

April 29, 2008

Dear Stockholder,

You are cordially invited to attend the 2008 Annual Meeting of Stockholders of Osiris Therapeutics, Inc. to be held at 2:00 p.m. Eastern Daylight Time ("EDT"), on Wednesday, June 4, 2008, at the offices of Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, Maryland 21046.

Enclosed with this letter is a Notice of Annual Meeting, a Proxy Statement, and a Proxy Card and return envelope. Both the Notice of Annual Meeting and Proxy Statement provide details of the proposals to be considered and business that we will conduct at the Annual Meeting, and other information about Osiris Therapeutics, Inc. that you should consider when you vote your shares. At the Annual Meeting, we will ask you to:

- Elect two Class II directors;
- Approve the Amended and Restated 2006 Omnibus Plan to, among other things, increase the number of shares available for grant at any time under the 2006 Omnibus Plan as currently existing by 600,000 shares, from 850,000 to 1,450,000 shares;
- Ratify the appointment of Stegman & Company as Osiris Therapeutics, Inc.'s independent registered public accounting firm for the fiscal year ending December 31, 2008; and
- Transact any other business that is properly presented at the Annual Meeting.

We hope you will be able to attend the Annual Meeting. Your vote is important. Whether or not you plan to attend the Annual Meeting, we urge you to vote. You are urged to vote by signing, dating and promptly returning the proxy card in the enclosed prepaid return envelope. Your proxy will be voted at the Annual Meeting in accordance with your instructions. If you do not specify a choice on one of the proposals described in this proxy statement, your proxy will be voted as recommended by the Board of Directors. If you hold your shares through an account with a brokerage firm or other nominee or fiduciary such as a bank, please follow the instructions you receive from such brokerage firm or other nominee or fiduciary to vote your shares. Of course, if you attend the Annual Meeting you may vote in person. If you plan to attend the meeting, please mark the appropriate box on the enclosed proxy card. You may be asked to present valid picture identification at the Annual Meeting, such as a driver's license or passport. Cameras, recording devices and other electronic devices will not be permitted at the meeting.

Sincerely,



C. Randal Mills, Ph.D.
President and Chief Executive Officer

**YOUR VOTE IS IMPORTANT.
PLEASE RETURN YOUR PROXY CARD PROMPTLY.**

OSIRIS THERAPEUTICS, INC.

NOTICE OF 2008 ANNUAL MEETING OF STOCKHOLDERS

TIME: 2:00 p.m. EDT
DATE: June 4, 2008
PLACE: The offices of OSIRIS THERAPEUTICS, INC., 7015 Albert Einstein Drive, Columbia, Maryland 21046

PURPOSES:

1. To consider and to vote on the election of two nominees proposed by the Board of Directors, to serve as Class II members of the Board of Directors, each for a three-year term expiring at the annual meeting of stockholders to be held in 2011 and until their respective successors shall be duly elected and qualified.
2. To approve the Amended and Restated 2006 Omnibus Plan to among other things, increase the number of shares available for grant at any time under the 2006 Omnibus Plan as currently existing by 600,000 shares, from 850,000 to 1,450,000 shares (a copy of the Amended and Restated 2006 Omnibus Plan is attached as Appendix A to the Proxy Statement that accompanies this Notice of Annual Meeting).
3. To ratify the appointment of Stegman & Company as our independent registered public accounting firm for the fiscal year ending December 31, 2008.
4. To consider any other business that is properly presented at the Annual Meeting and any postponements or adjournments thereof.

The Board of Directors recommends a vote **FOR** the election of each of the nominees for Class II director, **FOR** the approval of the Amended and Restated 2006 Omnibus Plan, and **FOR** the ratification of appointment of Stegman & Company as Osiris Therapeutics, Inc.'s independent registered public accounting firm for the fiscal year ending December 31, 2008.

WHO MAY VOTE:

You may vote if you were the record owner of OSIRIS THERAPEUTICS, INC. common stock at the close of business on April 25, 2008. A list of stockholders of record will be available at the Annual Meeting and during the 10 days prior to the meeting, at the office of the Corporate Secretary at the above address.

All stockholders are cordially invited to attend the Annual Meeting. Whether you plan to attend the Annual Meeting or not, you are requested to complete, sign, date and return the enclosed proxy card as soon as possible in accordance with the instructions on the proxy card. A pre-addressed, postage prepaid return envelope is enclosed for your convenience.

BY ORDER OF THE BOARD OF DIRECTORS



Philip R. Jacoby, Jr.
Corporate Secretary

April 29, 2008

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April 29, 2008

PROXY STATEMENT FOR 2008 ANNUAL MEETING OF STOCKHOLDERS

This proxy statement provides information that you should read before you vote on the proposals that will be presented at the 2008 Annual Meeting of Stockholders of Osiris Therapeutics, Inc. The 2008 Annual Meeting will be held on June 4, 2008, at 2:00 p.m., EDT, at Osiris Therapeutics, Inc.'s principal executive office, located at 7015 Albert Einstein Drive, Columbia, Maryland 21046.

On or about May 1, 2008, we began mailing this proxy statement, accompanying proxy card and Osiris Therapeutics, Inc.'s 2007 Annual Report to Stockholders, to stockholders who according to our records owned shares of our common stock at the close of business on April 25, 2008.

This proxy statement and the accompanying annual report to stockholders are available electronically at *<http://www.osiris.com>*.

GENERAL INFORMATION ABOUT THE ANNUAL MEETING

Why Did You Send Me this Proxy Statement?

We sent you this proxy statement and the enclosed proxy card because the Board of Directors of OSIRIS THERAPEUTICS, INC. is soliciting your proxy to vote at the 2008 Annual Meeting of Stockholders to be held at our offices, 7015 Albert Einstein Drive, Columbia, Maryland 21046, on Wednesday, June 4, 2008, at 2:00 p.m. EDT, and at any adjournments or postponements of the meeting. This proxy statement, along with the accompanying Notice of Annual Meeting of Stockholders, summarizes the purposes of the meeting and information you need to know to vote at the Annual Meeting.

On May 1, 2008 we began sending this proxy statement, the attached Notice of Annual Meeting and the enclosed proxy card to all stockholders entitled to vote at the meeting. Although not part of this proxy statement, we are also sending along with the proxy statement, our 2007 Annual Report to Stockholders.

Who Can Vote?

Only stockholders who owned our common stock of record at the close of business on April 25, 2008, the record date for the Annual Meeting, are entitled to vote at the Annual Meeting. On this record date, there were 31,660,787 shares of our common stock outstanding and entitled to vote. We have no shares of any other class of capital stock outstanding.

You do not need to attend the Annual Meeting to vote your shares. Shares represented by valid proxies, received in time for the meeting and not revoked prior to the meeting, will be voted at the meeting. A stockholder may revoke a proxy before the proxy is voted by delivering to our Corporate Secretary a signed statement of revocation or a duly executed proxy card bearing a later date. Any stockholder who has executed a proxy card but attends the meeting in person may revoke the proxy and vote at the meeting.

How Many Votes Do I Have?

Each share of our common stock that you own entitles you to one vote.

How Do I Vote?

Whether you plan to attend the Annual Meeting or not, we urge you to vote by proxy. Voting by proxy will not affect your right to attend the Annual Meeting. If your shares are registered directly in your name through our stock transfer agent, StockTrans, Inc., or you have stock certificates, you may vote by mail or in person. If by mail, please complete, sign and date the enclosed proxy card and return it promptly in the envelope provided. If you attend the meeting, you may deliver your completed proxy card in person or you may vote by completing a ballot, which will be available at the meeting.

If your shares are held in "street name" (held in the name of a bank, broker or other nominee), you must provide the bank, broker or other nominee with instructions on how to vote your shares and can do so as follows:

- **By mail.** Complete, sign and date the enclosed proxy card and return it promptly in the envelope provided.
- **In person at the meeting.** Contact the broker or other nominee who holds your shares to obtain a broker's proxy card and bring it with you to the meeting. You will not be able to vote at the meeting unless you have a proxy card from your broker.

If you properly fill in your proxy card and send it to us in time, your "proxy" (one of the individuals named on your proxy card) will vote your shares as you have directed. If you sign the proxy card but do not make specific choices, your proxy will vote your shares as recommended by the Board of Directors.

How Does the Board of Directors Recommend That I Vote on the Proposals?

The Board of Directors recommends that you vote as follows:

- " **FOR** " the election of the two nominees proposed by the Board for election as Class II directors;
- " **FOR** " the approval of the Amended and Restated 2006 Omnibus Plan; and
- " **FOR** " the ratification of the appointment of Stegman & Company as our independent registered public accounting firm for our fiscal year ending December 31, 2008.

If any other matter is presented, the proxy card provides that your shares will be voted by the proxy holder listed on the proxy card in accordance with his best judgment. At the time this proxy statement was printed, we knew of no matters that needed to be acted on at the Annual Meeting, other than those discussed in this proxy statement.

May I Revoke My Proxy?

If you give us your proxy, you may revoke it at any time before the meeting. You may revoke your proxy in any one of the following ways:

- by signing a new proxy card and submitting it as instructed above;
- by notifying our Corporate Secretary in writing before the Annual Meeting that you have revoked your proxy; or
- by attending the meeting in person and voting in person. Attending the meeting in person will not in and of itself revoke a previously submitted proxy unless you specifically request it.

What if I Receive More Than One Proxy Card?

You may receive more than one proxy card or voting instruction form if you hold shares of our common stock in more than one account, which may be in registered form or held in street name. Please vote in the manner described under "How Do I Vote?" for each account to ensure that all of your shares are voted.

Will My Shares be Voted if I Do Not Return My Proxy Card?

If your shares are registered in your name or if you have stock certificates, they will not be voted if you do not return your proxy card by mail or vote at the meeting as described above under "How Do I Vote?" If your shares are held in street name and you do not provide voting instructions to the bank, broker or other nominee that holds your shares as described above under "How Do I Vote?," the bank, broker or other nominee generally has the discretionary authority to vote your unvoted shares on both Proposals 1, 2 and 3 even if it does not receive instructions from you. We encourage you to provide voting instructions. This ensures your shares will be voted at the meeting in the manner you desire. If your broker determines that it cannot vote your shares on a particular matter because it has not received instructions from you and does not have discretionary voting authority on that matter, this is referred to as a "broker non-vote."

What Vote is Required to Approve Each Proposal and How are Votes Counted?

Proposal 1: Election of Director Nominees

The affirmative vote of a plurality of the shares voted affirmatively is required to elect a director. The two individuals receiving the most votes will be elected. Abstentions are not counted for purposes of electing directors. You may vote either FOR all of the nominees, WITHHOLD your vote from all of the nominees or WITHHOLD your vote from any one of the nominees. Votes that are withheld will not be included in the vote tally for the election of directors. Brokerage firms generally have authority to vote customers' unvoted shares held by the firms in street name for the election of directors. If a broker does not exercise this authority, such broker non-votes will have no effect on the results of this vote.

Proposal 2: Approve the Amended and Restated 2006 Omnibus Plan

Under Delaware law, approval of the Amended and Restated 2006 Omnibus Plan requires a majority of the votes present in person or by proxy and entitled to be cast at the Annual Meeting to be voted "FOR" this proposal. A properly executed proxy marked "ABSTAIN" with respect to the approval of the amendment to the 2006 Omnibus Plan will have the effect of a negative vote. Broker non-votes are not considered as votes entitled to be cast on the matter, and thus will have no effect on the result of the vote.

Proposal 3: Ratify Selection of Independent Registered Public Accounting Firm

Approval of the proposal to ratify the appointment of Stegman & Company as our independent registered public accounting firm for 2008 requires the affirmative vote of the holders of a majority of the votes present in person or represented by proxy and entitled to be cast at the Annual Meeting. A properly executed proxy marked "ABSTAIN" with respect to such proposal will have the effect of a negative vote. Broker non-votes are not considered as votes entitled to be cast on the matter, and thus will have no effect on the result of the vote. We are not required to obtain the approval of our stockholders to select our independent registered public accounting firm. However, if our stockholders do not ratify the selection of Stegman & Company as our independent registered public accounting firm for the fiscal year ending December 31, 2008, the Audit Committee of our Board of Directors may determine to reconsider its selection.

Who Will Bear the Costs of Soliciting these Proxies?

We will pay all of the costs of soliciting these proxies. Our directors and employees may solicit proxies in person or by telephone, fax or email. We will pay these employees and directors no additional compensation for these services. We will ask banks, brokers and other institutions, nominees

and fiduciaries to forward these proxy materials to their principals and to obtain authority to execute proxies. We will then reimburse them for their expenses.

How Many Shares Must be Present in Order to Hold the Annual Meeting?

The presence, in person or by proxy, of the holders of a majority of the outstanding shares of our common stock is necessary to constitute a quorum at the meeting. If a quorum is not represented at the meeting, the meeting cannot take place. Votes of stockholders of record who are present at the meeting in person or by proxy, abstentions, and broker non-votes are all counted for purposes of determining whether a quorum exists.

PROPOSALS TO BE PRESENTED AT THE ANNUAL MEETING

PROPOSAL NO. 1—ELECTION OF DIRECTOR NOMINEES

The Board currently consists of five members, classified into three classes as follows: Jay M. Moyes and Gregory H. Barnhill constitute the Class I directors, with a term ending at the Annual Meeting to be held in 2010; C. Randal Mills and Felix Gutzwiller constitute the Class II directors, with a term ending at the upcoming Annual Meeting; and Peter Friedli constitutes the Class III director, with a term ending at the Annual Meeting to be held in 2009.

On April 17, 2008, our Board accepted the recommendation of its independent directors to nominate Dr. Mills and Dr. Gutzwiller for re-election at the Annual Meeting for a term of three years to serve until the 2011 Annual Meeting of Stockholders, and until their respective successors have been elected and qualified, or until their earlier death, resignation, retirement or removal.

