain FDA approval for commercialization before we do, we may not be able to achieve significant market acceptance for certain products of ours, which would have a material adverse effect on our business.

For a summary of the competitive conditions relating to indications which we are considering for our AZX100 and ICARMs research and development activities, see the section in this reoffer prospectus titled The Company AZX100 ICARMs Competition and the reports we file with the Securities and Exchange Commission and incorporate by reference into the registration statement of which this reoffer prospectus is a part. For a summary of the competitive conditions relating to Chrysalin-based indications, please see our Annual Report on Form 10-K for the fiscal year ended December 31, 2005, and other reports we file with the Securities and Exchange Commission and incorporate by reference into the registration statement of which this reoffer prospectus is a part.

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Our product candidates may not gain market acceptance among physicians, patients and the medical community, including insurance companies and other third party payors. If our product candidates fail to achieve market acceptance, our ability to generate revenue will be limited.

Even if we obtain regulatory approval for our products, market acceptance will depend on our ability to demonstrate to physicians and patients the benefits of our products in terms of safety, efficacy, and convenience, ease of administration and cost effectiveness. In addition, we believe market acceptance depends on the effectiveness of our marketing strategy, the pricing of our products and the reimbursement policies of government and third-party payors. Physicians may not prescribe our products, and patients may determine, for any reason, that our product is not useful to them. Insurance companies and other third party payors may determine not to reimburse for the cost of the therapy. If any of our product candidates fails to achieve market acceptance, our ability to generate revenue will be limited.

Healthcare reform and restrictions on reimbursements may limit our financial returns.

Our ability to successfully commercialize our products may depend in part on the extent to which government health administration authorities, private health insurers and other third party payors will reimburse consumers for the cost of these products. Third party payors are increasingly challenging both the need for, and the price of, novel therapeutic drugs and uncertainty exists as to the reimbursement status of newly approved therapeutics. Adequate third party reimbursement may not be available for our drug products to enable us to maintain price levels sufficient to realize an appropriate return on our investments in research and product development, which could restrict our ability to commercialize a particular drug candidate.

Risks Related to Our Common Stock

Our stock price is volatile and fluctuates due to a variety of factors.

Our stock price has varied significantly in the past (from a high of $8.96 to a low of $1.61 from January 1, 2004 to May 23, 2006) and may vary in the future due to a number of factors, including:

- announcement of the results of, or delays in, preclinical and clinical studies;
- fluctuations in our operating results;
- developments in litigation to which we or a competitor is subject;
- announcements and timing of potential acquisitions, divestitures, capital raising activities and conversions of preferred stock;
- announcements of technological innovations or new products by us or our competitors;
- FDA and other regulatory actions;
- developments with respect to our or our competitors patents or proprietary rights;
- public concern as to the safety of products developed by us or others; and
- changes in stock market analyst recommendations regarding us, other drug development companies or the pharmaceutical industry generally.

In addition, the stock market has from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the market price of our stock.

Additional authorized shares of our common stock available for issuance may have dilutive and other material effects on our stockholders.

We are authorized to issue 100,000,000 shares of common stock. As of May 23, 2006, there were 40,573,489 shares of common stock issued and outstanding. However, the total number of shares of our common stock issued and outstanding does not include shares reserved in anticipation of the exercise of options, warrants or additional

investment rights. As of May 23, 2006 we had stock options outstanding to purchase approximately 2,852,721 shares of our common stock, the exercise price of which range between $1.75 per share to $17.38 per share, warrants outstanding to purchase 286,706 shares of our common stock with an exercise price of $6.39, and we

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have reserved shares of our common stock for issuance in connection with the potential exercise thereof. Additionally, at our Annual Stockholder Meeting on May 12, 2006, our stockholders approved the OrthoLogic Corp. 2005 Equity Incentive Plan, which provides an additional 2,000,000 shares of our common stock for incentive awards.

As disclosed in the Registration Statement on Form S-3 we filed on April 13, 2006, on February 27, 2006 (the Closing Date), we closed the initial transactions relating to our Common Stock and Warrant Purchase Agreement (the Purchase Agreement) dated February 24, 2006 with PharmaBio Development Inc. (PharmaBio), an affiliate of Quintiles Transactional Corp. and Quintiles, Inc., which provides for the purchase of shares of our common stock in three tranches. On the Closing Date, PharmaBio purchased 359,279 shares of our common stock for a purchase price of $2,000,000 based on the average closing stock price for the 15-day period prior to that date. In addition, we also entered into a Class A Warrant Agreement with PharmaBio on the same date, whereby we issued PharmaBio a fully vested warrant to purchase 46,706 shares of our common stock at $6.39 a share. At our election, PharmaBio will purchase an additional amount of our common stock for a purchase price of $1,500,000 on each of June 30, 2006 and September 29, 2006 with the number of shares to be determined by the 15-day average closing stock price prior to each such date. Each additional stock purchase will include the issuance of fully vested warrants, exercisable for a ten-year period from the date of issuance, for an amount of shares equal to 13% of the shares purchased on the date of issuance, with the exercise price set at 115% of the share price of each respective share purchase (each, an Additional Class A Warrant, and collectively, the Additional Class A Warrants). We are also parties to a Class B Warrant Agreement (the Class B Warrant), Class C Warrant Agreement (the Class C Warrant) and a Class D Warrant Agreement (the Class D Warrant) with PharmaBio to purchase in the aggregate up to 240,000 shares of our common stock at $6.39 a share (the Class B Warrant, Class C Warrant and Class D Warrant are collectively referred to in this reoffer prospectus as the Milestone Warrants). The Milestone Warrants, all dated as of February 24, 2006, will be exercisable for a ten-year period from that date, and will vest based on the achievement of certain milestones.

To the extent such options or warrants are exercised or additional stock is issued, the holders of our common stock will experience further dilution. In addition, in the event that any future financing or consideration for a future acquisition should be in the form of, be convertible into or exchangeable for, equity securities, investors will experience additional dilution.

Certain provisions of our amended and restated certificate of incorporation and bylaws will make it difficult for stockholders to change the composition of our board of directors and may discourage takeover attempts that some of our stockholders may consider beneficial.

