ORTHOLOGIC CORP
Form S-3
October 03, 2006

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As filed with the Securities and Exchange Commission on October 2, 2006
Registration No. _____

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

FORM S-3
REGISTRATION STATEMENT
Under
The Securities Act of 1933

ORTHOLOGIC CORP.
(Exact name of registrant as specified in its charter)

DELAWARE	**86-0585310**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

1275 West Washington Street
Tempe, Arizona 85281
(602) 286-5520
(Address, including zip code, and telephone number,
including area code, of registrant s principal executive offices)

John M. Holliman, III, Executive Chairman
and principal executive officer
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)

Copy to:
Steven P. Emerick, Esq.
Quarles & Brady Streich Lang, LLP
One Renaissance Square, Two North Central Avenue
Phoenix, Arizona 85004
(602) 230-5517

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

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

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

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

registration statement for the same offering. o _____

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

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

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

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered	Proposed maximum offering price per unit	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, par value $.0005 per share (with attached Preferred Stock Purchase Rights)	1,262,531 (1)	$1.30 (2)	$1,641,291 (2)	$175.62
Common Stock, par value $.0005 per share (with attached Preferred Stock Purchase Rights) underlying Initial Class A Warrant	46,706 (1)	$6.39 (3)	$298,452 (3)	$31.93
Common Stock, par value $.0005 per share (with attached Preferred Stock Purchase Rights) underlying Additional Class A Warrant and Milestone Warrants	357,423 (1)	$1.91 (3)	$682,678 (3)	$73.05
TOTAL	**1,666,660 (1)**		**$2,622,421**	**$280.60 (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) Estimated pursuant to Rule 457(c) of the Securities Act of 1933, based on the average of the high and low prices reported on the NASDAQ Global Market on September 28, 2006, solely for the purpose of calculating the registration fee.

(3) Pursuant to Rule 457(g) of the Securities Act of 1933, the proposed maximum offering price is based upon the higher of the price at which the warrants or options may be exercised and the price of shares of common stock as determined in accordance with Rule 457(c).

(4) The filing fee of $280.60 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, which was later withdrawn, no securities having been sold thereunder, leaving a balance of $11,770. We applied $256.62 to our registration statement on Form S-3 filed April 25, 2006, Commission File no. 333-133530, leaving a balance of $11,513.38. It is from this balance that we wish to pay the filing fee for this registration statement on Form S-3.

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

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

PROSPECTUS

SUBJECT TO COMPLETION, DATED OCTOBER 2, 2006

ORTHOLOGIC CORP.

1,666,660 SHARES OF COMMON STOCK

This prospectus relates to the sale of up to an aggregate of 1,666,660 shares of our common stock by PharmaBio Development Inc. (d/b/a NovaQuest) (NovaQuest). Such shares consist of 1,262,531 shares of common stock and 404,129 shares of common stock underlying warrants. NovaQuest is sometimes referred to in this prospectus as the selling security holder. The prices at which NovaQuest may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions. We will not receive any of the proceeds from the resale by the selling security holder of any of the securities covered by this prospectus, however, we have received $3.5 million from the sale of shares under a Common Stock and Warrant Purchase Agreement we have entered into with NovaQuest. We will also receive the exercise price of the warrants described in this prospectus (to the extent that the selling security holder does not utilize the cashless exercise feature, if provided).

Our common stock is listed on The NASDAQ Global Market, under the symbol OLGC. Our preferred stock is not listed or quoted on any exchange. On September 28, 2006, the closing price of our common stock on The NASDAQ Global Market was $1.29 per share.

You should carefully consider the risk factors described under the heading Risk Factors and Forward-Looking Statements in this prospectus, in addition to any risk factors which may be included in any supplement, or which are incorporated by reference into this prospectus.

Investing in our securities involves a high degree of risk. Before buying any of our common stock, you should carefully read the discussion of material risks of investing in our securities under the heading Risk Factors and Forward-Looking Statements beginning on page 6 in this prospectus.

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

The date of this prospectus is _____, 2006.

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* * *

ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus. We have not, and the selling security holder has not, authorized anyone to provide you with different information. No one is making offers to sell or seeking offers to buy these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information contained in this prospectus is accurate as of the date on the front of this prospectus only and that any information we have incorporated by reference is accurate as of the date of the document incorporated by reference only, regardless of the time of delivery of this prospectus or 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 prospectus may not contain all of the information that may be important to you. You should read the entire prospectus as well as the documents incorporated by reference into this 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 prospectus is a part and the additional information described below under the heading Where You Can Find More Information.