Unless authority to vote for any of these nominees is withheld, the shares represented by a validly executed proxy will be voted FOR the election as directors of nominees Drs. Mills and Gutzwiller. In the event that any nominee should become unable or unwilling to serve, the shares represented by a validly executed proxy will be voted for the election of such other person as the Board may recommend in his/her place, unless the Board chooses to reduce the number of directors serving on the Board. We have no reason to believe that any nominee will be unable or unwilling to serve as a director.

OUR BOARD OF DIRECTORS RECOMMENDS THE ELECTION OF C. RANDAL MILLS AND FELIX GUTZWILLER AS DIRECTORS, AND PROXIES SOLICITED BY THE BOARD WILL BE VOTED IN FAVOR THEREOF UNLESS A STOCKHOLDER HAS INDICATED OTHERWISE ON THE PROXY.

PROPOSAL NO. 2 — APPROVAL OF AMENDED AND RESTATED 2006 OMNIBUS PLAN

At the Annual Meeting, we will present a proposal to the stockholders to approve the amendment and restatement of our 2006 Omnibus Plan, as contemplated by the Amended and Restated 2006 Omnibus Plan, in the form attached to this Proxy Statement as Appendix A (the "Amended and Restated Plan"). The Amended and Restated Plan is described in further detail below. This description is, however, qualified in its entirety by reference to the Amended and Restated Plan, in the form attached as Appendix A, and you are encouraged to review the Amended and Restated Plan in its entirety.

Pursuant to the Amended and Restated Plan, the aggregate number of shares of common stock available for grants and awards at any time is increased by 600,000 shares, from 850,000 shares as previously provided in the 2006 Omnibus Plan to 1,450,000 shares, and repricing of options will become expressly prohibited without prior shareholder approval. In addition, the Amended and Restated Plan provides that all of our non-employee directors and all employees (including officers) of Osiris or any subsidiary are eligible to receive awards under the Amended and Restated 2006 Omnibus Plan. At April 22, 2008, we had 143 employees (including officers) and four non-employee directors, all of

whom would be eligible for awards under the Amended and Restated Plan. In no event shall any employee or director receive in any calendar year awards under the Amended and Restated Plan involving more than 125,000 shares of our common stock (or 50,000 shares in the case of performance share awards), as adjusted due to a merger, reorganization or similar event, as described below.

In April 2008, the Board approved the Amended and Restated Plan, subject to approval by our stockholders.

Plan Description

We compete with other companies in our peer group and industry for highly qualified employees (including officers) and directors. We believe that our ability to grant stock options and make other equity-based awards is a valuable and necessary compensation tool that helps us to attract, retain and motivate employees and directors and encourages these individuals to devote their best efforts to our business and financial success. In addition, we believe that equity-based awards align the long-term financial interests of employees and directors with the financial interests of our stockholders.

The 2006 Omnibus Plan is, and the Amended and Restated Plan will upon stockholder approval be, the sole equity compensation plan under which we make grants and awards to employees and directors. We formerly made grants under the Amended and Restated 1994 Stock Incentive Plan, but the ability to make awards thereunder has expired. As of April 22, 2008, 129,260 shares remained available for future grants and awards under the 2006 Omnibus Plan. Since the adoption of the 2006 Omnibus Plan in April 2006, we granted equity-based awards thereunder covering an aggregate of 715,990 shares of our common stock. Of this amount, awards for an aggregate of 355,990 shares have been granted to employees (not including executive officers). Information regarding the number of shares covered by grants made to our directors and our four most highly compensated executive officers is included elsewhere in this proxy statement, including in the "Director Compensation Table" and under the heading "Executive Compensation". We believe it is important to have sufficient shares available for equity awards, and therefore have proposed, as part of the Amended and Restated Plan, that the number of shares available for grants and awards be increased by 600,000 from 850,000 to 1,450,000 shares. These shares may be either authorized and unissued shares or issued shares reacquired by Osiris and held in the treasury.

The Compensation Committee of the Board of Directors administers the Amended and Restated Plan. The Compensation Committee has the authority, subject to the terms of the Amended and Restated Plan to determine and designate the employees and directors to whom awards will be made and the terms, conditions and restrictions applicable to each award (including, but not limited to, the option price, any restriction or limitation, any vesting schedule or acceleration thereof, any forfeiture restrictions and performance goals and criteria).

Generally, Section 162(m) of the Internal Revenue Code of 1986, as Amended or the "Code" does not permit publicly held companies like Osiris to deduct compensation paid to certain executive officers to the extent such compensation exceeds \$1 million per officer in any year. However, a performance-based compensation plan that is approved by stockholders at least once every five years may not be subject to this deduction limit. Insofar as Osiris complies with these and other requirements set forth in Section 162(m), amounts paid to executive officers under the Amended and Restated Plan will qualify for a federal tax deduction by Osiris. Under the terms of the Amended and Restated Plan, however, the Compensation Committee retains the authority to issue awards that may not qualify under Section 162(m).

The Amended and Restated Plan contains provisions for making various stock-based awards, including non-qualified stock options, incentive stock options as defined in Section 422 of the Code, stock appreciation rights, restricted stock awards, and performance shares and in some cases performance units. Stock options provide the participant with the right to purchase shares of our

common stock over a specified term and subject to any specified vesting period, at an exercise price established at the time of grant. Stock appreciation rights, or SARs, entitle the holder to payment in the form of shares or cash, with the amount of the payment being equal to the difference between the exercise price established as of the date of grant and the fair market value of our common stock on the date of exercise, multiplied by the number of shares with respect to which the SAR is exercised. Like stock options, SARs typically have a vesting period and specified term. The exercise price for stock options and SARs is determined by the Compensation Committee at the time of grant and must be at least 100% of the then fair market value of our common stock. Restricted Stock awards are awards of shares of common stock made subject to any restrictions that the Committee may determine, and may be made without restriction in the discretion of the Committee. On April 25, 2008, the closing price of our common stock was \$11.73.

Performance share awards give the holder the right to receive a designated number of shares of our common stock at the end of a specified performance period, if specified performance goals are met. Performance units give the holder the right to receive a fixed dollar amount, or equivalent, at the end of a specified performance period if specified performance goals are met. Depending on decisions made by the Compensation Committee, the method of payment of a performance unit can be in common stock, cash, or a combination of both. To satisfy Section 162(m) of the Code, performance goals must be established by the Committee not later than ninety days after the commencement of the applicable performance period and may be based on our stock price, return on assets, return on capital employed, return on shareholders equity, earnings, earnings per share, total shareholder return, sales, costs, satisfaction of product development or other milestones or other goals related to the performance of Osiris, a particular business unit, or in some cases individual performance. Except as provided in any applicable award agreement, when circumstances occur that cause predetermined performance objectives to be an inappropriate measure of performance, the Compensation Committee, in its discretion, may adjust the performance goals. The Compensation Committee will determine whether performance share and performance unit awards are earned, *i.e.*, whether the designated performance goals are achieved during the specified performance period.

The term of the Amended and Restated Plan expires on April 16, 2016, unless extended prior to expiration with the approval of the stockholders. Unless so extended, no stock options may be granted or other awards made under the Amended and Restated Plan on or after April 16, 2016. Awards made prior to expiration remain outstanding in accordance with their terms, notwithstanding expiration of the Amended and Restated Plan.

The aggregate number of shares issuable under the Amended and Restated Plan and the number of shares subject to options and awards made thereunder, and the applicable exercise price, are subject to adjustment in the event of a merger, reorganization, consolidation, recapitalization, dividend (other than a regular cash dividend), stock split, or other change in corporate structure affecting our common stock. Shares subject to stock options or SARs that expire, terminate or are canceled unexercised, shares of restricted stock that have been forfeited to Osiris, and shares that are not issued as a result of forfeiture, expiration or termination of an award, including shares that are not earned or that are forfeited under a performance share award, may be reissued under the Amended and Restated Plan. The shares subject to Stock Appreciation Rights exercised but settled for cash may not, however, be reissued.

If the employment or service with us of a participant is terminated other than as a result of death or disability, then, at any time during the ninety days following, the participant may exercise any options or SARs that were exercisable by him or her on the date of termination, subject to two events that may lead to an extension of such exercise term. If the participant serves as a director of Osiris when his or her employment terminates, then his or her stock options or SARs will not terminate and will continue to vest until he or she ceases to be a director and the holder will then have three months to exercise any stock options or SARs that were exercisable on the date he or she ceased to be a

director. Second, the Compensation Committee may, in its sole discretion, permit a non-qualified stock option holder whose employment with Osiris is terminated to exercise any stock options that were exercisable on the date of termination for up to twelve months after termination, provided that such exercise period does not extend beyond the expiration date of the option as determined on the date of grant. However, if the Compensation Committee determines that the participant's employment or service was terminated as a result of dishonesty or conduct detrimental to our best interest, all outstanding options and SARs will be forfeited on the date of termination. If a participant's employment or service with us is terminated as a result of death or disability, then the participant or his or her estate may generally exercise any option or SAR at any time within one year, but only to the extent exercisable on the date of termination of employment or service.

If a participant's employment or service is terminated for any reason following a performance period, any performance share or performance unit awards that are earned but not yet paid as of the date of termination will be paid to the participant. Unless otherwise determined by the Committee at the time of grant, outstanding performance share and performance unit awards shall be terminated and forfeited upon the participant's termination of employment or service prior to the end of the performance period. If the participant ceases to be employed by us but continues to serve as a director, the foregoing rules shall apply only to the end of the participant's service as a director.

If a participant's employment or service with us is terminated other than as a result of death or disability, any restricted stock awards that are subject to forfeiture restrictions are terminated. If the participant ceases to be employed by us but continues to serve as a director, the foregoing rules shall apply only to the end of the participant's service as a director.

The Committee may, in its discretion but subject to the compliance requirements set forth in Section 409A of the Code, provide in any award agreement or determine at any time following the grant that exercisability shall be accelerated, in whole or in part, in the event of a participant's retirement, death, disability or termination of service on the Board. The Compensation Committee may at any time amend, discontinue, or terminate all or any part of the Plan. However, unless otherwise required by law, the rights of a participant with respect to any grant or award prior to the amendment, discontinuance or termination may not be impaired without the consent of such participant. Osiris will seek the approval of our stockholders for any amendment if such approval is necessary to comply with applicable law or the Rules of the NASDAQ Global Market or other relevant regulatory requirement.

Federal Tax Consequences

The Federal income tax discussion set forth below is intended for general information only. State and local income tax consequences are not discussed, and may vary from locality to locality.

Non-Qualified Options. Under present United States Treasury regulations, an employee who is granted a non-qualified stock option will not realize taxable income at the time the stock option is granted. In general, an optionee will be subject to tax for the year of exercise on an amount of ordinary income equal to the excess of the fair market value of the shares on the date of exercise over the option exercise price, and Osiris will receive a corresponding deduction. Income tax withholding requirements apply upon exercise. The optionee's basis in the shares so acquired will be equal to the option exercise price plus the amount of ordinary income upon which he or she is taxed. Upon subsequent disposition of the shares, the optionee will realize capital gain or loss, long-term or short-term, depending upon the length of time the shares are held after the stock option is exercised.

Incentive Options. An optionee is not taxed at the time an incentive option is granted. The tax consequences upon exercise and later disposition generally depend upon whether the optionee was an employee of Osiris or a subsidiary at all times from the date of grant until three months preceding exercise (one year in the case of disability) and on whether the optionee holds the shares for more than one year after exercise and two years after the date of grant of the stock option.

If the optionee satisfies both the employment rule and the holding rule, for regular tax purposes the optionee will not realize income upon exercise of the stock option and Osiris will not be allowed an income tax deduction at any time. The difference between the option exercise price and the amount realized upon disposition of the shares by the optionee will constitute a long-term capital gain or a long-term capital loss, as the case may be.

If the optionee meets the employment rule but fails to observe the holding rule (a "disqualifying disposition"), the optionee generally recognizes as ordinary income, in the year of the disqualifying disposition, the excess of the fair market value of the shares at the date of exercise over the option exercise price. Any excess of the sales price over the fair market value at the date of exercise will be recognized by the optionee as capital gain (long-term or short-term depending on the length of time the stock was held after the stock option was exercised). If, however, the sales price is less than the fair market value at the date of exercise, then the ordinary income recognized by the optionee is generally limited to the excess of the sales price over the option exercise price. In both situations, the tax deduction allowable to Osiris is limited to the amount of ordinary income recognized by the optionee. Under current Internal Revenue Service guidelines, Osiris is not required to withhold any Federal income tax in the event of a disqualifying disposition.

Different consequences will apply for an optionee subject to the alternative minimum tax.

Restricted Stock, Performance Share Awards and Performance Units. A participant normally will not realize taxable income upon the award of restricted stock issued subject to restrictions or the grant of performance share or performance unit awards. When any restrictions, conditions and requirements established with respect to such an award have been satisfied and, in the case of performance share or performance unit awards, the payment amount determined, any cash and the fair market value of any shares of our common stock received, or not subject to a substantial risk of forfeiture, whichever occurs earlier, will constitute ordinary income to the participant in the year in which paid or when no longer subject to a substantial risk of forfeiture, and Osiris will be entitled to a deduction in the same amount. A participant will, however, generally realize ordinary income in an amount equal to the fair market value of any award made without restriction at the time of grant, such as an award of restricted stock without restriction. Osiris will generally be entitled to a deduction in the same amount.

Stock Appreciation Rights. A participant normally will not realize any income at the time of grant of a SAR. Upon the exercise of a SAR, any cash received and the fair market value on the exercise date of any shares of common stock received would constitute ordinary income to the participant, and Osiris would be entitled to a deduction in the amount of such income at the time of exercise.