Certain provisions of our amended and restated certificate of incorporation and bylaws may have the effect of delaying or preventing changes in control if our board of directors determines that such changes in control are not in the best interests of OrthoLogic Corp. and our stockholders. These provisions include, among other things, the following:

- a classified board of directors with three-year staggered terms;
- advance notice procedures for stockholder proposals to be considered at stockholders meetings;
- the ability of our board of directors to fill vacancies on the board;
- a prohibition against stockholders taking action by written consent; and
- super majority voting requirements for the stockholders to modify or amend our bylaws and specified provisions of our amended and restated certificate of incorporation.

These provisions are not intended to prevent a takeover, but are intended to protect and maximize the value of our stockholders interests. While these provisions have the effect of encouraging persons seeking to acquire control of our company to negotiate with our board of directors, they could enable our board of directors to prevent a transaction that some, or a majority, of our stockholders might believe to be in their best interests and, in that case, may prevent or discourage attempts to remove and replace incumbent directors. In addition, we are subject to the

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provisions of Section 203 of the Delaware General Corporation Law, which prohibits business combinations with interested stockholders. Interested stockholders do not include stockholders whose acquisition of our securities is pre-approved by our board of directors under Section 203.

We may issue additional shares of preferred stock that have greater rights than our common stock and also have dilutive and anti-takeover effects.

We are permitted by our amended and restated certificate of incorporation to issue up to 2,000,000 shares of preferred stock. We can issue shares of our preferred stock in one or more series and can set the terms of the preferred stock without seeking any further approval from our common stockholders or other security holders. Any preferred stock that we issue may rank ahead of our common stock in terms of dividend priority or liquidation rights and may have greater voting rights than our common stock.

In connection with the Rights Agreement dated as of March 4, 1997 between us and the Bank of New York, as amended (the Rights Agreement), our board approved the designation of 500,000 shares of Series A Preferred Stock. The Rights Agreement and the exercise of rights to purchase Series A Preferred Stock pursuant to the terms thereof may delay, defer or prevent a change in control because the terms of any issued Series A Preferred Stock would potentially prohibit our consummation of certain extraordinary corporate transactions without the approval of the Board. In addition to the anti-takeover effects of the rights granted under the Rights Agreement, the issuance of preferred stock, generally, could have a dilutive effect on our stockholders.

We have not previously paid dividends on our common stock and we do not anticipate doing so in the foreseeable future.

We have not in the past paid any dividends on our common stock and do not anticipate that we will pay any dividends on our common stock in the foreseeable future. Any future decision to pay a dividend on our common stock and the amount of any dividend paid, if permitted, will be made at the discretion of our board of directors.

Future sales or the potential for sale of a substantial number of shares of our common stock could cause the trading price of our common stock to decline and could impair our ability to raise capital through subsequent equity offerings.

Sales of a substantial number of shares of our common stock in the public markets, or the perception that these sales may occur, could cause the market price of our stock to decline and could materially impair our ability to raise capital through the sale of additional equity securities. This reoffer prospectus covers the resale of shares that previously were restricted. As a result, the number of our securities eligible to be sold in the market will increase upon the effectiveness of this registration statement. If the selling security holders sell a significant amount of this common stock, or if there is a perception that such sales will be effected, the prices of those securities could drop.

We caution that the foregoing list of important factors is not exhaustive and may not be up to date. Developments in any of these areas could cause our results to differ materially from results that have been or may be projected by us.

Forward-Looking Statements

All statements other than statements of historical facts included or incorporated by reference into this reoffer prospectus, including statements regarding our future financial position, business strategy, budgets, projected costs, and plans and objectives for future operations are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are subject to risks and uncertainties that could cause actual results to differ materially from those anticipated as of the date of this reoffer prospectus. Forward-looking statements generally can be identified by the use of forward-looking words such as may, could, expect, intend, pla seek, anticipate, believe, estimate, predict, potential, continue, or the negative of these terms or other comp terminology. You should not place undue reliance on forward-looking statements since they involve known and unknown risks, uncertainties and other factors which are, in some cases, beyond our control and which could materially affect actual results, levels of activity, performance or achievements. Some of the factors that could cause such a variance may be disclosed in a Risk Factors section

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elsewhere in this reoffer prospectus and documents incorporated by reference into this reoffer prospectus, and include the following:

unfavorable results of our product candidate development efforts;

unfavorable results of our pre-clinical or clinical testing;

delays in obtaining, or failure to obtain FDA approvals;

increased regulation by the FDA and other agencies;

the introduction of competitive products;

impairment of license, patent or other proprietary rights;

failure to achieve market acceptance of our products;

the impact of present and future collaborative agreements; and

failure to successfully implement our drug development strategy.

We urge you to consider these factors and to review carefully the description of risks in this section titled Risk Factors and Forward-Looking Statements for a more complete discussion of the risks of an investment in our securities. The forward-looking statements included in this reoffer prospectus or incorporated by reference into this reoffer prospectus are made only as of the date of this reoffer prospectus or the date of the incorporated document, and we undertake no obligation to publicly update these statements to reflect subsequent events or circumstances.

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THE COMPANY

Overview of the Business

CHRYSALIN®

Chrysalin (TP508) is being developed in two lead indications, both of which represent areas of significant unmet medical need fracture repair and diabetic foot ulcer healing. Chrysalin, or TP508, is a 23-amino acid synthetic peptide representing a receptor-binding domain of the human thrombin molecule, a naturally occurring agent responsible for blood clotting and initiating the natural healing cascade of cellular events responsible for tissue repair in both soft tissue and bone.

On March 15, 2006, the Company reported results of an analysis of topline data from its Phase 3 clinical trial of the novel synthetic peptide Chrysalin® (TP508) in subjects who sustained unstable, displaced distal radius (wrist) fractures. Treatment with 10µg Chrysalin did not demonstrate a statistically significant benefit compared to placebo in the primary efficacy endpoint of time to removal of immobilization.

Within the secondary endpoints, radiographic evidence of time to radial cortical bridging, showed a statistically significant benefit for Chrysalin treated subjects ($p = 0.046$). This benefit mirrored findings from the Phase 1/2 clinical trial that provided part of the foundation for the Phase 3 study. A statistically significant difference between Chrysalin treatment and placebo in the functional secondary endpoints was not observed. From a safety perspective, there were no adverse events related to Chrysalin reported in this Phase 3 trial, nor were there any differences in adverse event rates observed between the Chrysalin and placebo treated subject.