When used in this prospectus, the terms OrthoLogic, we, our, us and the Company 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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PROSPECTUS SUMMARY

This summary highlights selected information from this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, including the risks of investing discussed under Risk Factors and Forward-Looking Statements beginning on page 6, the information incorporated by reference, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Our Company

OrthoLogic is a biotechnology company focused on the development and commercialization of the novel synthetic peptide Chrysalin® (TP508) 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 both soft tissue and bone.

Recent Events

On August 29, 2006, OrthoLogic Corp. reported the results of preliminary interim analysis of data from its Phase 2b dose-ranging clinical trial of the novel synthetic peptide Chrysalin® (TP508) in unstable, displaced distal radius (wrist) fractures and termination of the Phase 2b study. In the dataset of 240 subjects as a group that were evaluable in the Phase 2b interim analysis, treatment with Chrysalin did not demonstrate benefit compared to placebo in the primary efficacy endpoint of time to removal of immobilization. Individual findings of efficacy in secondary endpoints, including radiographic healing, were not seen in this interim analysis. Further, no dose response relationship was observed. The trial met the pre-specified safety endpoint by demonstrating no significant difference in the incidence of adverse events between the Chrysalin and placebo groups.

On April 5, 2006, James M. Pusey, MD resigned as our President and Chief Executive Officer and as a Class I director of the company. John M. Holliman, III, a director of OrthoLogic since September 1987 and Chairman of the Board of Directors since August 1997, assumed the title of Executive Chairman on that date. In that position, Mr. Holliman serves as our principal executive officer and leads our business and corporate strategic activities. Randolph C. Steer, MD, Ph.D. was named our President on April 5, 2006, and is responsible for directing our strategy and operations in all clinical development and regulatory areas.

On March 15, 2006, we reported results of our Phase 3 fracture repair human clinical trial. For the primary endpoint, immobilization removal, no statistically significant difference between placebo and a single injection of Chrysalin were achieved. Consistent with the Phase 1/2 human clinical trial results, a statistically significant difference for a secondary endpoint, radiographic evidence of radial cortical bridging, was achieved. However, no statistically significant difference was noted in the study s other secondary endpoints. On March 15, 2006, we temporarily halted our Phase 2b fracture repair dosing clinical trial to perform an interim analysis of the data of the subjects enrolled to that date.

On February 23, 2006, we entered into an agreement to purchase certain assets and assume certain liabilities of AzERx, Inc., in exchange for $390,000 in cash and 1,355,000 shares of our common stock. The transaction closed on February 27, 2006. Under the terms of the agreement, we acquired an exclusive license for the core intellectual property relating to AzERx s lead compound, AZX100, a 24-amino acid peptide. AZX100 is currently being investigated for several applications, including the treatment of vasospasm associated with subarachnoid hemorrhage, prevention of keloid scarring, and treatment of asthma. We 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 AZX100 technology.

We continue to explore other biopharmaceutical compounds that can complement our research activity internally and broaden our potential pipeline for successful products.

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The Offering

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. (d/b/a NovaQuest) (NovaQuest), which provides for the purchase of shares of our common stock in three tranches together with the issuance of accompanying warrants to purchase shares of our common stock (the Initial Class A Warrant, the June Class A Warrant, and the September Class A Warrant). We are also parties to an Amended and Restated Class B Warrant Agreement (the Class B Warrant), an Amended and Restated Class C Warrant Agreement (the Class C Warrant) and an Amended and Restated Class D Warrant Agreement (the Class D Warrant) with NovaQuest to purchase in the aggregate up to 240,000 shares of our common stock at $1.91 a share (the Class B Warrant, Class C Warrant and Class D Warrant are collectively referred to in this prospectus as the Milestone Warrants). On July 3, 2006, we closed the second tranche and we have elected not to complete the third proposed tranche, including the issuance of the September Class A Warrant.

All of the shares being offered pursuant to this prospectus are being sold by the selling security holder. See Selling Security Holder later in this prospectus.

We are obligated to file a registration statement to cover resale of the shares issued on the Closing Date, the additional shares we elected to issue on July 3, 2006 pursuant to the Purchase Agreement, as well as the shares to be issued upon exercise of the Initial Class A Warrant, the June Class A Warrant and the Milestone Warrants (collectively referred to in this prospectus as the Warrants).