Deductibility of Executive Compensation. Section 162(m) of the Code disallows a tax deduction to publicly held companies for compensation paid to the Chief Executive Officer and the four most highly compensated executive officers, other than the Chief Executive Officer, to the extent that total compensation exceeds \$1 million per covered officer in any taxable year. The limitation applies only to compensation which is not considered to be performance-based. Compensation deemed paid by Osiris in connection with disqualifying dispositions of incentive stock option shares or exercises of non-qualified stock options granted under the Amended and Restated Plan qualifies as performance-based compensation for purposes of Section 162(m) if the grants were made by a committee of "outside directors" as defined under Section 162(m). We anticipate that any compensation deemed paid by us in connection with disqualifying dispositions of incentive stock option shares or exercises of non-qualified stock options will qualify as performance-based compensation for purposes of Section 162(m) and will not have to be taken into account for purposes of the \$1 million limitation. Accordingly, all compensation deemed paid with respect to those stock options should be deductible by us without limitation under Section 162(m).

Impact of Section 409A. Section 409A of the Code applies to compensation vested or deferred after December 31, 2004. Generally speaking, an amount is "vested" on the date that the employee's or director's right to receive the amount is no longer conditioned on the employee's or director's performance of substantial future services, and "deferred compensation" is compensation earned currently, the payment of which is deferred to a later taxable year. The provisions of the Amended and Restated Plan have been drafted to be in good faith compliance with Section 409A as interpreted under the guidance currently available.

THE BOARD OF DIRECTORS HAS DETERMINED THAT APPROVAL OF THE AMENDED AND RESTATED 2006 OMNIBUS PLAN IS IN THE BEST INTEREST OF OSIRIS AND ITS STOCKHOLDERS AND RECOMMENDS THAT YOU VOTE " FOR " THE APPROVAL OF THIS PROPOSAL NO. 2.

PROPOSAL NO. 3—INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Our Board and management are committed to the quality, integrity and transparency of the financial reports. Independent auditors play an important part in our system of financial control. In accordance with the duties set forth in its written charter, the Audit Committee of our Board has appointed Stegman & Company as our independent registered public accounting firm for the fiscal year ending December 31, 2008. A representative of Stegman & Company is expected to attend this year's Annual Meeting, to be available to respond to appropriate questions from stockholders, and have the opportunity to make a statement if he or she desires to do so.

If the stockholders do not ratify the appointment of Stegman & Company, the audit committee may reconsider its selection, but is not required to do so. Notwithstanding the proposed ratification of the appointment of Stegman & Company by the stockholders, the Audit Committee, in its discretion, may direct the appointment of a new independent registered public accounting firm at any time during the year without notice to, or the consent of, the stockholders, if the Audit Committee determines that such a change would be in the Company's best interests and the best interests of its stockholders.

The Board proposes that the stockholders ratify the appointment of Stegman & Company to serve as our independent registered public accounting firm for our fiscal year ending December 31, 2008, although such ratification is not required under Delaware law or our Amended and Restated Certificate of Incorporation or Amended and Restated By-Laws.

Audit and Non-Audit Fees

The following is a summary of the fees charged to us by Stegman & Company for services rendered during the last two fiscal years:

Type of Fee	Fiscal Year Ended 12/31/07	Fiscal Year Ended 12/31/06
Audit Fees	\$ 138,909	\$ 95,813
Audit-Related Fees	1,400	115,558
Tax Fees	10,550	7,500
All Other Fees	—	—
Total	\$ 150,859	\$ 218,871

Audit Fees—Fees for the audit of our annual financial statements included in our report on Form 10-K, and reviews of our quarterly financial statements included in our reports on Form 10-Q.

Audit Related Fees—Fees for other audit related services, including other SEC filings, comfort letters and consents.

Tax Fees —Fees for preparation and review of tax returns and tax consultations.

All Other Fees —We did not engage Stegman & Company to perform any services other than those listed separately above.

Pre-Approval Policy

The Audit Committee Charter provides that all audit and non-audit accounting services that are permitted to be performed by the Company's principal independent registered public accounting firm under applicable rules and regulations must be pre-approved by the Audit Committee or by designated independent members of the Audit Committee, other than with respect to de minimis exceptions permitted under Section 202 of the Sarbanes-Oxley Act of 2002. Following adoption of the Audit Committee Charter, all services performed by Stegman & Company have been pre-approved in accordance with the Audit Committee Charter.

Prior to or as soon as practicable following the beginning of each fiscal year, a description of audit, audit-related, tax, and other services expected to be performed by the independent registered public accounting firm in the following fiscal year is presented to the Audit Committee for approval. Following such approval, any requests for audit, audit-related, tax, and other services not presented and pre-approved must be submitted to the Audit Committee for specific pre-approval and cannot commence until such approval has been granted. Normally, pre-approval is provided at regularly scheduled meetings. However, the authority to grant specific pre-approval between meetings, as necessary, may be delegated to one or more members of the Audit Committee who are independent directors. In the event such authority is so delegated, the full Audit Committee must be updated at the next regularly scheduled meeting with respect to any services that were granted specific pre-approval by delegation. During 2007, the Audit Committee has functioned in conformance with these procedures.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE " FOR " THE RATIFICATION OF THE APPOINTMENT OF STEGMAN & COMPANY AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM, AND PROXIES SOLICITED BY THE BOARD WILL BE VOTED IN FAVOR OF SUCH RATIFICATION UNLESS A STOCKHOLDER HAS INDICATED OTHERWISE ON THE PROXY.

STOCKHOLDER PROPOSALS AND NOMINATIONS FOR DIRECTOR

In order to be eligible for inclusion in our proxy materials for next year's Annual Meeting of Stockholders, any stockholder proposal to take action at such meeting must be received at the offices of Osiris Therapeutics, Inc. at 7015 Albert Einstein Drive, Columbia, Maryland 21046, no later than December 30, 2008. Any such proposal shall be subject to the requirements of the proxy rules adopted under the Securities Exchange Act of 1934.

Our Amended and Restated By-Laws require advance notice of business to be brought before a stockholders meeting, including nominations of persons for election or directors. Generally, notice to our Corporate Secretary must be given no later than one hundred twenty (120) days prior to the day we released its proxy statement in connection with our previous year's annual meeting; provided, however, that in the event that the date of the annual meeting is changed by more than thirty (30) days from the date of the prior year's annual meeting, notice by the stockholder, to be timely, must be so delivered no later than ninety (90) days prior to the newly announced date that we will mail our proxy statement; and (b) with respect to an election to be held at a special meeting of the stockholders for the election of directors, the close of business on the tenth day following the date on which the notice of the meeting was mailed or such public disclosure was made, whichever occurs first.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of April 25, 2008 for (a) the executive officers named in the Summary Compensation Table on page of this proxy statement, (b) each of our executive officers and directors and director nominees, (c) all of our current directors and executive officers as a group and (d) each stockholder that we know to be the beneficial owner of more than 5% of our common stock. Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. We deem shares of common stock that may be acquired by an individual or group within 60 days of April 25, 2007 pursuant to the exercise of options or warrants to be outstanding for the purpose of computing the percentage ownership of such individual or group, but those shares are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table. Except as indicated in footnotes to this table, we believe that the stockholders named in this table have sole voting and investment power with respect to all shares of common stock shown to be beneficially owned by them based on information provided to us by these stockholders. Percentage of ownership is based on 33,739,794 shares of common stock outstanding on April 25, 2008.

Name and Address of Beneficial Owners	Number	Percent
Executive Officers and Directors		
Gregory H. Barnhill	12,421	—
Harry E. Carmitchel, Jr.(1)	88,250	—
Cary J. Claiborne(2)	75,000	—
Lode Debrabandere(3)	22,500	—
Earl R. Fender(4)	42,500	—
Peter Friedli(5)	16,050,039	47.6%
Felix Gutzwiller	49,500	—
Philip R. Jacoby, Jr.(6)	7,000	—
C. Randal Mills(7)	400,000	1.2%
Jay M. Moyes	4,500	—
Michelle L. Williams(8)	14,082	—
All directors and executive officers as a group (11 persons)	16,765,792	49.7%
Other 5% Stockholders		
Venturetec, Inc. c/o Osiris Therapeutics, Inc. 7015 Albert Einstein Drive Columbia, Maryland 21046	3,963,629	11.7%
Thomas Schmidheiny(9) 23 Fraubourg de'Hopital 2000 Neuchatel, Switzerland	3,053,267	9.0%
BIH SA(9) 23 Fraubourg de'Hopital 2000 Neuchatel, Switzerland	2,658,113	7.9%

- (1) Includes 82,000 shares owned directly by Mr. Carmitchel and 6,250 shares issuable upon the exercise of options.
- (2) Mr. Claiborne's employment terminated in November 2007.
- (3) Includes 22,500 shares issuable upon exercise of options.

- (4) Includes 42,500 shares issuable upon exercise of options. Mr. Fender's employment terminated on April 23, 2008.
- (5) Includes 9,870,371 shares owned directly by Mr. Friedli; 1,000,000 shares issuable upon the exercise of outstanding warrants; assuming the warrants are exercised in full for cash; 205,423 shares issuable upon the conversion of a certain Convertible Promissory Note, which may be converted at the discretion of the holder; 625 shares owned by Margrit Friedli, Mr. Friedli's mother; 3,963,629 shares owned by Venturetec, Inc.; 1,000,000 shares owned by US Venture 05, Inc.; and 10,000 shares owned by Joyce Ltd. Mr. Friedli is the President of Venturetec, Inc. and US Ventures 05, Inc. and the owner of Joyce, Ltd.
- (6) Includes 5,625 shares owned directly by Mr. Jacoby and 1,375 shares issuable upon the exercise of options.
- (7) Includes 123,000 shares owned directly by Dr. Mills; 2,000 shares owned in custodial accounts where Dr. Mills is the custodian; and 275,000 shares issuable upon the exercise of options.
- (8) Includes 14,082 shares issuable upon exercise of options.
- (9) Includes 395,154 shares owned directly by Mr. Schmidheiny; 2,408,944 shares owned by BIH, SA; and 249,169 shares issuable upon the conversion of a certain Convertible Promissory Note owned by BIH SA, which may be converted at the discretion of the holder. Mr. Schmidheiny is the Chairman and controlling shareholder of BIH, SA.

MANAGEMENT

The Board of Directors

Our Amended and Restated Certificate of Incorporation and Amended and Restated By-Laws provide that our business is to be managed by or under the direction of our Board of Directors (the "Board"). Our Board is divided into three classes for purposes of election. One class is elected at each annual meeting of stockholders to serve for a three-year term and until their respective successors are duly elected and qualified. Our Board currently consists of five members, classified into three classes as follows: Gregory H. Barnhill and Jay M. Moyes, constitute a class with a term ending at the Annual Meeting of Stockholders in 2010 (the "Class I directors"); C. Randal Mills, Ph.D., and Felix Gutzwiller, M.D., Dr.P.H. constitute a class with a term which expires at the Annual Meeting (the "Class II directors"); and Peter Friedli constitutes a class with a term ending at the Annual Meeting of Stockholders in 2009 (the "Class III director"), and in each case, until their respective successors have been duly elected and qualified or until their earlier death, resignation, retirement or removal.

On April 17, 2008, our Board, upon the recommendation and with the approval of our Independent directors determined to nominate Drs. Mills and Gutzwiller for election at the Annual Meeting for a term of three years to serve until the 2011 Annual Meeting of Stockholders, and until their respective successors have been elected and qualified, or until their earlier death, resignation, retirement or removal.

Set forth below are the names of the persons nominated as directors and directors whose terms do not expire this year, their ages, the offices held by them at Osiris, if any, their principal occupations or employment for at least the past five years, the length of their tenure as directors and the names of other public companies in which such persons hold directorships:

Peter Friedli, age 54, is our Chairman of the Board and was co-founder of Osiris. Mr. Friedli has been a director of Osiris since January 1996, except for the period between February and June 2004. He has since 1996 been a principal of the investment-banking firm Friedli Corporate Finance, Inc., a leading Swiss venture capital firm which has made significant investments in the biotechnology industry and has been the primary source of financing for Osiris. Mr. Friedli is also President of New

Venturetec Ltd., a Swiss publicly traded investment company. Mr. Friedli has extensive experience as an independent investment manager in venture capital and has specialized in investments domiciled in the United States in the areas of biotechnology and technology. Prior thereto, he worked in the field of international management consulting for service and industrial companies in Europe and the United States. Mr. Friedli is a director of Invenda, Inc., a publicly traded provider of interactive database marketing technologies and services. He also serves as a director in certain private companies.

C. Randal Mills, age 36, is our President and Chief Executive Officer and joined us in this capacity in July 2004. Dr. Mills has also been a member of our Board since July 2004. Prior to joining Osiris, Dr. Mills was an executive officer of Regeneration Technologies, Inc. ("RTI") (NASDAQ—RTIX). Dr. Mills served in several leadership positions at RTI from its formation in 1998 until 2004, including Vice President of Business Development and Vice President of Operations and R&D. Prior to RTI, Dr. Mills was a member of the founding management team of the University of Florida Tissue Bank, Inc., the predecessor company to RTI. Dr. Mills received a bachelor's degree in microbiology and cell science and a Ph.D. in drug development, both from the University of Florida.

Felix Gutzwiller, M.D., Dr.P.H., age 60, has been a member of our Board since 2003, and is Professor and Chairman of the Department of Public Health of the University of Zurich Medical School. Dr. Gutzwiller is also an elected member of the Swiss Parliament. Dr. Gutzwiller received a medical degree from the University of Basel in 1974 and did his post-graduate training at both Harvard University and Johns Hopkins University. He received his Dr.P.H. from the Johns Hopkins University School of Hygiene and Public Health in 1980. Dr. Gutzwiller has received many honors and awards over the years in the health profession.

Jay M. Moyes, age 54, has been a member of our Board since the completion of our initial public offering in August 2006. Mr. Moyes has served as the Chief Financial Officer of Myriad Genetics, Inc. from June 1996 until his retirement in November 2007, and served as Myriad's Vice President of Finance from July 1993 until July 2005. From 1991 to 1993, Mr. Moyes served as Vice President of Finance and Chief Financial Officer of Genmark, Inc. Mr. Moyes held various positions with the accounting firm of KPMG LLP from 1979 through 1991, most recently as a Senior Manager. He holds an M.B.A. degree from the University of Utah, a B.A. degree in economics from Weber State University, and is a Certified Public Accountant. Mr. Moyes has also served as a member of the Board of Trustees of the Utah Life Science Association from 1999 through 2006.