The Company is currently assessing Chrysalin in a Phase 2b human clinical trial in distal radius fracture, which is a double-blind, randomized placebo controlled trial that explores a wider dose range of Chrysalin, including 1 µg, 3 µg, 10 µg, or 30 µg doses. At March 15, 2006, the Company temporarily interrupted enrollment in its Phase 2b fracture repair dosing clinical trial to perform an interim analysis of the subjects enrolled up to that date. The Company plans to announce the results of the interim analysis and its future fracture repair indication plans by the 3rd Quarter of 2006.

Chrysalin Product Platform

Chrysalin, or TP508, is a 23-amino acid synthetic peptide representing a receptor-binding domain of the human thrombin molecule, a naturally occurring molecule in the body responsible for both blood clotting and initiating many of the cellular events responsible for tissue repair. Chrysalin mimics specific attributes of the thrombin molecule, stimulating the body s natural healing processes. Drugs based on the Chrysalin peptide can be used to mimic part of the thrombin response without stimulating the events associated with blood clotting and therefore has the potential to accelerate the natural cascade of healing events. The Chrysalin molecule serves as the basis for a group of potential therapeutic products we refer to collectively as the Chrysalin Product Platform. We have initiated or are conducting clinical trials for two potential Chrysalin products: one trial for acceleration of fracture repair, and a second trial for diabetic foot ulcer. We previously conducted a pilot study for spine fusion. We have conducted pre-clinical testing for cartilage defect repair, cardiovascular repair, dental bone repair, and tendon repair (See the Company s Annual Report on Form 10-K for the year ended December 31, 2005 for additional comments on the Chryslin Product Platform.).

The development of each of our potential product candidates in the Chrysalin Product Platform is based on our collective knowledge and understanding of how the human thrombin molecule contributes to the repair of soft tissue and bone. While there are important differences in each of the product candidates in terms of purpose (fracture repair, diabetic foot ulcer healing, etc.) each product candidate is focused on accelerating and enhancing tissue repair and is based on the ability of Chrysalin to mimic specific attributes of the human thrombin molecule to stimulate the body s natural healing process.

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We are developing the Chrysalin-based product candidates, fracture repair and diabetic foot ulcer healing, in parallel. We expect to learn from the results of each trial and apply the findings to the development of the other product candidates. We believe there are distinct research activities within the product candidates whose outcomes and results will apply across the product platform in terms of safety and efficacy.

Through March 31, 2006 the Company has focused most of its efforts on the development and commercialization of fracture repair and diabetic foot ulcer healing indications. The results of the Company efforts in these two product candidates will affect when and what future actions are taken on the other product candidates described above.

Acceleration of Fracture Repair

Every broken bone is called a fracture and approximately 30 million fractures are treated every year throughout the developed world, as reported by medical reimbursement records in countries with national healthcare systems. The treatment of a fracture depends on the severity of the break. Simple fractures often heal themselves, with more complex closed fractures potentially amenable to treatment by manipulation (also called reduction) without requiring surgery. Fractures that break the skin (or open fractures) or where the fragments cannot be lined up correctly usually require surgery. Sometimes plates, screws or pins are used for mechanical stabilization, occasionally with the use of bone grafts, all of which are invasive, expensive and time consuming procedures.

Chrysalin is a substance that, when injected through the skin into the fracture site at the time of fracture reduction, was shown in a preliminary clinical trial to accelerate the healing of the fracture. Chrysalin does this by mimicking certain stimulatory aspects of the thrombin molecule. Fractures that heal faster lead to earlier return of function for the patient and potentially improved clinical outcomes.

In pre-clinical animal studies, a single injection of Chrysalin into the fracture gap accelerated fracture healing by up to 50% as measured by mechanical testing. In late 1999, we initiated a combined Phase 1/2 human clinical trial to evaluate the safety of Chrysalin and its effect on the rate of healing in adult subjects with unstable distal radius fractures (fractures around and in the wrist joint). We presented the results of this Phase 1/2 human clinical trial for fracture repair at the 57th Annual Meeting of the American Society for Surgery of the Hand in October 2002. The data from x-ray evaluations revealed that a single injection of Chrysalin into the fracture gap resulted in a trend toward accelerated fracture healing compared with the saline placebo control. There were no reportable adverse events attributable to Chrysalin in the study.

We completed subject enrollment in our pivotal Phase 3 human clinical trial evaluating the efficacy of Chrysalin in subjects with unstable and/or displaced distal radius (wrist) fractures in May 2005. We enrolled a total of 503 study subjects in 27 health centers throughout the United States. The primary efficacy endpoint in the trial was to measure how quickly wrist fractures in subjects injected with Chrysalin heal, as measured by the removal of immobilization. Accelerated removal of immobilization allows patients to initiate hand therapy and regain full function of their wrists and hands sooner. The clinical trial s secondary efficacy endpoints include radiographic analysis of healing, as well as clinical, functional, and subject outcome parameters. On March 15, 2006, the Company reported results of an analysis of topline data from its Phase 3 clinical trial of the novel synthetic peptide Chrysalin® (TP508) in unstable, displaced distal radius (wrist) fractures. Treatment with 10µg Chrysalin did not demonstrate a statistically significant benefit compared to placebo in the primary efficacy endpoint of time to removal of immobilization. Within the secondary endpoints, radiographic evidence of time to radial cortical bridging, showed a statistically significant benefit for Chrysalin treated subjects ($p = 0.046$). This benefit mirrored findings from the Phase 1/2 clinical trial that provided part of the foundation for the Phase 3 study. A statistically significant difference between Chrysalin treatment and placebo in the functional secondary endpoints was not observed. From a safety perspective, there were no adverse events related to Chrysalin reported in this Phase 3 trial, nor were there any differences in adverse event rates observed between the Chrysalin and placebo treated subject.

The Company is currently assessing Chrysalin in a Phase 2b human clinical trial in distal radius fractures, which is a double-blind, randomized placebo controlled trial that explores a wider dose range of Chrysalin, including 1 µg, 3 µg, 10 µg, or 30 µg doses. Our enrollment goal was 590 subjects in approximately 60 sites. On March 15, 2006, the Company temporarily interrupted enrollment in its Phase 2b fracture repair dosing human

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clinical trial to perform an interim analysis of the subjects enrolled up to that date. The Company plans to announce the results of the interim analysis and its future fracture repair indication plans by the 3rd Quarter of 2006.

Dermal Wound Healing

Our dermal wound healing studies are focused on healing diabetic foot ulcers, a common problem for diabetic patients. Diabetic patients suffer from open wound foot ulcers because diabetes related nerve damage causes the patient to lose sensation. Patients thus may not notice an injury to the foot and neglect the injury. This fact and the diminished blood flow to extremities caused by diabetes cause a diabetic patient s wounds to heal more slowly or not at all.