Issuer	OrthoLogic Corp.
Common stock offered in this prospectus	1,262,531 shares as of October 2, 2006
Common stock underlying warrants offered in this prospectus:	
Shares underlying Initial Class A Warrant	The Initial Class A Warrant, dated February 24, 2006, is fully vested and entitles the selling security holder to purchase 46,706 shares of our common stock at $6.39 per share.
Shares underlying June Class A Warrant	The Additional Class A Warrant, dated June 30, 2006, is fully vested and entitles the selling security holder to purchase 117,423 shares of our common stock at $1.91 per share.
Shares underlying Class B Warrant	The Amended and Restated Class B Warrant, dated February 24, 2006, and amended and restated as of June 30, 2006, entitles the selling security holder to purchase up to 80,000 shares of our common stock at $1.91 per share. The Class B Warrant will vest based on the achievement of a milestone identified in the Class B Warrant.
Shares underlying Class C Warrant	The Amended and Restated Class C Warrant, dated February 24, 2006, and amended and restated as of June 30, 2006, entitles the selling security holder to purchase up to 80,000 shares of our common stock at $1.91 per share. The Class C Warrant will vest based on the achievement of a milestone identified in the Class C Warrant.

Shares underlying Class D Warrant	The Amended and Restated Class D Warrant, dated February 24, 2006, and amended and restated as of June 30, 2006, entitles the selling security holder to purchase up to 80,000 shares of our common stock at $1.91 per share. The Class D Warrant will vest based on the achievement of a milestone identified in the Class D Warrant.
Use of proceeds	We will not receive any of the proceeds from the resale by

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	the selling security holder of any of the securities covered by this prospectus, however, we have received $3.5 million from the initial sale of shares under the Purchase Agreement. We will also receive the exercise price of the warrants described in this prospectus (to the extent that the selling security holder does not utilize the cashless exercise feature, if provided). We intend to use the net proceeds we received from the sale of securities to the selling security holder for general corporate purposes, including capital expenditures, working capital needs, current and future clinical trials of our drug candidates, as well as other research and drug development activities.
The NASDAQ Global Market symbol	Our common stock is listed on The NASDAQ Global Market under the symbol OLGC. The Warrants are not, and will not be, listed on any exchange or quoted on any market.
Risk Factors	You should carefully consider the information under Risk Factors and Forward-Looking Statements included in this prospectus beginning on page 6 so that you understand the risks associated with an investment in our securities.
Registration Rights	We agreed to file a registration statement with respect to the shares of common stock issuable upon exercise of the Warrants, as well as other securities issued to NovaQuest as described in this prospectus. Subject to certain suspension periods, we are obligated to use our best efforts to have the registration statement covering these securities declared effective as promptly as practicable following the filing of the registration statement, and to keep it effective until the earlier of: (i) the sale under the registration statement of all of the shares of common stock covered by the applicable registration rights agreement; and (ii) such date as all remaining unsold shares of common stock covered by the applicable registration rights agreement can be sold by the selling security holder without restriction pursuant to the requirements of Rule 144 promulgated under the Securities Act. Following the effective date of the registration statement, in certain circumstances, we may suspend the selling security holder s use of the registration statement to resell its securities for up to 60 days (which need not be consecutive) in any twelve month period. See Description of Warrants Registration Rights.

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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 expand 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 that our losses will increase as we expand 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 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 our Phase III and Phase 2b clinical trials showed that the differences in the primary endpoint analyses between our lead compound, Chrysalin, and the placebo were not statistically significant and this could result in a substantial delay in our ability to generate revenue.

On March 15, 2006, we reported results of our Phase 3 fracture repair human clinical trial. For the primary endpoint, immobilization removal, no statistically significant difference between placebo and a single injection of Chrysalin were achieved. Consistent with the Phase 1/2 human clinical trial results, a statistically significant difference for a secondary endpoint, radiographic evidence of radial cortical bridging, was achieved. However, no statistically significant difference was noted in the study s other secondary endpoints. These results may make it more difficult to achieve regulatory approval of Chrysalin. On March 15, 2006, we temporarily halted our Phase 2b fracture repair dosing clinical trial to perform an interim analysis of the data of the subjects enrolled to that date.

On August 29, 2006, we reported the results of preliminary interim analysis of data from our Phase 2b dose-ranging clinical trial of the novel synthetic peptide Chrysalin® (TP508) in unstable, displaced distal radius (wrist) fractures and termination of the Phase 2b study. In the dataset of 240 subjects as a group that were evaluable in the Phase 2b interim analysis, treatment with Chrysalin did not demonstrate benefit compared to placebo in the primary efficacy endpoint of time to removal of immobilization. Individual findings of efficacy in secondary endpoints, including radiographic healing, were not seen in this interim analysis. Further, no dose response relationship was observed. The trial met the pre-specified safety endpoint by demonstrating no significant difference in the incidence of adverse events between the Chrysalin and placebo groups.