Gregory H. Barnhill, age 54, has been a member of our Board since the completion of our initial public offering in August 2006. Mr. Barnhill has served as a Partner and Member of the board of directors of Brown Advisory Securities, LLC since 2003. Mr. Barnhill is also a member of numerous philanthropic and corporate boards. From 1975 to 2003, Mr. Barnhill held various positions with Deutsche Bank Securities, Inc., most recently as Managing Director and Regional Manager, North American Equity Sales. He holds a B.A. degree in economics from Brown University. Mr. Barnhill holds NYSE/NASD licenses series 7, 63, 9 and 10 as well as life, health and variable annuities insurance licenses.

Our Board has determined that the following members of the Board qualify as "independent" under the definition promulgated by The NASDAQ Stock Market, Inc: Mr. Moyes, Dr. Gutzwiller, and Mr. Barnhill. Furthermore, our Board has determined that none of the members of the two standing committees of the Board has any material relationship with us (either directly or as a partner, stockholder or officer of an organization that has a relationship with us), and therefore, each committee is "independent" within the meaning of our independence standards.

Committees of the Board of Directors and Meetings

As described below, our Board has an Audit Committee and a Compensation Committee. The Board does not have a Nominating Committee, but all nominations of Directors require approval by a majority of our independent directors.

Meeting Attendance. During the year ended December 31, 2007 there were twelve meetings of the Board, and the various committees of the Board met a total of five times. During 2007, no then-incumbent director attended fewer than 75% of the total number of meetings of the Board and committees on which the director served. We do not have a policy on director attendance at Annual Meetings, but all of our directors are invited and encouraged to attend Annual Meetings. All of our directors attended our 2007 Annual Meeting.

Audit Committee. Our Audit Committee met four times during 2007. This committee currently has three members, Mr. Moyes (Chairman), Dr. Gutzwiller and Mr. Barnhill. Our Audit Committee has the authority to retain and terminate the services of our independent registered public accounting firm, reviews annual financial statements, considers matters relating to accounting policy and internal controls and reviews the scope of annual audits. All members of the Audit Committee satisfy the current independence standards promulgated by the Securities and Exchange Commission and by The NASDAQ Stock Market, Inc., as such standards apply specifically to members of audit committees. The Board has determined that Mr. Moyes is an "audit committee financial expert," as defined by the rules and regulations of the Securities and Exchange Commission. None of the members of the Audit Committee, or the proposed members of the Audit Committee, have participated in the preparation of any of our financial statements at any time during the last three fiscal years. Please also see the report of the Audit Committee set forth elsewhere in this proxy statement.

Compensation Committee. Our Compensation Committee met one time during 2007. This committee currently has two members, Dr. Gutzwiller (Chairman) and Mr. Barnhill. Our Compensation Committee administers our stock plans and reviews, approves and makes recommendations on our compensation policies, practices and procedures to ensure that legal and fiduciary responsibilities of the Board are carried out and that such policies, practices and procedures contribute to our success. The Compensation Committee is also responsible for recommending to the independent members of our Board the compensation of our Chief Executive Officer and our other officers, and conducts its decision-making process with respect to that issue without the Chief Executive Officer present. All members of the Compensation Committee qualify as "independent" under the definition promulgated by The NASDAQ Stock Market, Inc. Please also see the report of the Compensation Committee set forth elsewhere in this proxy statement.

The foregoing summary of our corporate governance policies is qualified in its entirety and subject to the terms of such policies as modified by the Board from time to time. The following corporate governance documents are publicly available on the Investor Relations—Corporate Governance section of our website at <http://www.osiris.com> :

- Corporate Governance Principles
- Corporate Code of Conduct and Ethics
- Audit Committee Charter
- Compensation Committee Charter
- Code of Business Conduct and Ethics for Members of the Board of Directors and Executive Officers
- Insider Trading Policy

Compensation Committee Interlocks and Insider Participation. During 2007, our Compensation Committee consisted of two members, Dr. Gutzwiller (Chairman) and Mr. Barnhill. None of our executive officers, officers or employees is a member of the Compensation Committee, nor do any of our executive officers serve as a member of the board of directors or compensation committee (or other board committee performing equivalent functions or, in the absence of any such committee, the entire board of directors) of any entity that has one or more executive officers serving as a member of our Board or Compensation Committee.

Director Nominations

We do not have a formally constituted nominating committee but instead our Board on July 19, 2006 adopted Corporate Governance Principles which provide for the nomination of persons to serve on our Board upon the approval of a majority of our independent directors. The qualifications of recommended candidates will be also be reviewed and approved by the full Board. Our Board, through the adoption of the Corporate Governance Principles, has indicated its preference for this approach, which allows all of our Board members to contribute more readily to the nomination process. Stockholders may recommend director candidates for inclusion by the Board in the slate of nominees recommended to stockholders for election as described below.

The process followed by our Board and independent directors to identify and evaluate potential candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by independent directors and the Board. In considering whether to recommend any candidate for inclusion in the Board's slate of recommended director nominees, the Board and the independent directors apply the standards established for service on the Board in the Corporate Governance Principles, as follows: directors should possess the highest personal and professional ethics, integrity and values, and be committed to representing the long-term interests of the stockholders; they must also have an inquisitive and objective perspective, practical wisdom and mature judgment; the selection of director nominees should further an objective of having a board representing diverse experience at policy-making levels in business, government, education and technology, and in areas that are relevant to our global activities; directors must be willing to devote sufficient time to carrying out their duties and responsibilities effectively, and should be committed to serve on the Board for an extended period of time; directors should offer their resignation in the event of any significant changes in their personal circumstances, including a change in their principal job responsibilities. The Board does not believe that arbitrary term limits on directors' service are appropriate, nor does it believe that directors should expect to be re-nominated annually. The Board and the independent directors do not assign specific weights to particular criteria and no particular criterion is necessarily applicable to all prospective nominees. Although we do not have a specific policy with respect to the nomination of directors by stockholders, nominations made by stockholders will be considered. We believe that it is not necessary to have a policy for director nominations by stockholders because the Board, including the independent directors, is able to effectively locate and evaluate potential candidates for nomination to the Board due to the directors' intimate knowledge of our business and the life science industry. Stockholders may communicate directly with the Board by written communication as described below.

Stockholder Communications to the Board

Generally, stockholders who have questions or concerns should contact our Investor Relations department at (443) 545-1800. However, any stockholders who wish to address questions regarding our business directly to the Board, or any individual director, may do so by sending a written communication addressed to: Corporate Secretary, 7015 Albert Einstein Drive, Columbia, Maryland 21046. All such communications will be compiled by the Corporate Secretary and submitted to the

Board or the individual director so designated on a periodic basis. The Board has instructed the Corporate Secretary, prior to forwarding any correspondence, to review such correspondence and, in his discretion, not to forward items if they are deemed of a commercial, irrelevant or frivolous nature or otherwise inappropriate for consideration by the Board. These screening procedures are designed to assist the Board in reviewing and responding to stockholder communications in an appropriate manner. All communications directed to the Audit Committee in accordance with the procedures set forth in this paragraph that relate to questionable accounting or auditing matters will be forwarded promptly and directly to the Chairman (or another member) of the Audit Committee.

Compensation of Directors

All directors are reimbursed for their out-of-pocket expenses incurred in attending meetings. Each director who is not an employee is eligible to receive compensation from us for his or her services as a member of our Board or any of its standing committees. In determining compensation for directors, the decision is generally guided by three goals: compensation should fairly pay the directors for work required of directors of a company of our size and scope; compensation should align directors' interests with the long-term interests of stockholders; and the structure of the compensation should be simple, transparent and easy for stockholders to understand. Consistent with these goals, in 2007, our non-employee directors received a retainer in the form of an award of 2,500 shares of our common stock plus an additional common stock award for up to 2,500 shares based on Board participation and performance. Directors were provided the option to receive all or a portion of their award in cash or shares.

The following table summarizes compensation paid to our non-employee directors during 2007.

Director Compensation

Name	Fees Earned or Paid in Cash(\$)	Stock Awards(\$) (1)	Option Awards (\$)	All Other Compensation(\$)	Total(\$)
Gregory Barnhill	—	59,050	—	—	59,050
Peter Friedli	—	118,100	—	—	118,100
Felix Gutzwiller	35,430	82,670	—	—	118,100
Jay Moyes	23,620	35,430	—	—	59,050

- (1) Reflects the grant of awards in February 2007 under our 2006 Omnibus Plan for 5,000 shares of common stock to each of Peter Friedli and Felix Gutzwiller and 2,500 shares of common stock to Gregory Barnhill and Jay Moyes for their service on our Board in 2006. The fair value of these shares at the time of grant was \$23.62 per share and the directors were provided with the option of receiving their award in shares, cash or a combination of cash and shares.

Options granted during 2007 to any named executive officers serving on the Board are reported under "Executive Compensation—Option Grants in Last Fiscal Year."

Executive Officers

The following discussion sets forth certain information regarding our executive officers, with the exception of C. Randal Mills, Ph.D., whose information is set forth above under "Management—The Board of Directors."

Harry E. Carmitchel, age 57, is our Chief Operating Officer and joined us in this capacity in September 2004. Mr. Carmitchel has over 20 years of general management and operations experience in the medical field. Prior to joining us, Mr. Carmitchel was a Principal with the Pacific Consulting Group for four years, where he specialized in corporate turnarounds. Prior to this time, Mr. Carmitchel was a General Manager with McQuay International and spent eight years as President of the Medical

Division for Stryker Corporation. Previously, he also served as Vice President of Operations and Vice President of Marketing for Everest and Jennings, Inc. Mr. Carmitchel earned an M.B.A. from the University of Southern California and a Bachelors degree in electrical engineering from the General Motors Institute.

Philip R. Jacoby, Jr., age 56, is our Interim Chief Financial Officer and Corporate Secretary and joined us in April 2005. Mr. Jacoby previously served as our Corporate Controller and Chief Accounting Officer. From 1999 to 2004, Mr. Jacoby served as Vice President and Corporate Controller for FTI Consulting, Inc., a global business financial and economic consulting firm. Mr. Jacoby began his career with Arthur Andersen & Co. and earned his undergraduate degree in business and public administration from the University of Maryland.

Earl R. Fender, age 60, was, until April 23, 2008 when his employment with us terminated, our Vice President and General Manager for Orthopedics and joined us in this capacity in June 2006. Prior to joining us, Mr. Fender served for over ten years with DePuy Spine, a Johnson & Johnson company, holding positions as Vice President, Sales, U.S. President, and finally as Worldwide President. Most recently Mr. Fender served as Worldwide Vice President, Public Policy, for the five global businesses of DePuy, Inc., leading and shaping DePuy's response to key external environmental issues. Mr. Fender's academic credentials include a B.A. in Business Administration from Thiel College and the completion of Harvard Business School's Program for Management Development.

Lode Debrabandere, age 43, is our Vice President and General Manager for Inflammatory Diseases and joined us in this capacity in July 2006. Prior to joining us, Dr. Debrabandere served for over four years with Bristol-Myers Squibb as Vice President for Strategic Marketing for Neuroscience and Infectious Diseases. Prior to that, Dr. Debrabandere led the Marketing department of UCB Pharma Inc., focusing in the areas of allergy/respiratory and neurology and before that held various positions in the Research and Development Department at UCB Pharma, including the management of clinical development activities in the U.S., Europe, and Japan. Dr. Debrabandere earned an M.B.A., a Ph.D. in pharmaceutical sciences, toxicology, and a Pharm. D. degree in pharmaceutical sciences, all from the University of Leuven, Belgium.

Michelle LeRoux Williams, Ph.D., age 34, is our Vice President of Development and joined Osiris in October 2001. Dr. Williams previously served as Director of Orthopedics and in that role was responsible for the development of Osteocel from initial concept through market launch. Prior to joining us, Dr. Williams completed an NIH postdoctoral fellowship in tissue engineering at Columbia University, evaluating cellular constructs for the repair and regeneration of cartilage in arthritis patients. Dr. Williams earned a bachelors degree in mechanical engineering from Rice University and a Ph.D. in biomedical engineering from Duke University.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Overview

The Compensation Committee of the Board is composed entirely of independent directors as such term is defined by the rules of The NASDAQ Stock Market, Inc. The Compensation Committee, which consists of Dr. Felix Gutzwiller (Chairman) and Mr. Gregory Barnhill, is responsible for establishing and administering our executive compensation policies. This Compensation Discussion and Analysis addresses the material elements of compensation of our named executive officers.

General Compensation Policy

The objectives of our executive compensation programs are to:

- Provide a competitive compensation package that will attract and retain superior talent and reward performance.
- Support the achievement of desired company performance.
- Align the interests of executives with the long-term interests of stockholders through award opportunities that can result in ownership of common stock, thereby encouraging the achievement of superior results over an extended period.

Elements of Executive Officer Compensation

Our executive officer compensation program is comprised of: (i) base salary, which is set on an annual basis; (ii) annual incentive bonuses, which are based on overall company performance and the achievement of management objectives; and (iii) long-term incentive compensation in the form of periodic stock option or share equity grants, with the objective of aligning the executive officers' long-term interests with those of the stockholders and encouraging the achievement of superior results over an extended period.

The Compensation Committee performs annual reviews of executive compensation to confirm the competitiveness of the overall executive compensation packages as compared with companies who compete with us to attract and retain employees.

In considering compensation of executives, one of the factors the Compensation Committee takes into account is the anticipated tax treatment of various components of compensation. We do not believe Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"), which generally disallows a tax deduction for certain compensation in excess of \$1 million to any of our named executive officers, will have a material effect on us. The Compensation Committee has considered the requirements of Section 162(m) of the Code and its related regulations. It is the Compensation Committee's present policy to consider measures to preserve the full deductibility of executive compensation, to the extent consistent with its other compensation objectives.