Current standard treatment for diabetic foot ulcer wounds focuses on sanitation of the wound and non-use of the foot (off loading) to allow for the body s natural healing processes to occur. These treatments require high patient compliance and effectively heal only approximately 33% of these ulcers. Wounds that do not respond to treatment can sometimes result in amputation of the affected limb.

We believe topical treatment of the wound with Chrysalin will promote new tissue growth necessary for healing of a diabetic foot ulcer. CBI conducted a multicenter Phase 1/2 double blind human trial with 60 subjects, the results of which were presented at the Wound Healing Society in May of 2002. We found no drug related adverse events due to Chrysalin in this trial and complete wound closure occurred in 70% of Chrysalin-treated ulcers relative to 33% in placebo controls, a statistically significant difference.

Our pre-clinical studies and the initial Phase 1/2 human clinical trial evaluated Chrysalin in a saline formulation. We are currently evaluating various gel formulations of Chrysalin that will make Chrysalin easier for patients to use.

AZX100 ICARMs

AZX100, a 24-amino acid synthetic peptide, is one of a new class of compounds in the field of smooth muscle relaxation called Intracellular Actin Relaxing Molecules, or ICARMs .

AZX100 relaxes smooth muscle, which modulates the function of blood vessels, sphincters, the gastrointestinal tract, the genitourinary tract, and the airways. Sustained abnormal contraction of any of these muscles is called spasm. Any disorders known to be associated with excessive constriction or inadequate dilation of smooth muscle represent potential applications for AZX100, including:

Subarachnoid hemorrhage (SAH) induced spasm of the intracranial blood vessels

Spasm of vein grafts after harvest

Spasm of the portal vein (PHT)

Spasm of airway smooth muscle (asthma)

Spasm of lung vessels, which causes pulmonary (lung) hypertension

Male and female sexual dysfunction

Toxemia of pregnancy (pre-eclampsia/eclampsia)

Pre-term labor

Reynaud s disease or phenomenon

Achalasia (spasm of the lower esophageal sphincter)

Non-occlusive mesenteric ischemia

Hemolytic-uremia

Prinzmetal s angina (a form of coronary spasm that causes angina), and

Anal fissure.

AZX100 may also reverse the fibrotic phenotype of fibroblasts and smooth muscle cells in a mechanism similar to that which causes vasorelaxation. Through phenotypic modulation of fibroblasts and smooth muscle cells, AZX100 may inhibit the scarring that results from wound healing and disease states in the dermis, blood vessels, lungs, liver and other organs.

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AZX100 is currently being evaluated by the Company for applications such as the treatment of vasospasm associated with subarachnoid hemorrhage, prevention of keloid scarring, pulmonary fibrosis and the treatment of asthma. Preclinical and human *in vitro* studies have shown that this novel compound has the ability to relax smooth muscle in multiple tissue types. The Company will continue pre-clinical activities on AZX100 in 2006.

Competition

The following provides a summary of the competitive conditions relating to indications for which we are considering for our AZX100 and ICARMs research and development activities. For a summary of the competitive conditions relating to Chrysalin-based indications, please see our Annual Report on Form 10-K for the fiscal year ended December 31, 2005, and other reports we file with the Securities and Exchange Commission and incorporate by reference into the registration statement of which this reoffer prospectus is a part.

Subarachnoid Hemorrhage (SAH)

Approved

The only current pharmacological treatment for SAH is the calcium channel antagonist Nimotop (nimodipine). Although Nimotop significantly improves the outcome of surviving patients through a neuroprotective effect, it has not been shown to alter the incidence or magnitude of vasospasm or to decrease mortality. Nimotop carries in the label a black box warning regarding i.v. or other parenteral administration.

In Development

The other potential competing products currently under development for SAH are endothelin antagonists (endothelin has been implicated in SAH-induced vasospasm). Elevated plasma levels of endothelin-1 (ET-1) have been shown to occur in patients with SAH-induced vasospasm, although the timing of endothelin elevation has varied from as early as three days after SAH to 8 14 days after SAH. Such differences indicate endothelin may not induce vasospasm, but rather may play a role in vasospasm progression. Conflicting results have also been reported regarding the cerebrospinal fluid levels of ET-1. Taken together, these studies indicate that endothelin may contribute to SAH-induced vasospasm. Thus, clinical trials have been conducted for Acetelion s endothelial antagonists, clazosentan (specific ET_A receptor antagonist) and bosentan (Tracleer®, dual ET_A and ET_B receptor antagonist). Although bosentan appears effective for pulmonary arterial hypertension, the trial for SAH was discontinued because of a lack of efficacy.

Roche is developing a follow-up compound from bosentan, Ro 61-1790, to improve water solubility and ET_A potency and has demonstrated in vivo efficacy with a canine double hemorrhage model. In the double hemorrhage model two blood clots must be placed to cause vasospasm. While vasospasm can be demonstrated angiographically, it does not typically result in cerebral infarction. Thus, Ro 61-1790 must be tested in humans to determine whether its improvements will increase efficacy.

The primary disadvantage of endothelin antagonists is that they act on a single vasoconstrictor, although additional mediators have been implicated in SAH. Therefore, targeting downstream vasorelaxing pathways with administration of AZX100 may be more effective. In addition, the ET receptor is internalized once it interacts with the ET peptide. Thus, this drug may only be effective as a prevention measure, not treatment.

In addition, the recombinant haemostatic agent NovoSeven (activated factor VIIa) is currently registered for treatment of bleeding of hemophelia patients, but has also been shown to be effective against the intracerebral hemorrhage (ICH) in phase 2b clinical trials. NovoSeven accelerates the coagulation process at the site of ICH limiting hematoma.

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Keloid Scarring

Approved

There is no approved pharmacologic treatment to permit scarless healing. In the setting of keloid formation, the scars are often excised and treated with steroids with variable results.

In Development

The potential competing products are recombinant transforming growth ß-3 (TGF- ß-3) and antiTGF- ß-1. Renovo is conducting phase 3 clinical trials in Europe on recombinant hTGF- ß-3 (*Justiva*). While preliminary efficacy has been shown in healing in healthy individuals, like other therapeutics, rhTGF- ß-3 addresses only part of the pathway that end in phosphorylation of our target molecule and results in scar inhibition. The potential of the AZX100 to completely inhibit the entire scarring pathways suggests that AZX100 may be more effective than rhTGF- ß-3 at scarless healing, Renovo has also begun clinical trials on antihTGF- ß-1, which like rhTGF- ß-3 also blocks part of the signaling cascade resulting in scar formation. AZX100 may be more effective than antihTGF- ß-1 through more complete inhibition of the scarring cascade.