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, we reported results of our Phase 3 fracture repair human clinical trial. For the primary endpoint, immobilization removal, no statistically significant difference between placebo and a single injection of Chrysalin were achieved. Consistent with the Phase 1/2 human clinical trial results, a statistically significant difference for a secondary endpoint, radiographic evidence of radial cortical bridging, was achieved. However, no statistically significant difference was noted in the study s other secondary endpoints. These results may make it more difficult to achieve regulatory approval of Chrysalin. On March 15, 2006, we temporarily halted our Phase 2b fracture repair dosing clinical trial to perform an interim analysis of the data of the subjects

enrolled to that date.

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On August 29, 2006, as discussed in the risk factors above, we reported the results of preliminary interim analysis of data from our Phase 2b dose-ranging clinical trial of the novel synthetic peptide Chrysalin® (TP508) in unstable, displaced distal radius (wrist) fractures and termination of the Phase 2b study. In the dataset of 240 subjects as a group that were evaluable in the Phase 2b interim analysis, treatment with Chrysalin did not demonstrate benefit compared to placebo in the primary efficacy endpoint of time to removal of immobilization. Individual findings of efficacy in secondary endpoints, including radiographic healing, were not seen in this interim analysis. Further, no dose response relationship was observed. The trial met the pre-specified safety endpoint by demonstrating no significant difference in the incidence of adverse events between the Chrysalin and placebo groups.

We will have to determine whether to redesign our Chrysalin fracture repair product candidate and our protocols and continue with additional testing, or cease activities in this area. Redesigning the product candidate or clinical protocols may not be economically practicable or scientifically possible. A substantial delay in obtaining FDA approval or termination of the Chrysalin fracture repair product candidate could result in a delay in our ability to generate revenue and could have a material adverse effect on our business going forward.

The majority of our product candidates are all 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 and Phase 2b fracture repair human clinical trials 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. 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.

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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 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 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.

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.

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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 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 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.

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.

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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 and diabetic ulcer healing or 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 in which we are considering for our AZX100 and ICARMs research and development activities, see the section in this 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 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 ending 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 prospectus is a part.

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

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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 and the Warrants

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 $1.25 from January 1, 2004 to September 28, 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 September 28, 2006, there were 41,564,291 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 September 28, 2006 we had stock options outstanding to purchase approximately 3,584,719 shares of our common stock, the exercise price of which range between $1.70 per share to $8.00 per share, warrants outstanding to purchase 46,706 shares of our common stock with an exercise price of $6.39, warrants outstanding to purchase 357,423 shares of our common stock with an exercise price of $1.91 and we 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 2005 Equity Incentive Plan, which provides an additional 2,000,000 shares of our common stock for incentive awards. To the extent such options 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;

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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 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.

If we do not maintain an effective registration statement or comply with applicable state securities laws, the Warrant holders may not be able to exercise the Warrants.

For the holders of the Warrants to be able to exercise their Warrants, the shares of our common stock to be issued upon exercise of those Warrants must be covered by an effective and current registration statement and qualify or be exempt under the securities laws of the state or other jurisdiction in which the Warrant holders live. We can give no assurance that we will be able to continue to maintain a current registration statement relating to the shares of our common stock underlying the Warrants or that an exemption from registration or qualification will be available throughout their term. This may have an adverse effect on the ability of the Warrant holders to exercise the Warrants.

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While the Warrants are outstanding, it may be more difficult to raise additional equity capital.

While the Warrants are outstanding, we may find it more difficult to raise additional equity capital.

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 prospectus covers the resale of shares that previously were restricted, as well as shares underlying warrants issued to the selling security holder. 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 holder sells 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.

Exercise of the Warrants will dilute the ownership interests of existing stockholders.

The exercise of the Warrants will dilute the ownership interests of existing stockholders and any sales in the public market of the common stock issuable upon such exercise could adversely affect prevailing market prices of our common stock. In addition, the existence of the Warrants may encourage short selling by market participants because exercise of the Warrants could depress the price of our common stock.

You should consider the United States federal income tax consequences of owning the Warrants and our common stock.

You are urged to consult your tax advisors with respect to the United States federal income tax consequences resulting from an exercise of the Warrants, as well as the possibility of taxable income resulting from certain changes to the terms of the Warrants.

We caution that the foregoing list of important factors is not exclusive 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 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 prospectus. Forward-looking statements generally can be identified by the use of forward-looking words such as may, could, expect, intend, plan, seek, anticipate, estimate, predict, potential, continue, or the negative of these terms or other comparable terminology. You should n 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 elsewhere in this prospectus and documents incorporated by reference into this 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;

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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 prospectus or incorporated by reference into this prospectus are made only as of the date of this 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&#1