Management's Role in Determining Executive Compensation

The Compensation Committee approves the final determination of compensation for all the executive officers. Our Chief Executive Officer provides our Compensation Committee with recommendations regarding compensation for the other named executive officers. Our Compensation Committee reviews such recommendations and approves annual compensation for named executive officers, consisting of base salary and any annual cash incentive (discussed below), on an annual basis. Our Compensation Committee may request additional information and analysis and ultimately determines in its discretion, based on its own analysis and judgment and the recommendations of the Chief Executive Officer, whether to approve any recommended changes in compensation.

Base Salary

The Compensation Committee reviews base salary levels for our executive officers on an annual basis. Base salaries are set competitively relative to companies in the biotechnology industry and other comparable companies. In determining salaries, the Compensation Committee also takes into consideration individual experience and performance, and seeks to compare the salaries paid by companies similar in size and stage of development. Within this comparison group, we seek to make comparisons to executives at a comparable level of experience, who have a comparable level of responsibility and expected level of contribution to their company. In setting base salaries, the

Compensation Committee also takes into account the intense level of competition among biotechnology companies to attract talented personnel.

Our goal is to pay each named executive officer a base salary sufficient to remain competitive in the market. On February 4, 2008, the Compensation Committee of the Board approved the 2008 annual base salaries for each of the named executive officers, effective February 1, 2008 as follows:

	Name and Position	2008 Base Salary	2007 Base Salary
C. Randal Mills	President & Chief Executive Officer	\$ 425,000	\$ 400,000
Harry E. Carmitchel	Chief Operating Officer(1)	180,000	175,000
Cary J. Claiborne(2)	Former Chief Financial Officer	—	190,000
Philip R. Jacoby, Jr.	Interim Chief Financial Officer	155,000	135,000
Earl R. Fender(3)	Vice President and General Manager for Orthopedics	255,000	235,000
Lode Debrabandere	Vice President and General Manager for Inflammatory Diseases	240,000	230,000
Michelle LeRoux Williams	Vice President of Development	225,000	160,000

- (1) Reflective of Mr. Carmitchel's less than full-time employment status, as described in his employment agreement, his base salary represents 75% of a full-time base salary of \$240,000.
- (2) Mr. Claiborne's employment terminated on November 23, 2007.
- (3) Mr. Fender's employment terminated on April 23, 2008.

The 2007 base salaries for Dr. Mills, Messrs. Carmitchel, Jacoby and Fender, and Drs. Debrabandere and Williams are consistent with the range of salaries received by their respective counterparts in companies in the biotechnology industry and other comparable companies.

Annual Incentive Bonuses

Bonuses for executive officers are discretionary and are awarded on an annual basis by the Compensation Committee after fiscal year end. Bonus amounts are determined based upon overall company performance, together with a subjective review of the individual executive officer's performance over the past fiscal year and achievement of management objectives or goals related to the executive officer's areas of responsibility. The Compensation Committee believes Dr. Mills has managed Osiris well in a challenging business climate and has continued to move it towards its long-term objectives. Consistent with this assessment, Dr. Mills was awarded a bonus of \$90,000 for the year ending December 31, 2007. The range of bonuses paid for our named executive officers on the basis of 2007 performance was \$10,000 to \$90,000.

Exercise of Discretion in Executive Compensation Decisions

Subject to the terms of any binding agreements that provide otherwise, the Compensation Committee has complete discretion to withhold payment pursuant to any of our incentive compensation plans irrespective of whether we or our executive officers have successfully met the goals set under these plans. The Compensation Committee also typically has the authority to grant payment under any of the plans despite the non-attainment by us or our executive officers of the pre-established goals. For 2007, the Compensation Committee did not exercise such discretion in the payment of awards to our executive officers.

Long-term Incentive Compensation

Long-term incentive compensation, including stock options, allows the executive officers to share in any appreciation in the value of our common stock. The Compensation Committee believes that stock option participation aligns executive officers' interests with those of the stockholders. The amounts of the awards are designed to reward past performance and create incentives to meet long-term objectives. Awards are made at a level calculated to be competitive within the biotechnology industry, as well as a broader group of companies of comparable size and complexity. In determining the amount of each grant, the Compensation Committee takes into account the number of shares held by the executive prior to the grant.

- We granted stock options to Dr. Mills to purchase 100,000 shares at a weighted average exercise price of \$23.62 in 2007 and options to purchase 100,000 shares at a weighted average price of \$0.40 in 2006, compared to 150,000 shares at a weighted average exercise price of \$0.40 in the year ended December 31, 2004. Dr. Mills did not receive any stock option grants in the year ended December 31, 2005. Dr. Mills also received a grant of 125,000 restricted stock units in 2004 that vested in September 2005 and were converted into common stock.
- We granted stock options to Mr. Claiborne to purchase 20,000 shares at a weighted average price of \$23.62 in 2007 and 15,000 shares at a weighted average exercise price of \$0.40 in 2006, compared to 60,000 shares at a weighted average exercise price of \$0.40 in the year ended December 31, 2004. Mr. Claiborne did not receive any stock option grants in the year ended December 31, 2005. The stock options granted to Mr. Claiborne in 2007 were forfeited upon termination of his employment in November 2007.
- We granted stock options to Mr. Carmitchel to purchase 25,000 shares at a weighted average exercise price of \$23.62 in 2007 and 25,000 shares at a weighted average exercise price of \$0.40 in 2006, compared to 100,000 shares at a weighted average exercise price of \$0.40 in the year ended December 31, 2004. Mr. Carmitchel did not receive any stock option grants in the year ended December 31, 2005.
- We granted stock options to Mr. Fender to purchase 20,000 shares at a weighted average exercise price of \$23.62 in 2007 and 75,000 shares at a weighted average exercise price of \$6.84 in 2006. The options granted to Mr. Fender in 2007 and the unvested options granted to him in 2006 were forfeited upon termination of his employment in April 2008.
- We granted stock options to Dr. Debrabandere to purchase 15,000 shares at a weighted average exercise price of \$23.62 in 2007 and 75,000 shares at a weighted average exercise price of \$6.84 in 2006.
- We granted stock options to Dr. Williams to purchase 20,000 shares at a weighted average exercise price of \$14.19 in 2007 upon her appointment as an executive officer

These option awards are designed to align the interests of the named executive officers with those of Osiris' stockholders with respect to short-term operating results and long-term increases in the price of Osiris' stock, and are consistent with the goals of our long-term incentive compensation program as a whole.

Prior to our initial public offering, we granted stock options at an exercise price equivalent to the fair market value as determined by our Board. For financial reporting purposes and in connection with preparing for our initial public offering, we retrospectively analyzed the fair market value of our common stock as of the dates of the issuance of equity instruments. Pursuant to this retrospective analysis, we determined that certain of the stock options granted prior to our initial public offering were granted at exercise prices below the fair market value on the date of grant.

Executive Benefits and Perquisites

Our executive compensation program remains relatively free of executive benefits and perquisites. Generally, benefits and perquisites available to executive officers are available to all employees on similar terms.

We do not provide our executive officers separate dining or other facilities, company cars, club dues, or other similar perquisites. We provide air travel for executive officers for business purposes only. Our health care, insurance, 401(k) plan, and other welfare and employee-benefit programs are the same for all eligible employees, including the named executive officers. In certain situations, we provide our named executive officers with expense reimbursement relating to relocation.

We provide the above-described executive benefits and perquisites in order to attract and retain our named executive officers by offering compensation opportunities that are competitive with those offered by similarly situated public companies. However, such executive benefits and perquisites represent a relatively small portion of their total compensation. The value of benefits and perquisites provided are presented in the "All Other Compensation" column (and described in the related footnotes) of the Summary Compensation Table.

Retirement/Post-Employment Benefits.

The Company does not provide any retirement programs, pension benefits or deferred compensation plans to its named executive officers other than its 401(k) plan, which is available to all employees.

Compensation Committee Report

The Compensation Committee has reviewed and discussed the foregoing Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussions, the Compensation Committee recommended to our Board that the Compensation Discussion and Analysis be included in this proxy statement.

Compensation Committee Members:

Felix Gutzwiller, M.D.,
Dr. P.H., Chairman
Gregory Barnhill

This Compensation Committee Report shall not be deemed incorporated by reference by any general statement incorporating by reference this proxy statement into any filing under the Securities Act of 1933 or under the Securities Exchange Act of 1934, except to the extent that Osiris specifically incorporates this information by reference, and shall not otherwise be deemed filed under the Securities Act of 1933 and the Securities Exchange Act of 1934, and shall not be deemed soliciting material.

Summary Compensation Table

The following table shows the total compensation paid or accrued during 2007 and 2006 to our Chief Executive Officer, our Chief Financial Officer and each of our four next most highly compensated executive officers who earned more than \$100,000 during 2007.

Name and Principal Position	Year	Salary (\$)	Bonus \$(1)	Stock Awards \$(2)	Option Awards \$(2)	Non-Equity Incentive Plan Compensation (\$)	Nonqualified Deferred Compensation Earnings (\$)	All Other Compensation \$(3)	Total (\$)
C. Randal Mills President and Chief Executive Officer	2007	394,167	90,000	—	317,840	—	—	—	802,007
	2006	315,000	90,000	—	594,428	—	—	—	999,428
Harry E. Carmitchel Chief Operating Officer	2007	173,542	60,000	—	75,487	—	—	—	309,029
	2006	153,750	36,000	—	148,607	—	—	—	338,357
Cary J. Claiborne Chief Financial Officer(4)	2007	189,917	—	—	—	—	—	175,141	365,058
	2006	184,500	40,000	—	89,164	—	—	—	313,664
Philip R. Jacoby, Jr. Interim Chief Financial Officer	2007	131,792	10,000	—	18,332	—	—	—	160,124
	2006	118,000	10,000	—	9,750	—	—	—	137,750
Earl R. Fender Vice President and General Manager of Orthopedics(5)	2007	234,167	70,000	—	219,765	—	—	—	523,932
	2006	125,337	42,000	—	—	—	—	108,267	275,604
Lode Debrabandere Vice President and General Manager, Inflammatory Diseases	2007	229,583	40,000	—	167,408	—	—	—	436,991
	2006	94,615	26,600	—	—	—	—	—	121,215
Michelle LeRoux Williams Vice President of Development	2007	146,667	60,000	—	32,112	—	—	—	238,779
	2006	120,000	10,000	—	6,167	—	—	—	136,167

- (1) Represents bonus payments that were paid in 2008 on account of named executive officer performance in 2007, and bonus payments made in 2007 on account of named executive officer performance in 2006.
- (2) These amounts reflect the non-cash amounts recognized for financial statement purposes for 2007 and 2006 in accordance with FAS Statement 123(R) of stock based awards pursuant to our stockholder approved equity plans. Assumptions used in the calculations of these amounts are included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Note 1—Description of Business and Significant Accounting Policies" and "Note 6—Share-Based Compensation" to our Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2007 and filed with the SEC on March 17, 2008, or Annual Report on Form 10-K for the year ended December 31, 2006 and filed with the SEC on March 17, 2007, as applicable.
- (3) Represents relocation expenses paid to Earl R. Fender pursuant to his employment agreement and severance payments made to Cary J. Claiborne pursuant to his employment agreement upon termination of employment in November 2007.
- (4) Mr. Claiborne's employment terminated on November 23, 2007.
- (5) Mr. Fender's employment terminated on April 23, 2008.

Grants of Plan-Based Awards

The following table provides information on equity awards granted in 2007 to each of the named executive officers:

Name	Grant Date	All Other Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Option Awards (\$/Sh)	Grant Date Fair Value of Stock and Option Awards
C. Randal Mills	2/5/2007	100,000(1)	\$ 23.62	1,387,000
Harry E. Carmitchel	2/5/2007	25,000(1)	23.62	346,750
Cary J. Claiborne(3)	2/5/2007	20,000(2)	23.62	277,400
Philip R. Jacoby, Jr.	2/5/2007	3,000(1)	23.62	41,610
	7/26/2007	3,000(1)	12.50	21,090
Earl R. Fender(4)	2/5/2007	20,000(1)	23.62	277,400
Lode Debrabandere	2/5/2007	15,000(1)	23.62	208,050
Michelle LeRoux Williams	5/1/2007	20,000(1)	14.90	163,971

- (1) Represents stock options awarded by the Board of Directors, which vest in equal installments on the first, second, third and fourth anniversary of the award date.
- (2) These options were forfeited upon termination of employment in November 2007.
- (3) Mr. Claiborne's employment terminated November 23, 2007.
- (4) Mr. Fender's employment terminated April 23, 2008.

Equity Compensation Plan Information

We have two equity compensation plans: (1) the Amended and Restated 1994 Stock Option and Incentive Plan, as amended, and (2) the 2006 Stock Option and Incentive Plan. A total of 1,586,379 shares of common stock are currently reserved for issuance pursuant to the plans (without regard to increase in the number of shares contemplated by Proposal No. 2 in this proxy statement). Currently, awards under the stock option and incentive plans consist of qualified and non-qualified stock options and restricted shares of common stock. Our stockholders have approved both stock option and incentive plans. As of December 31, 2007:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options	Weighted-Average Exercise Price of Outstanding Options (\$/Sh)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by security holders	880,410	8.64	426,250
Equity compensation plans not approved by security holders(1)	1,000,000	11.00	0

- (1) Warrant issued to purchase shares of Common Stock, exercisable at any time at the option of the holder, prior to expiration in May 2011.