While many other companies are investigating therapeutics for wound healing, these therapeutics will be synergistic with and not competitive with AZX100 as they are targeting more rapid healing and not scar inhibition.

Asthma

Asthma ranks as the third highest reason for preventable hospitalizations in the U.S. with 470,000 hospitalizations and more than 5,000 deaths each year (American Academy of Allergy Asthma and Immunology Report). Acute asthma accounts for an estimated two-million emergency department visits annually. There are many competitors with asthma products approved or in development. AZX100 has been shown to relax airway smooth muscle and may be developed for the treatment of asthmatic attacks. Specific markets include severe acute asthma and asthma that is refractory to current therapies. Severe asthma has been defined as asthma that is refractory to current therapeutic approaches in clinical use (anti-inflammatory agents and bronchodilators). The current approach is to use ß-adrenergic agonists, which activate the cAMP/PKA pathway. AZX100 is a mimetic of the molecule downstream of this pathway and hence may be more sensitive and specific for the treatment of severe asthma. In addition, patients with severe asthma present to the emergency room for treatment, hence efficacy can be closely monitored and outcomes will be apparent in a short time frame after treatment. Recent data has demonstrated that one out of every six asthmatics has a mutation in the ß-adrenergic receptor. These patients do not respond to ß-adrenergic agonists and in fact do worse when treated with ß-adrenergic agonists. This patient population would be potentially treated with the AZX100 compound in that it acts downstream of the receptors.

For more information about the status of our drug development efforts, see Chrysalin Product Platform above and review our Annual Report on Form 10-K for the fiscal year ended December 31, 2005, and other reports we file with the Securities and Exchange Commission and incorporate by reference into the registration statement of which this reoffer prospectus is a part. Chrysalin, ICARMs and OrthoLogic are registered United States domestic trademarks of OrthoLogic Corp.

Additional Information about OrthoLogic

OrthoLogic Corp. was incorporated as a Delaware corporation in July 1987 as IatroMed, Inc. We changed our name to OrthoLogic Corp. in July 1991. Our executive offices are located at 1275 West Washington Street, Tempe, Arizona 85281, and our telephone number is (602) 286-5520.

Our website address is www.orthologic.com. Our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, as well as any amendments to those reports, are available free of charge through our website as soon as reasonably practical after we file or furnish them to the U.S. Securities and Exchange Commission. Once at our website, go to the Investors section to locate these filings.

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In March 2004, we adopted a code of conduct that applies to all of our employees and has particular sections that apply only to our principal executive officer and senior financial officers. We posted the text of our code of conduct on our website in the Investors section of our website under Code of Conduct. In addition, we will promptly disclose on our website (1) the nature of any amendment to our code of conduct that applies to our principal executive officer and senior financial officers, and (2) the nature of any waiver, including an implicit waiver, from a provision of our code of ethics that is granted to one of these specified officers, the name of such officer who is granted the waiver and the date of the waiver.

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USE OF PROCEEDS

We will not receive any proceeds from the sale of the common stock pursuant to this reoffer prospectus. All proceeds from the sale of the common stock pursuant to this reoffer prospectus will be made for the account of the selling security holders, as described below.

SELLING SECURITY HOLDERS

This reoffer prospectus relates to offers and sales by the selling security holders of shares of common stock previously issued under the OrthoLogic Corp. 2005 Equity Incentive Plan. As noted in the table below, the selling security holders include certain of our executive officers and directors. This reoffer prospectus also covers any additional shares of our common stock that become issuable in connection with the shares being registered by reason of any stock splits, stock dividends or similar transactions.

As the selling security holders may sell all or some part of the common stock that they hold under this reoffer prospectus and this offering is not being underwritten on a firm commitment basis, we are unable to estimate the amount of common stock that will be held by the selling security holders upon termination of this offering. Our common stock offered by this reoffer prospectus may be offered from time to time, in whole or in part, by the persons named below or by their permitted transferees, as to whom applicable information will, to the extent required, be set forth in a prospectus supplement. There can be no assurance that the selling security holders will offer or sell any of their shares registered in this offering.

The following table sets forth information as of May 23, 2006, regarding the beneficial ownership of our common stock by the selling security holders prior to this offering, the shares of our common stock to be sold in the offering and the beneficial ownership of our common stock by the selling security holders upon completion of the offering.

Except under applicable community property laws or as otherwise indicated in the footnotes to the table below, the persons named in the table have sole voting and investment power with respect to all shares beneficially owned. The address of the selling security holders is c/o 1275 West Washington Street, Tempe, Arizona, 85281.

Our registration of shares does not necessarily mean that the selling security holders will sell all or any of these securities. We have assumed for purposes of the table below that the selling security holders will sell all of the shares offered for sale. The selling security holders may have sold, transferred or otherwise disposed of all or a portion of their shares, or acquired additional shares, since the date on which they provided information regarding their securities.

Selling Security Holder	Relationship to OrthoLogic	Shares of Common Stock Beneficially Owned Before Offering (1) (12)	Shares to be Sold in the Offering (13)	Shares of Common Stock Beneficially Owned Upon Completion of the Offering (1)(11)(12)(14)	
				Number	% (14)
John M. Holliman, III	Executive Chairman and Director	279,667 (2)	11,612	286,177	*
James T. Ryaby, Ph.D.	Senior Vice President Chief Scientific Officer	220,119 (3)	20,000	240,119	*
Dana B. Shinbaum	Vice President Business Development	0 (4)	15,000	15,000	*

Michael D. Casey	Director	85,000 (5)	11,612	91,510	*
Fredric J. Feldman	Director	286,850 (6)	11,612	293,360	*
Elwood D. Howse, Jr.	Director	238,644 (7)	11,612	245,154	*
William M. Wardell, MD, Ph.D.	Director	35,000 (8)	4,690	35,000	*
Augustus A. White, III	Director	321,231 (9)	11,612	327,741	*
Sherry A. Sturman	(former CFO)	251,219 (10)	20,000	271,219	*

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* Less than 1%

(1) The amounts and percentages of common stock beneficially owned are reported on the basis of regulations of the Securities and Exchange Commission governing the determination of beneficial ownership of securities. Under the rules of the Commission, a person is deemed to be a beneficial owner of a security if that person has or shares voting power, which includes the power to vote or to direct the voting of such security, or investment power, which includes the power to dispose of or to direct the disposition of such security. A person is also deemed to be a beneficial owner of any securities of which that person has a

right to acquire beneficial ownership within 60 days, including through the exercise of options or warrants. Under these rules, more than one person may be deemed a beneficial owner of the same securities and a person may be deemed a beneficial owner of securities as to which he has no economic interest.

(2) Includes 211,667 shares Mr. Holliman has a right to acquire upon exercise of stock options, and 3,000 shares indirectly owned.

(3) Includes 217,219 shares Dr. Ryaby has a right to acquire upon exercise of stock options.

(4) Mr. Shinbaum owns these 15,000 shares at May 23, 2006.

(5) All 85,000 are shares Mr. Casey has a right to acquire

upon exercise of stock options.

(6) Includes 200,000 shares Dr. Feldman has a right to acquire upon exercise of stock options. Voting and investment power shared with spouse.

(7) Includes 190,000 shares Mr. Howse has a right to acquire upon exercise of stock options. Voting and investment power shared with spouse.

(8) All 35,000 are shares Dr. Wardell has a right to acquire upon exercise of stock options.

(9) Includes 216,500 shares Dr. White has a right to acquire upon exercise of stock options and 6,878 indirectly owned shares.

(10) Includes 249,219 shares Ms. Sturman has a right to acquire upon exercise of

stock options.

(11) Includes the shares of common stock covered by this reoffer prospectus.

(12) Includes a total of 1,404,605 shares of our common stock subject to acquisition within 60 days of the date of this table through the exercise of stock options granted under our employee stock plans.

(13) Assumes that all of the shares offered are sold by the selling security holders and assumes no other change in the beneficial ownership of our common stock by the selling security holders after the date of this reoffer prospectus.

(14) Applicable percentage of ownership is based on 40,573,489 shares of common stock outstanding as of May 23,

2006.

PLAN OF DISTRIBUTION

We will not receive any of the proceeds from the resale by the selling security holders of any of the securities covered by this reoffer prospectus. The aggregate proceeds to the selling security holders from the sale of our common stock will be the purchase price of the common stock less any discounts and commissions. The selling security holders reserve the right to accept and, together with their agents, to reject, any proposed purchase of common stock to be made directly or through agents. As used in this reoffer prospectus, to the extent applicable, selling security holders includes holders of shares of our common stock received from the selling security holders after the date of this reoffer prospectus and who received such shares by gift or by other non-sale related transfer by the selling security holders, including transfers to an immediate family member of such stockholder, by will or through operation of the laws of descent and distribution, and their respective administrators, guardians, receivers, executors or other persons acting in a similar capacity.

The common stock may be sold from time to time to purchasers:

directly by the selling security holders and their successors, which includes their transferees, pledgees or donees or their successors; or

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through underwriters, broker-dealers or agents who may receive compensation in the form of discounts, concessions or commissions from the selling security holders or the purchasers of the common stock. These discounts, concessions or commissions may be in excess of those customary in the types of transactions involved.

The selling security holders and any underwriters, broker-dealers or agents who participate in the distribution of the common stock may be deemed to be underwriters within the meaning of the Securities Act of 1933, as amended. As a result, any profits on the sale of the common stock by the selling security holders and any discounts, commissions or concessions received by any such broker-dealers or agents may be deemed to be underwriting discounts, and underwriters within the meaning of the Securities Act will be subject to reoffer prospectus delivery requirements of the Securities Act. If any of the selling security holders are deemed to be underwriters, such selling security holders may be subject to certain statutory liabilities, including, without limitation, liabilities under Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Securities Exchange Act of 1934, as amended. If the common stock is sold through underwriters, broker-dealers or agents, the selling security holders will be responsible for underwriting discounts or commissions or agent s commissions.

The common stock may be sold in one or more transactions at:

fixed prices;

prevailing market prices at the time of sale;

prices related to such prevailing market prices;

varying prices determined at the time of sale; or

negotiated prices.

These sales may be effected in transactions:

on any national securities exchange or quotation service on which the common stock may be listed or quoted at the time of the sale;

in the over-the-counter market;

otherwise than on such exchanges or services or in the over-the-counter market;

through the writing and exercise of options, whether such options are listed on an options exchange or otherwise; or

through the settlement of short sales.

These transactions may include block transactions or crosses. Crosses are transactions in which the same broker acts as an agent on both sides of the trade.

In connection with the sales of the common stock or otherwise, the selling security holders may enter into hedging transactions with broker-dealers or other financial institutions. These broker-dealers or other financial institutions may in turn engage in short sales of the common stock in the course of hedging their positions. The selling security holders may also sell the common stock short and deliver common stock to close out short positions, or loan or pledge common stock to broker-dealers that in turn may sell the common stock.

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

The selling security holders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or

secured parties may offer and sell the shares of common stock from time to time under this reoffer prospectus, or under an amendment to this reoffer prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling security holders to include the pledgee, transferee or other successors in interest as selling security holders under this reoffer prospectus.

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At the time a particular offering is made, if required, a prospectus supplement will be distributed, which will set forth the names of the selling security holders, the aggregate amount and type of securities being offered, the price at which the securities are being sold and other material terms of the offering, including the name or names of any underwriters, broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling security holders and any discounts, commissions or concessions allowed or reallowed to broker-dealers.

We cannot be certain that the selling security holders will sell any or all of the common stock pursuant to this reoffer prospectus. Further, we cannot assure you that the selling security holders will not transfer, devise or gift the common stock by other means not described in this reoffer prospectus, including sales under Rule 144 of the Securities Act. The common stock may be sold in some states only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification is available and complied with.

The selling security holders and any other person participating in the sale of the common stock will be subject to the Exchange Act. The Exchange Act rules include, without limitation, Regulation M, which may limit the timing of purchases and sales of any of the common stock by the selling security holders and any other such persons. In addition, Regulation M may restrict the ability of any person engaged in the distribution of the common stock and the ability of any person or entity to engage in market-making activities with respect to the common stock.

We have agreed to pay substantially all expenses incidental to the registration, offering and sale of the common stock to the public, other than commissions, fees and discounts of underwriters, brokers, dealers and agents.