Outstanding Equity Awards at Fiscal Year-End

Name	Option Awards					Stock Awards			
	Number of Securities Underlying Unexercised Options (#)		Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Options (#)	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (\$)
	Exercisable	Unexercisable							
C. Randal Mills	150,000	—	—	0.40	05/14/14	—	—	—	—
	100,000	—	—	0.40	01/10/16	—	—	—	—
	—	100,000	—	23.62	02/04/17	—	—	—	—
Harry E. Carmitchel	—	75,000	—	23.62	02/04/17	—	—	—	—
Cary J. Claiborne	—	—	—	—	—	—	—	—	—
Philip R. Jacoby, Jr.	—	5,000	—	0.40	10/09/15	—	—	—	—
	625	1,250	—	0.40	12/01/15	—	—	—	—
	—	3,000	—	23.62	02/04/17	—	—	—	—
	—	3,000	—	12.50	07/25/17	—	—	—	—
Earl R. Fender	18,750	56,260	—	6.84	06/11/16	—	—	—	—
	—	20,000	—	23.62	02/04/17	—	—	—	—
Lode Debrabandere	18,750	56,250	—	6.84	07/30/16	—	—	—	—
	—	15,000	—	23.62	02/04/17	—	—	—	—
Michelle L. Williams	250	—	—	0.40	10/01/11	—	—	—	—
	270	—	—	0.40	04/01/12	—	—	—	—
	4,812	938	—	0.40	11/21/14	—	—	—	—
	3,750	3,750	—	0.40	12/01/15	—	—	—	—
	—	20,000	—	14.19	06/30/17	—	—	—	—

Option Exercises and Stock Vested

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$)
C. Randal Mills	—	—	—	—
Harry E. Carmitchel	40,000	556,400	—	—
Cary J. Claiborne	15,000	199,800	—	—
Philip R. Jacoby, Jr.	5,625	87,855	—	—
Earl R. Fender	—	—	—	—
Lode Debrabandere	—	—	—	—
Michelle LeRoux Williams	—	—	—	—

Employment Contracts, Termination of Employment and Change in Control Arrangements

Except in the case of Dr. Mills and Messrs. Carmitchel and Fender and Dr. Debrabandere, as described below, none of our employees is employed for a specified term, and each employee's employment with us is subject to termination at any time by either party for any reason, with or without cause. We have entered into employment agreements with Dr. Mills and Messrs. Carmitchel and Fender and Dr. Debrabandere.

Under Dr. Mills' employment agreement, dated as of May 15, 2004, he serves as our Chief Executive Officer for an initial three-year term. Thereafter, the agreement renews automatically each May 15 for successive one-year terms, unless either party provides notice of termination at least ninety days prior to May 15. We may otherwise terminate Dr. Mills' employment (i) if he is unable to perform his duties due to some incapacity for three or more consecutive months or for four or more non-consecutive months, (ii) if he fails to perform his duties and such failure is not cured within thirty

days after specific written notice by the Board, or (iii) for cause. Dr. Mills may terminate his employment for good reason. If we terminate Dr. Mills for failure to perform his duties, in addition to paying any amount otherwise owed, we must pay him a lump sum in an amount equal to one half of his annual base salary (based on his 2008 annual base salary of \$425,000, this amount equals \$212,500) and provide six months of medical, life and disability benefits (having an extended value of approximately \$9,000). If we terminate Dr. Mills without cause or if he terminates his employment for good reason, in addition to paying any amount otherwise owed, we must pay him a lump sum in an amount equal to one full year of base salary (based on his 2008 annual base salary of \$425,000, this amount equals \$425,000) and provide one full year of medical, life, and disability benefits (having an estimated value of approximately \$18,000).

Under Mr. Carmitchel's employment agreement, dated as of September 1, 2004, he serves as our Chief Operating Officer for an initial three-year term. Thereafter, the agreement renews automatically each September 1 for successive one-year terms, unless either party provides notice of termination at least ninety days prior to September 1. We may otherwise terminate Mr. Carmitchel's employment (i) if he fails to perform his duties and such failure is not cured within thirty days after specific written notice by the Board or (ii) for cause. Mr. Carmitchel may terminate his employment for good reason. If we terminate Mr. Carmitchel for failure to perform his duties or without cause, or if Mr. Carmitchel terminates his employment for good reason, in addition to paying any amount otherwise owed, we must pay Mr. Carmitchel a lump sum in an amount equal to one half of his annual base salary (based on his 2008 annual base salary of \$180,000, this amount equals \$90,000) and provide six months of medical, life and disability benefits (having an estimated value of approximately \$15,000). Pursuant to his employment agreement, Mr. Carmitchel's employment relationship is less than full-time.

Under Mr. Fender's employment agreement, dated as of June 12, 2006, he served until April 23, 2008 as our Vice President and General Manager for Orthopedics. The employment agreement had provided for an initial three-year term and automatic each June 12 for successive one-year terms, unless either party provides notice of termination at least ninety days prior to June 12. The agreement also provided that we may otherwise terminate Mr. Fender's employment (i) if he is unable to perform his duties due to some incapacity for three or more consecutive months or four or more non-consecutive months, (ii) if he fails to perform his duties and such failure is not cured within thirty days after specific written notice by the Board or (iii) for cause; and that Mr. Fender may terminate his employment for good reason. If we had terminated Mr. Fender for inability to perform his duties or for cause, or if Mr. Fender had terminated his employment for other than good reason, our obligations to Mr. Fender are limited to payment of amounts otherwise owed at the time of termination. If we had terminated Mr. Fender for failure to perform his duties, in addition to paying any amount otherwise owed, we would have been required to pay him a lump sum in an amount equal to three months of his annual base salary (based on his 2008 annual base salary of \$255,000, this amount equals \$63,750) and provide six months of medical, life and disability benefits (having an estimated value of approximately \$10,000). If we had terminated Mr. Fender without cause or if he had terminated his employment for good reason, in addition to paying any amount otherwise owed, we would have had to pay him a lump sum in an amount equal to six months of base salary (based on his 2008 annual base salary of \$255,000, this amount equals \$127,500) and provide six months of medical, life, and disability benefits (having an estimated value of approximately \$20,000). Mr. Fender resigned his position in April 2008 and our payments to him upon termination were limited to amounts otherwise owed to him at the time.

Under Dr. Debrabandere's employment agreement, dated as of July 31, 2006, he serves as our Vice President and General Manager, Inflammatory Diseases for an initial three-year term. Thereafter, the agreement renews automatically each July 31 for successive one-year terms, unless either party provides notice of termination at least ninety days prior to July 31. We may otherwise terminate Dr. Debrabandere's employment (i) if he is unable to perform his duties due to some incapacity for three or more consecutive months or four or more non-consecutive months, (ii) if he fails to perform

his duties and such failure is not cured within thirty days after specific written notice by the Board or (iii) for cause. Dr. Debrabandere may terminate his employment for good reason. If we terminate Dr. Debrabandere for inability to perform his duties or for cause, or if Dr. Debrabandere terminates his employment for other than good reason, we have no obligations to Dr. Debrabandere other than the payment of amounts otherwise owed at the time of termination. If we terminate Dr. Debrabandere for failure to perform his duties, in addition to paying any amount otherwise owed, we must pay him a lump sum in an amount equal to three months of his annual base salary (based on his 2008 annual base salary of \$240,000, this amount equals \$60,000) and provide six months of medical, life and disability benefits (having an estimated value of approximately \$10,000). If we terminate Dr. Debrabandere without cause or if he terminates his employment for good reason, in addition to paying any amount otherwise owed, we must pay him a lump sum in an amount equal to six months of base salary (based on his 2006 annual base salary of \$240,000, this amount equals \$120,000) and provide six months of medical, life, and disability benefits (having an estimated value of approximately \$20,000).

For purposes of the employment agreements with Dr. Mills and Messrs. Carmitchel and Fender and Dr. Debrabandere, "cause" is defined to include (i) the commission of a felony or a crime of moral turpitude or any other act or omission involving dishonesty or fraud with respect to us or any of our subsidiaries, customers, or suppliers, (ii) conduct tending to bring Osiris or any subsidiary into substantial public disgrace or disrepute, (iii) gross negligence or willful misconduct with respect to us or any subsidiary, or (iv) any breach of a material section of the agreement.

For purposes of the employment agreements with Dr. Mills and Messrs. Carmitchel and Fender and Dr. Debrabandere, "good reason" means (i) our failure to perform or observe any material term or provision of the agreement and our continued failure to cure such default within thirty days after written demand for performance from the executive specifically describing the alleged default, (ii) a material reduction in the scope of the executive's responsibilities and duties, or (iii) absent a written agreement between us and the executive, a material reduction in the executive's base pay or incentive compensation.

REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Audit Committee of the Board of Directors of Osiris Therapeutics, Inc. has three members, Mr. Moyes (Chairman), Dr. Gutzwiller and Mr. Barnhill. Each of the members of the Audit Committee are independent directors who meet the independence and experience requirements of The NASDAQ Stock Market, Inc. and the independence requirements of the Securities and Exchange Commission. The Audit Committee has furnished the following report:

The Audit Committee assists the Board in overseeing and monitoring the integrity of Osiris' financial reporting process, compliance with legal and regulatory requirements and the quality of internal and external audit processes. The role and responsibilities of the Audit Committee are set forth in a written charter adopted by the Board. This committee reviews and reassesses the charter annually and recommends any changes to the Board for approval. The Audit Committee is responsible for overseeing Osiris' overall financial reporting process, and for the appointment, compensation, retention, and oversight of the work of Osiris' independent registered public accounting firm. In fulfilling its responsibilities for the financial statements for 2007, the Audit Committee took the following actions:

- Reviewed and discussed the audited financial statements for 2007 with management and Stegman & Company, Osiris' independent registered public accounting firm for 2007.
- Discussed with Stegman & Company the matters required to be discussed by the Statement on Auditing Standards No. 61, as amended relating to the conduct of the audit.

- Received written disclosures and the letter from Stegman & Company regarding its independence as required by Independence Standards Board Standard No. 1. The Audit Committee further discussed with Stegman & Company its independence. The Audit Committee also considered the status of taxation matters and other areas of oversight relating to the financial reporting and audit process that the committee determined appropriate.
- Based on the Audit Committee's review of the audited financial statements and discussions with management and Stegman & Company, the Audit Committee recommended to the Board that the audited financial statements be included in the Annual Report on Form 10-K for 2007 for filing with the Securities and Exchange Commission.
- Retained Stegman & Company as Osiris' independent registered public accounting firm for 2008.

THE AUDIT COMMITTEE

Jay Moyes, Chairman
Felix Gutzwiller, M.D., Dr. P.H.
Gregory Barnhill

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Our records reflect that all reports which were required to be filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, as amended, were filed on a timely basis, except for Form 4s for Messrs. Friedli, Barnhill, Moyes, Carmitchel, Claiborne, Jacoby, Fender and Drs. Gutzwiller, Mills and Debrabandere for grants dated February 4, 2007, which were not reported until February 26, 2007. An Annual Statement of Beneficial Ownership on Form 5 is not required to be filed if there are no previously unreported transactions or holdings to report. Nevertheless, we are required to disclose the names of directors, officers and 10% stockholders who did not file a Form 5 unless we have obtained a written statement that no filing is required or if we otherwise know that no Form 5 is required. For 2006, we received either a written statement from our directors, officers and 10% stockholders or know from other means that no Form 5s were required to be filed.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

As required by our Corporate Governance Principles, our Audit Committee reviews and approves in advance all related-party transactions. Our policy with respect to related party transactions is incorporated within our Audit Committee Charter, a copy of which is available on our website at <http://www.osiris.com>. This policy sets forth the review and approval requirements for transactions in which we will be a participant and in which any of our directors, director nominees, executive officers, other employees or greater than 5% beneficial owners of our common stock, or any immediate family member or any affiliated entity of such persons, has a direct or indirect interest. Pursuant to this policy, any proposed transaction that would require disclosure under the related party transaction disclosure requirements of the United States Securities and Exchange Commission must be submitted to the Audit Committee for consideration. No member of the Audit Committee may participate in any consideration or approval of any related person transaction with respect to which such member or any of such member's immediate family members is the related person.

The Audit Committee may approve only those related party transactions that are in, or are not inconsistent with, the best interests of Osiris and its stockholders, as the Audit Committee determines in good faith. In making such a determination, the Audit Committee is required to consider all of the relevant facts and circumstances relating to the transaction including, but not limited to, the following:

- the benefits to us;
- if the transaction involves a director, a member of the director's immediate family or entity affiliated with the director, the impact on the director's independence;
- the availability of other sources for comparable products or services;
- the terms of the transaction; and
- the terms available to unrelated third parties.

Peter Friedli, the Chairman of our Board, has been responsible for procuring since 1993, either directly or through affiliated entities, an aggregate of approximately \$250 million in debt and equity financing for us and our predecessor company. Mr. Friedli is the beneficial owner of approximately 48% of our common stock as of December 31, 2007.

From 1995 until the closing of our initial public offering in August 2006, we and our predecessor company were party to a Consulting Agreement, originally with Friedli Corporate Finance AG, and subsequently Friedli Corporate Finance, Inc. ("FCF"), for the provision of business and advisory services to us. Mr. Friedli is the sole owner of FCF. Under this agreement, FCF provided general business, financial and investment advice to us, and served as a liaison between us and FCF clients who have invested in us, many of which are located in Switzerland. This Consulting Agreement also granted to FCF a right of first refusal with respect to any debt or equity financings by us, and contained a

provision requiring us to allocate ten percent of the shares in any offering to FCF. The Consulting Agreement between us and FCF was terminated upon the closing of our initial public offering in 2006.