WHERE YOU CAN FIND MORE INFORMATION

REGISTRATION STATEMENT AND OTHER GOVERNMENT FILINGS

Securities and Exchange Commission

We have filed with the Securities and Exchange Commission (the Commission) a registration statement on Form S-8 under the Securities Act with respect to our common stock offered in this reoffer prospectus. This reoffer prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules to the registration statement. For further information with respect to us and our common stock, we refer you to the registration statement and its exhibits and schedules. Statements contained in this reoffer prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, reference is made to the copy of that contract or document filed as an exhibit to the registration statement, each of these statements being qualified in all respects by that reference.

We are subject to the information reporting requirements of the Securities Exchange Act of 1934, as amended. As such, we file annual, quarterly and special reports, proxy statements and other documents with the Commission. These reports, proxy statements and other documents, as well as the registration statement of which this reoffer prospectus is a part and the exhibits to such registration statement, may be inspected and copied at the public reference facilities maintained by the Commission at its Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of such material by mail from the public reference facilities of the Commission s Washington, D.C. offices, at prescribed rates. Please call the Commission at 1-800-SEC-0330 for further information on its public reference facilities. The Commission also maintains a website that contains reports, proxy and information statements and other information regarding registrants, including us, that file electronically with the Commission at the address http://www.sec.gov. The registration statement of which this reoffer prospectus is a part, including all exhibits and amendments to such registration statement, is available on that website.

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Nasdaq

Our common stock is listed on The NASDAQ National Market. Material filed by us can also be inspected and copied at the offices of the National Association of Securities Dealers, Inc. at 1735 K Street, N.W., Washington, D.C. 20006.

OrthoLogic Corp.

Most of our Commission filings also are available at our website at http://www.orthologic.com. Information contained on our website is not part of this reoffer prospectus. We will provide you without charge, upon your oral or written request, with a copy of any or all reports, proxy statements and other documents we file with the Commission, as well as any or all of the documents incorporated by reference in this reoffer prospectus or the registration statement of which it is a part (other than exhibits to such documents unless such exhibits are specifically incorporated by reference into such documents). Requests for such copies should be directed to:

OrthoLogic Corp.
Attention: Corporate Secretary
1275 West Washington Street
Tempe, Arizona 85281
Telephone number: (602) 286-5520

INFORMATION INCORPORATED BY REFERENCE

This registration statement incorporates by reference the documents listed below that we have previously filed with the Commission. They contain important information about us and our financial condition.

Our Annual Report on Form 10-K for the year ended December 31, 2005;

Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2006;

Our Current Reports on Form 8-K filed with the Commission on January 19, 2006, January 31, 2006, February 16, 2006, March 1, 2006, March 3, 2006, March 7, 2006, March 13, 2006, March 15, 2006, April 11, 2006, May 4, 2006 and May 18, 2006 (other than current reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K);

The description of our common stock contained in our Registration Statement on Form 8-A dated January 28, 1993, and any further amendment or report updating that description; and

The description of our Series A preferred stock purchase rights contained in our Registration Statement on Form 8-A filed with the Commission on March 6, 1997, as amended as described in Forms 8-K filed with the Commission on August 24, 1999 and October 20, 2003, and any further amendment or report updating that description.

In addition, all documents filed by us with the Commission subsequent to the filing date of this registration statement pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934 (other than current reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K), and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated herein by reference shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any subsequently filed document which also is, or is deemed to be, incorporated by reference herein modifies or supersedes such prior statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement except as indicated herein.

LEGAL MATTERS

The validity of the securities to be sold pursuant to this reoffer prospectus is being passed upon for us by our counsel, Quarles & Brady Streich Lang LLP, Phoenix, Arizona.

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EXPERTS

The financial statements, the related financial statement schedule and management s report on the effectiveness of internal control over financial reporting incorporated in this prospectus by reference from the OrthoLogic Corp. Annual Report on Form 10-K for the year ended December 31, 2005 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports (which reports (1) express an unqualified opinion on the financial statements and financial statement schedule and include an explanatory paragraph referring to the fact that OrthoLogic Corp. is in the development stage at December 31, 2005, (2) express an unqualified opinion on management s assessment regarding the effectiveness of internal control over financial reporting, and (3) express an unqualified opinion on the effectiveness of internal control over financial reporting), which are incorporated herein by reference, and have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

INDEMNIFICATION

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

A Delaware corporation may indemnify past or present officers and directors of such corporation or of another corporation or other enterprise at the former corporation s or enterprise s request, in an action by or in the right of the corporation to procure a judgment in its favor under the same conditions, except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in defense of any action referred to above, or in defense of any claim, issue or matter therein, the corporation must indemnify such person against the expenses (including attorneys fees) which such person actually and reasonably incurred in connection therewith. Section 145 further provides that any indemnification shall be made by the corporation only as authorized in each specific case upon a determination that indemnification of such person is proper because he has met the applicable standard of conduct (i) by the stockholders, (ii) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, (iii) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, or (iv) by independent legal counsel in a written opinion, if there are no such disinterested directors, or if such disinterested directors so direct. Section 145 further provides that indemnification pursuant to its provisions is not exclusive of other rights of indemnification to which a person may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

We have directors and officers insurance which provides for indemnification of our officers and directors and certain other persons against liabilities and expenses incurred by any of them in certain stated proceedings and under certain stated conditions. We have also entered into separate indemnification agreements with each of our directors and certain officers that may require us, among other things, to indemnify such directors and officers against certain liabilities that may arise by reason of their status or service as directors or officers to the maximum extent permitted under Delaware law.

Our restated certificate of incorporation provides that indemnification shall be to the fullest extent permitted by the DGCL for all current or former directors or officers.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, 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

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

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PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

This registration statement incorporates by reference the documents listed below that we have previously filed with the Commission. They contain important information about us and our financial condition.

Our Annual Report on Form 10-K for the year ended December 31, 2005;

Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2006;

Our Current Reports on Form 8-K filed with the Commission on January 19, 2006, January 31, 2006, February 16, 2006, March 1, 2006, March 3, 2006, March 7, 2006, March 13, 2006, March 15, 2006, April 11, 2006, May 4, 2006 and May 18, 2006 (other than current reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K);

The description of our common stock contained in our Registration Statement on Form 8-A dated January 28, 1993, and any further amendment or report updating that description; and

The description of our Series A preferred stock purchase rights contained in our Registration Statement on Form 8-A filed with the Commission on March 6, 1997, as amended as described in Forms 8-K filed with the Commission on August 24, 1999 and October 20, 2003, and any further amendment or report updating that description.