Separate from the Consulting Agreement, FCF served as our agent in Europe in connection with the issuance and sale in October 2006 of \$20 million of our Convertible Notes. In connection with these Convertible Notes, we paid an amount for costs equal to three percent (3%) of the aggregate amount of the Notes, of which one-third was paid to FCF, and two thirds was paid to others or FCF, as directed by FCF. Included among the purchasers of the Notes was Peter Friedli, individually, who purchased \$4,500,000, and New Venturetec, Inc., a Swiss publicly traded company approximately 3% owned by Mr. Friedli who serves as its President, which purchased an additional \$4,000,000 of the Notes. Mr. Friedli subsequently acquired the Note from New Venturetec, Inc. in a separate transaction. Also included among the purchasers of the Notes were BIH SA and Thomas Schmidheiny, Chairman and controlling shareholder of BIH SA, who each acquired \$2,000,000 of the Notes. BIH SA and Mr. Schmidheiny are beneficial owners of more than 5.0% of our common stock. Beginning in December 2007, these Notes, including accrued interest, were converted pursuant to an agreement into an aggregate of 1,553,361 shares of our common stock at prices above the NASDAQ closing price on the date of each conversion transaction. The Board, including all of our independent directors, but with Mr. Friedli abstaining, together with the Audit Committee, unanimously approved the offering and sale of the Notes, including the sale of a portion of the Notes to Mr. Friedli and New Venturetec, Inc., the arrangements with FCF and the subsequent conversion of the Notes into common stock.

In June 2007, Mr. Friedli served as our agent in connection with the issuance and sale of 1,757,469 shares of our common stock in a private placement to non-US investors at a purchase price of \$11.38 per share, which represented the NASDAQ closing price on the date of the transaction, and resulted in gross proceeds of \$20.0 million. Mr. Friedli acquired 1,230,228 of the shares issued in this transaction, and New Venturetec, Inc. acquired 263,620 shares.

In October 2007, we also obtained a \$30.0 million financing commitment from FCF. This financing commitment is for a twelve month term and provides for financing through the issuance by us of common stock at a price determined as the basis of market value, or the issuance by us of three-year promissory notes bearing interest at LIBOR plus 4%. Although we control the timing of any draws made during the term of the commitment, FCF determines the identity of the purchasers and whether we issue common stock or promissory notes, subject, however to limitations on, among other things, the aggregate number of shares of common stock that may be issued. We did not incur any fees in connection with the establishment of this financing commitment.

In December 2007, Mr. Friedli acted as the placement agent in connection with the issuance and sale of 950,000 shares of our common stock in a private placement to non-US investors at a purchase price of \$12.37 per share, which represented the NASDAQ closing price on the date of the transaction and resulted in gross proceeds of \$11.8 million. Each of Mr. Friedli and Venturetec, Inc. (an affiliate of New Venturetec, Inc.) acquired 100,000 shares in this transaction. The remaining 750,000 shares were acquired by BIH SA. We did not pay any fees or commissions in connection with these private placements.

In March 2008, we accepted a subscription agreement from Mr. Friedli for the purchase by him from us of a \$2.5 million convertible promissory note, bearing interest at 2% per annum, payable upon maturity on November 30, 2008. This note is convertible at any time at the sole discretion of the holder into shares of our common stock at a conversion price of \$12.17 per share. Also in March 2007, \$3,000,000 in similar notes, but with a conversion price of \$12.04 per share, were acquired by BIH SA. The conversion prices applicable to the respective notes represented the NASDAQ closing market price on the date of the respective transactions.

On October 30, 2006, we entered into a Lockup Agreement with Mr. Friedli and certain entities with which he is affiliated, Venturetec, Inc. and U.S. Venture 05, Inc. Pursuant to the Lockup

Agreement, Mr. Friedli and such entities have agreed with us, subject to limited exceptions, not to transfer our securities held by them without our approval, until January 30, 2008. The Lockup Agreement was amended in September 2007, pursuant to which Mr. Friedli and Venturetec, Inc. have agreed to extend the term of the Lockup Agreement as applicable to them, until January 30, 2009.

Our Board of Directors, including all of our independent directors but with Mr. Friedli abstaining, together with our Audit Committee, unanimously approved all of the transactions described above as occurring in 2007 and 2008 to date. We did not pay any fees for any of these financings arranged in 2007 or 2008 to date through Mr. Friedli or entities with which he is affiliated.

CORPORATE CODE OF CONDUCT AND ETHICS

We have adopted a Corporate Code of Conduct and Ethics that applies to all of our employees, including our chief executive officer and chief financial and accounting officers, and every member of our Board. A copy of the Corporate Code of Conduct and Ethics is publicly available on the Investors Relations—Corporate Governance section of our website at <http://www.osiris.com>. Disclosure regarding any amendments to, or waivers from, provisions of our Corporate Code of Conduct and Ethics that apply to our directors and principal executive and financial officers will be included in a Current Report on Form 8-K within four business days following the date of the amendment or waiver, unless website posting of such amendments or waivers is then permitted by the rules of The NASDAQ Stock Market, Inc.

AVAILABLE INFORMATION

We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended, and, in accordance therewith, file reports, proxy statements and other information with the U.S. Securities and Exchange Commission. Reports, proxy statements and other information filed by us may be inspected without charge and copies obtained upon payment of prescribed fees from the Public Reference Section of the U.S. Securities and Exchange Commission at 100 F Street, NE, Washington, D.C. 20549, or by way of the U.S. Securities and Exchange Commission's website, <http://www.sec.gov>.

We will provide without charge to each person to whom a copy of the proxy statement is delivered, upon the written or oral request of any such persons, additional copies of our Annual Report on Form 10-K for the period ended December 31, 2007. Requests for such copies should be addressed to:

Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, Maryland 21046, Attn: Investor Relations, Telephone (443) 545-1800

OTHER MATTERS

The Board knows of no other business which will be presented at the Annual Meeting. However, if any other business is properly brought before the Annual Meeting or any postponement or adjournment thereof, which may properly be acted upon, the proxies solicited hereby will be voted on such matter in accordance with the discretion of the proxy holders named therein.

WHETHER OR NOT YOU INTEND TO BE PRESENT AT THE MEETING, YOU ARE URGED TO FILL OUT, SIGN, DATE AND RETURN THE ENCLOSED PROXY AT YOUR EARLIEST CONVENIENCE.

By order of the Board of Directors:

A handwritten signature in black ink, appearing to read "Philip R. Jacoby, Jr.", written in a cursive style.

Philip R. Jacoby, Jr.
Corporate Secretary

Columbia, Maryland
April 29, 2008

APPENDIX A

OSIRIS THERAPEUTICS, INC. AMENDED AND RESTATED 2006 OMNIBUS PLAN (as amended and restated effective [June 4], 2008)

ARTICLE I PURPOSE; EFFECTIVE DATE; DEFINITIONS

1.1 **Purpose.** This Osiris Therapeutics, Inc. 2006 Omnibus Plan (the "*Plan*") is intended to secure for Osiris Therapeutics, Inc. (the "*Company*") and its stockholders the benefits of the incentive inherent in common stock ownership by the employees of the Company and its subsidiaries and directors of the Company who are largely responsible for the Company's future growth and continued financial success and to afford such persons the opportunity to obtain or increase their proprietary interest in the Company on a favorable basis and thereby have an opportunity to share in its success.

1.2 **Effective Date.** This Plan (as initially adopted by the Board and ratified by the stockholders) initially became effective on April 17, 2006. This Plan has been amended and restated in its entirety, effective [June 4], 2008, to, among other things, be exempt from (or, where applicable, to comply with) the requirements of Section 409A of the Code and to incorporate certain other amendments and clarifications.

1.3 **Definitions.** Throughout this Plan, the following terms shall have the meanings indicated:

(a) "**Agreement**" shall mean an Option Agreement, Restricted Stock Agreement, Performance Share Agreement, Performance Unit Agreement or SAR Agreement.

(b) "**Benefits**" shall mean any one or more of the following awards that may be granted under this Plan:

(i) Options (including ISOs and NQSOs);

(ii) Stock Appreciation Rights;

(iii) Performance Shares;

(iv) Performance Units; or

(v) Restricted Stock.

(c) "**Board**" shall mean the Board of Directors of the Company.

(d) "**Change of Control**" shall mean (a) the reorganization, consolidation or merger of the Company or any of its subsidiaries holding or controlling a majority of the assets relating to the business of the Company, with or into any third party (other than a subsidiary); (b) the assignment, sale, transfer, lease or other disposition of all or substantially all of the assets of the Company and its subsidiaries taken as a whole; or (c) the acquisition by any third party or group of third parties acting in concert, of beneficial ownership (within the meaning of Rule 13d-3 of the Securities and Exchange Commission ("SEC") under the Securities Exchange Act of 1934, as amended) of shares of voting stock of the Company, the result of which in the case of any transaction described in clauses (a), (b) and (c) above is that immediately after the transaction the stockholders of the Company immediately before the transaction, other than the acquiror, own less than fifty percent (50%) of the combined voting power of the outstanding voting securities entitled to vote generally in the election of directors of the surviving or resulting corporation in a transaction specified in clause (a) above, the acquiror in a transaction specified in clause (b) above, or the Company or the acquiror in a transaction specified in clause (c) above.

Notwithstanding the foregoing, the sale of Company securities beneficially owned by Peter Friedli ("Friedli Shares") shall not, by itself or when combined with any other transactions, constitute a Change in Control, unless such other transactions would constitute a Change in Control without regard to the sale of Friedli Shares.

(e) **"Code"** shall mean the Internal Revenue Code of 1986, as amended, any successor revenue laws of the United States, and the rules and regulations promulgated thereunder.

(f) **"Committee"** shall mean any committee of the Board designated by the Board to administer this Plan.

(g) **"Common Stock"** shall mean the common stock, par value \$.001 per share, of the Company.

(h) **"Company"** shall mean Osiris Therapeutics, Inc., a Delaware corporation.

(i) **"Eligible Person"** shall mean an Employee or a Non-Employee Director who has been designated by the Committee as eligible to receive a Benefit under this Plan in accordance with Section 3.1.

(j) **"Employee"** shall mean any person engaged or proposed to be engaged as an officer or employee of the Company or one of its subsidiaries.

(k) **"Exchange Act"** shall mean the Securities Exchange Act of 1934, as amended.

(l) **"Fair Market Value"** shall mean with respect to the Common Stock on any day, (i) the closing sales price on the immediately preceding business day of a share of Common Stock as reported on the principal securities exchange on which shares of Common Stock are then listed or admitted to trading, or (ii) if not so reported, the average of the closing bid and asked prices on the immediately preceding business day as reported by NASDAQ, or (iii) if not so reported, as furnished by any member of the National Association of Securities Dealers, Inc. selected by the Committee. In the event that the price of a share of Common Stock shall not be so reported or furnished, the Fair Market Value of a share of Common Stock shall be determined by the Committee in good faith. For purposes hereof, the fair market value on any day of an Option granted under the Plan shall be the value of the underlying Stock, determined as aforesaid, less the exercise price of the Option. A "business day" is any day, other than Saturday or Sunday, on which the relevant market is open for trading.

(m) **"ISO"** shall mean an Option that qualifies as an incentive stock option under Code Section 422. No Option that is intended to be an ISO shall be invalid under this Plan for failure to qualify as an ISO.

(n) **"NQSO"** shall mean a nonqualified stock option which is an Option that does not qualify as an incentive stock option under Code Section 422.

(o) **"Non-Employee Director"** shall mean a member of the Board who is not an Employee.

(p) **"Option"** shall mean an option to purchase shares of Common Stock granted by the Committee. An Option may be either an ISO or a NQSO, but only an Employee may be granted an ISO.

(q) **"Option Agreement"** shall mean the certificate evidencing an Option grant.

(r) **"Option Shares"** shall mean the shares of Common Stock purchased upon exercise of an Option.

(s) **"Performance Cycle"** shall have the meaning set forth in Section 7.1.

(t) **"Performance Period"** shall have the meaning set forth in Section 6.1.

(u) **"Performance Share"** shall mean an award made pursuant to Article VI of this Plan of the right to receive Common Stock at the end of a specified Performance Period if specified performance goals are met.

(v) **"Performance Unit"** shall mean an award made pursuant to Article VII of this Plan of the right to receive a fixed dollar amount, payable in cash or Common Stock or a combination of both, at the end of a specified Performance Cycle if specified performance goals are met.

(w) **"Plan"** shall mean this Osiris Therapeutics, Inc. 2006 Omnibus Plan, as the same may be amended from time to time.

(x) **"Restricted Stock"** shall mean Common Stock granted under Article VIII of this Plan, subject to such restrictions, if any, as the Committee may determine, as evidenced in a Restricted Stock Agreement. Shares of Common Stock shall cease to be Restricted Stock when, in accordance with the terms of the Restricted Stock Agreement, they become transferable and free of substantial risk of forfeiture.

(y) **"Restricted Stock Agreement"** shall mean any agreement evidencing the grant of Restricted Stock to an Eligible Person pursuant to this Plan.

(z) **"Restriction Period"** shall mean the time period, if any, during which Restricted Stock is subject to the restrictions set forth in a Restricted Stock Agreement.

(aa) **"SAR Agreement"** shall mean the certificate evidencing the grant of a Stock Appreciation Right to an Eligible Person pursuant to this Plan.

(bb) **"Stock Appreciation Right" or "SAR"** shall mean the right to receive cash or Common Stock, granted pursuant to Article V of this Plan and a SAR Agreement.

(cc) **"10% Stockholder"** shall mean an individual owning (directly or by attribution as provided in Code Section 424(d)) stock possessing more than 10% of the total combined voting power of all classes of stock of the Company.

ARTICLE II ADMINISTRATION

2.1 **Committee Administration.** This Plan and the Benefits awarded hereunder shall be interpreted, construed and administered by the Committee in its sole discretion. An Eligible Person (or other person, such as a beneficiary) eligible for Benefits under the Plan may appeal to the Committee in writing any decision or action of the Committee with respect to the Plan that adversely affects the Eligible Person (or other person). Upon review of such appeal and in any other case where the Committee has acted with respect to the Plan, the interpretation and construction by the Committee of any provisions of this Plan or of any Benefit shall be conclusive and binding on all parties.

2.2 **Committee Composition.** The Committee shall consist of not less than two persons who shall be members of the Board and shall be subject to such terms and conditions as the Board may prescribe. Each Committee member shall be a "non employee director" within the meaning of Rule 16b-3 promulgated under the Exchange Act and shall qualify to make determinations as to executive compensation under the listing requirements of the NASDAQ Global Market (or whatever other exchange the Common Stock may be listed for trading from time to time). Once designated, the Committee shall continue to serve until otherwise directed by the Board. From time to time, the Board may increase the size of the Committee and appoint additional members thereof, remove members (with or without cause) and appoint new members in substitution therefor, fill vacancies however caused and remove all members of the Committee.