In addition, all documents filed by us with the Commission subsequent to the filing date of this registration statement pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934 (other than current reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K), and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated herein by reference shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any subsequently filed document which also is, or is deemed to be, incorporated by reference herein modifies or supersedes such prior statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement except as indicated herein.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

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

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A Delaware corporation may indemnify past or present officers and directors of such corporation or of another corporation or other enterprise at the former corporation s request, in an action by or in the right of the corporation to procure a judgment in its favor under the same conditions, except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in defense of any action referred to above, or in defense of any claim, issue or matter therein, the corporation must indemnify such person against the expenses (including attorneys fees) which such person actually and reasonably incurred in connection therewith. Section 145 further provides that any indemnification shall be made by the corporation only as authorized in each specific case upon a determination that indemnification of such person is proper because he has met the applicable standard of conduct (i) by the stockholders, (ii) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, (iii) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, or (iv) by independent legal counsel in a written opinion, if there are no such disinterested directors, or if such disinterested directors so direct. Section 145 further provides that indemnification pursuant to its provisions is not exclusive of other rights of indemnification to which a person may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

We have directors and officers insurance which provides for indemnification of our officers and directors and certain other persons against liabilities and expenses incurred by any of them in certain stated proceedings and under certain stated conditions. We have also entered into separate indemnification agreements with each of our directors and certain officers that may require us, among other things, to indemnify such directors and officers against certain liabilities that may arise by reason of their status or service as directors or officers to the maximum extent permitted under Delaware law.

Our restated certificate of incorporation provides that indemnification shall be to the fullest extent permitted by the DGCL for all current or former directors or officers.

Item 7. Exemption from Registration Claimed.

The restricted shares of our common stock that are being registered for reoffer and resale under this registration statement were issued prior to the filing of this registration statement and are restricted securities (as such term is defined in Rule 144(a)(3) under the Securities Act). These restricted shares were issued to members of our board of directors and certain management employees pursuant to our 2005 Equity Incentive Plan in transactions exempt from registration under Section 4(2) of the Securities Act.

Item 8. Exhibits.

See the Exhibit Index which is incorporated herein by reference.

Item 9. Undertakings.

(a) The undersigned registrant hereby undertakes:

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

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provided, however, that clauses (a)(1)(i) and (a)(1)(ii) above do not apply if the information required to be included in a post-effective amendment by those clauses 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;

(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 the 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 or made in a document incorporated or deemed incorporated by reference into the 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; and

(iii) each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the 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 first use, 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 date of first use;

(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

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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.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant s annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan s annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in 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.

(c) 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 provisions described under Item 6 above, 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.

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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-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Tempe, State of Arizona, on June 13, 2006.

ORTHOLOGIC CORP.
(Registrant)

By: /s/ John M. Holliman, III
John M. Holliman, III
Executive Chairman

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints John M. Holliman, III and Les M. Taeger and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, and any other regulatory authority, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their substitutes, may lawfully do or cause to be done by virtue hereof.

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

Person	Title	Date
/s/ John M. Holliman, III John M. Holliman, III	Executive Chairman and Director (Principal Executive Officer)	June 13, 2006
/s/ Randolph C. Steer, MD, Ph.D. Randolph C. Steer, MD, Ph.D.	President and Chief Operating Officer	June 13, 2006
/s/ Les M. Taeger Les M. Taeger	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	June 13, 2006
/s/ Michael D. Casey Michael D. Casey	Director	June 13, 2006

/s/ Fredric J. Feldman, Ph.D.	Director	June 13, 2006
Fredric J. Feldman, Ph.D.		
/s/ Elwood D. Howse, Jr.	Director	June 13, 2006
Elwood D. Howse, Jr.		
/s/ Augustus A. White, III	Director	June 13, 2006
Augustus A. White, III		
/s/ William M. Wardell	Director	June 13, 2006
William M. Wardell		

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ORTHOLOGIC CORP.
EXHIBIT INDEX
TO
FORM S-8 REGISTRATION STATEMENT

Exhibit Number	Description	Incorporated Herein by Reference To	Filed Herewith
4.1	Rights Agreement dated as of March 4, 1997, between the Company and Bank of New York, and Exhibits A, B, and C thereto	Exhibit 4.1 to the Company s Registration Statement on Form 8-A filed with the Securities and Exchange Commission on March 6, 1997	
4.2	First Amendatory Agreement to March 4, 1997 Rights Agreement	Exhibit 10.1 to the Company s Form 8-K filed August 24, 1999	
4.3	Amendment No. 2 to March 4, 1997 Rights Agreement	Exhibit 4.1 to the Company s Form 8-K filed October 20, 2003	
4.4	Class A Warrant Agreement dated February 24, 2006, between OrthoLogic Corp. and PharmaBio Development Inc.	Exhibit 4.1 to the Company s Current Report on Form 8-K, filed with the SEC on March 3, 2006 (the March 3rd 8-K)	
4.5	Class B Warrant Agreement dated February 24, 2006, between OrthoLogic Corp. and PharmaBio Development Inc. (asterisks located within exhibit denote information that has been deleted pursuant to a request for confidential treatment filed with the Securities and Exchange Commission)	Exhibit 4.2 to the March 3rd 8-K	

4.6	Class C Warrant Agreement dated February 24, 2006, between OrthoLogic Corp. and PharmaBio Development Inc. (asterisks located within exhibit denote information that has been deleted pursuant to a request for confidential treatment filed with the Securities and Exchange Commission)	Exhibit 4.3 to the March 3rd 8-K

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Exhibit Number	Description	Incorporated Herein by Reference To	Filed Herewith
4.7	Class D Warrant Agreement dated February 24, 2006, between OrthoLogic Corp. and PharmaBio Development Inc. (asterisks located within exhibit denote information that has been deleted pursuant to a request for confidential treatment filed with the Securities and Exchange Commission)	Exhibit 4.4 to the March 3rd 8-K	
4.8	Form of Class A Warrant Agreement for Additional Class A Warrants	Exhibit 4.8 to the Company s Registration Statement on Form S-3 filed with the SEC on April 13, 2006	
5.1	Opinion of Quarles & Brady Streich Lang LLP		X
23.1	Consent of Deloitte & Touche LLP		X
23.2	Consent of Quarles & Brady Streich Lang LLP		Included in Exhibit 5.1
24.1	Powers of Attorney		See signature page