A majority of the entire Committee shall constitute a quorum, and the action of a majority of the members present at any meeting at which a quorum is present shall be deemed the action of the Committee. In addition, any decision or determination reduced to writing and signed by all of the members of the Committee shall be fully as effective as if it had been made by a majority vote at a meeting duly called and held. Subject to the provisions of this Plan and the Company's bylaws, and to any terms and conditions prescribed by the Board, the Committee may make such additional rules and regulations for the conduct of its business as it shall deem advisable. The Committee shall hold meetings at such times and places as it may determine.

2.3 Committee Powers. The Committee shall have authority to award Restricted Stock and to grant Options, SARs, Performance Shares and Performance Units pursuant to or as evidenced by an Agreement providing for such terms (not inconsistent with the provisions of this Plan) as the Committee may consider appropriate. Such terms shall include, without limitation, as applicable, the number of shares, the exercise price, the medium and time of payment, the term of each award and any vesting requirements, if any, and may include conditions (in addition to those contained in this Plan) on the exercisability of all or any part of an Option or SAR, the terms and conditions applicable to Performance Shares and Performance Units or on the transferability or forfeitability of Restricted Stock. Notwithstanding any such conditions, the Committee may, in its discretion, accelerate the time at which any Option or SAR may be exercised or the time at which Restricted Stock may become transferable or nonforfeitable. In addition, the Committee shall have complete discretionary authority to prescribe the form of Agreements; to adopt, amend and rescind rules and regulations pertaining to the administration of the Plan; and to make all other determinations necessary or advisable for the administration of this Plan. The express grant in the Plan of any specific power to the Committee shall not be construed as limiting any power or authority of the Committee. All expenses of administering this Plan shall be borne by the Company. The Committee shall have the authority to delegate from time to time its powers hereunder, in whole or in part, in accordance with and subject to compliance with all applicable laws, rules and regulations.

2.4 Receipt of Benefits by Committee Members. Members of the Committee shall be eligible to receive Benefits under this Plan; provided, however, that the Committee may, but shall not be required to, seek ratification of the Board or members thereof, on such terms as the Committee shall determine, in respect of any such Benefits so awarded.

2.5 Good Faith Determinations. No member of the Committee or other member of the Board shall be liable for any action or determination made in good faith with respect to this Plan or any Benefit granted hereunder.

ARTICLE III ELIGIBILITY; TYPES OF BENEFITS; SHARES SUBJECT TO PLAN

3.1 Eligibility. The Committee shall from time to time determine and designate Employees and Non-Employee Directors as Eligible Persons who shall receive Benefits under this Plan and the number of Options, Stock Appreciation Rights, Performance Shares, Performance Units and shares of Restricted Stock to be awarded to each such Eligible Person or the formula or other basis on which such Benefits shall be awarded to Eligible Persons. In making any such award, the Committee may take into account the nature of services rendered by an Eligible Person, commissions, fees or other compensation earned by the Eligible Person, the capacity of the Eligible Person to contribute to the success of the Company and other factors that the Committee may consider relevant.

3.2 Types of Benefits. Benefits under this Plan may be granted in any one or any combination of (a) Options, (b) Stock Appreciation Rights, (c) Performance Shares, (d) Performance Units, and (e) Restricted Stock, as described in this Plan. The Committee may (x) award Benefits in tandem so that acceptance of or exercise of one Benefit cancels the right of an Eligible Person to another and

(y) award Benefits in any combination or combinations and subject to any condition or conditions consistent with the terms of this Plan that the Committee in its sole discretion may consider appropriate.

3.3 Shares Subject to this Plan. Subject to the provisions of Section 4.1(e) (relating to adjustment for changes in Common Stock), the maximum number of shares that may be issued under this Plan shall not exceed in the aggregate 1,450,000 shares of Common Stock. The maximum number of shares authorized under this Plan shall only be increased with approval of the stockholders of the Company (except as provided in Section 4.1(e)). Such shares may be authorized and unissued shares or authorized and issued shares that have been reacquired by the Company. If any Benefits awarded under this Plan shall for any reason terminate or expire, or be surrendered or forfeited, without having been exercised in full, or without shares otherwise issuable thereunder having been issued for any reason, then the shares not purchased or issued under such Benefits shall be available again for grant hereunder, provided, however, that insofar as an SAR is exercised and settled for cash, the number of shares in respect of which the SAR is so exercised and settled shall not again be available for grant hereunder. Anything in this Plan to the contrary notwithstanding, in no event shall any Eligible Person receive in any calendar year Benefits under this Plan involving more than 125,000 shares of Common Stock (subject to adjustment as provided in Section 4.1(e)).

3.4 \$100,000 Limitation. Except as provided elsewhere in this Section, the Committee shall not grant an ISO to, or modify the exercise provisions of an outstanding ISO for, any person who, at the time of grant or modification, as applicable, would thereby hold ISOs issued by the Company if the aggregate Fair Market Value (determined as of the respective dates of grant and modification of each Option) of the Option Shares underlying such ISOs as are exercisable for the first time during any calendar year would exceed \$100,000 (or such other limitation as may be prescribed by the Code from time to time). The foregoing restriction on modification of outstanding ISOs shall not preclude the Committee from modifying an outstanding ISO if, as a result of such modification and with the consent of the holder, such Option no longer constitutes an ISO. Furthermore, if the \$100,000 limitation (or such other limitation prescribed by the Code) described in this Section is exceeded, then the ISO, the granting or modification of which resulted in exceeding such limitation, shall be treated as an ISO up to the limitation, and the excess shall be treated as a NQSO.

ARTICLE IV STOCK OPTIONS

4.1 Grant; Terms and Conditions. The Committee, in its discretion, may from time to time grant ISOs or NQSOs, or both, to any Eligible Person; provided that ISOs shall only be granted to Employees. Each Eligible Person who is granted an Option shall receive an Option Agreement from the Company in a form specified by the Committee and containing such provisions, consistent with this Plan, as the Committee, in its sole discretion, shall determine at the time the Option is granted.

(a) **Number of Shares.** Each Option Agreement shall state the number of shares of Common Stock to which it pertains.

(b) **Option Price.** Each Option Agreement shall state the Option exercise price, which shall not be less than 100% of the Fair Market Value per share of Common Stock on the date of grant of the Option. In the case of an ISO granted to a 10% Stockholder, the Option exercise price shall not be less than 110% of the Fair Market Value per share of Common Stock on the date of grant of the Option. The date of the grant of an Option shall be the date specified by the Committee in its grant of the Option. Subject to the foregoing, the price at which each share of Common Stock covered by an NQSO granted under the Plan may be purchased shall be the price determined by the Committee, in its absolute discretion, to be suitable to attain the purposes of this Plan.

(c) **Medium and Time of Payment.** Upon the exercise of an Option, the Option exercise price shall be payable in United States dollars, in cash (including by check) or (unless the Committee otherwise prescribes) in shares of Common Stock owned by the optionee (but not with Restricted Stock prior to the expiration of the Restriction Period), in NQSOs granted to the optionee under the Plan which are then exercisable (provided that the purchase price of Common Stock under an ISO may not be paid in NQSOs), or in a combination of cash, Common Stock and NQSOs. If all or any portion of the Option exercise price is paid in Common Stock owned by the optionee, then that stock shall be valued at its Fair Market Value as of the date the Option is exercised. If all or any portion of the Option exercise price is paid in NQSOs granted to the optionee under the Plan, then such NQSOs shall be valued at their Fair Market Value as of the date the Option is exercised.

(d) **Term and Exercise of Options.** The term of each Option shall be determined by the Committee at the time the Option is granted; provided that the term of an Option shall in no event be more than ten years from the date of grant or, in the case of an ISO granted to a 10% Stockholder, more than five years from the date of grant. During the lifetime of an optionee, the Option shall be exercisable only by him or her and shall not be assignable or transferable by him or her and no person shall acquire any rights therein. Following an optionee's death, the Option may be exercised (to the extent permitted under the Plan) by the person designated by the optionee as a beneficiary in a written notification delivered to the Committee prior to the optionee's death, or if there is no such written designation, by the executor or administrator of the optionee's estate or by the person or persons to whom such rights pass by will or by the laws of descent and distribution.

(e) **Recapitalization; Reorganization.** Subject to any otherwise required action by the stockholders of the Company, the Change of Control provisions set forth in Article IX of this Plan and any provision expressly to the contrary and contained in an Agreement, each of (i) the maximum number of shares of Common Stock that may be issued under this Plan pursuant to Section 3.3 above, (ii) the maximum number of shares of Common Stock that may be granted or be the subject of grants made to any Participant in any calendar year, (iii) the number of shares of Common Stock covered by each outstanding Option, (iv) the number of shares of Common Stock to which each Stock Appreciation Right or Performance Share relates, (v) the kind of shares subject to outstanding Benefits and (vi) the per share exercise price under each outstanding Option or SAR, shall be proportionately and equitably adjusted to account for any increase or decrease in the number of issued shares of Common Stock resulting from a reorganization, recapitalization, stock split, combination of shares, merger, consolidation, rights offering, subdivision or consolidation of shares or the payment of a stock dividend (but only on the Common Stock) or any other change in the capital structure or state of incorporation of the Company, in each case, in the manner the Committee deems appropriate. Such other substitutions or adjustments shall be made as may be determined by the Committee, in its sole discretion, to be necessary or appropriate under the circumstances. In connection with any event described in this paragraph, the Committee may provide, in its sole discretion, for the cancellation of any outstanding awards and payment in cash or other property therefor.

Subject to any action that may otherwise be required on the part of the stockholders of the Company, if the Company is the surviving corporation in any merger, consolidation, sale, transfer, acquisition, tender offer or exchange offer which does not result in a Change of Control, then each outstanding Option, Stock Appreciation Right, Restricted Stock and Performance Share award shall pertain to and apply to the securities or other consideration that a holder of the number of shares of Common Stock subject to the Option or to which the Stock Appreciation Right or Restricted Stock or Performance Share relates would have been entitled to receive in such transaction.

Notwithstanding the foregoing, in no event shall any Option or be exercisable after the date of termination of the exercise period of such Option.

In the event of a change in the Common Stock as presently constituted, which change is limited to a change of all of the authorized shares with par value into the same number of shares with a different par value or without par value, the shares resulting from any such change shall be deemed to be the Common Stock within the meaning of this Plan.

The grant of an Option, Stock Appreciation Right or other Benefit pursuant to this Plan shall not affect in any way the right or power of the Company to make adjustments, reclassifications, reorganizations or changes of its capital or business structure or to merge or to consolidate or to dissolve, liquidate, sell or otherwise transfer all or any part of its business or assets.

The provisions of this Section 4.1(e) shall be limited in respect of ISOs to the extent necessary to comply with the applicable provisions of Code Section 424(a).

(f) **Rights as a Stockholder.** Subject to Section 10.10 of this Plan regarding uncertificated shares, an optionee or a transferee of an Option shall have no rights as a stockholder with respect to any shares covered by his or her Option until the date of the issuance of a stock certificate to him or her for those shares upon payment of the exercise price. No adjustments shall be made for dividends (ordinary or extraordinary, whether in cash, securities or other property) or distributions or other rights for which the record date is prior to the date such stock certificate is issued, except as provided in Section 4.1(e).

(g) **Modification, Extension and Renewal of Options.** Subject to the terms and conditions and within the limitations of this Plan, the Committee may modify, extend or renew outstanding Options granted under this Plan or accept the surrender of outstanding Options (to the extent not theretofore exercised) and authorize the granting of new Options in substitution therefor (to the extent not theretofore exercised). No modification of an Option shall, without the consent of the optionee, alter or impair any rights or obligations under any Option theretofore granted under this Plan. Notwithstanding the foregoing,

(i) no Option exercise period may be extended beyond the latest date at which the Option otherwise would have expired;
and

(ii) the Committee shall not have authority to reprice to reduce the exercise price Options without first obtaining shareholder approval for such repricing.

(h) **Exercisability and Term of Options.** Unless earlier terminated, Options granted pursuant to this Plan shall be exercisable at any time on or after the dates of exercisability and before the expiration date. Notwithstanding the foregoing, an Option shall terminate and may not be exercised if the Eligible Person to whom it is granted ceases to be employed by, or provide services as a Non-Employee Director to, the Company, except that: (1) unless the Committee shall at any time determine that the Eligible Person's employment or service was terminated for conduct that in the judgment of the Committee involves dishonesty or action by the Eligible Person that is detrimental to the best interest of the Company, the Eligible Person may at any time within ninety (90) days after termination of his or her employment or service exercise his or her Option but only to the extent the Option was exercisable by him or her on the date of termination of employment or service; (2) if such Eligible Person's employment or service terminates on account of total and permanent disability, then the Eligible Person may at any time within one year after termination of his or her employment or service exercise his or her Option but only to the extent that the Option was exercisable on the date of termination of employment or service; and (3) if such Eligible Person dies while in the employ of the Company or while serving as a Non-Employee Director, or within the ninety (90) day or twelve month period following termination of his or her employment or service as described in clause (1) or (2) above, then his or her Option may be exercised at any

time within twelve months following his or her death by the person specified in Section 4.1(d), but only to the extent that such Option was exercisable by him or her on the date of termination of employment or service. The last sentence shall apply to any outstanding Options which are ISOs to the extent permitted by Code Section 422, and such outstanding ISOs in excess thereof shall, immediately upon the occurrence of the event described in such sentence, be treated for all purposes of the Plan as NQSOs and shall be immediately exercisable as such as provided in such sentence. The Committee may, in its discretion, provide in any Option Agreement or determine at any time after the date of grant that the exercisability of an Option will be accelerated, in whole or in part, in the event of an Eligible Person's retirement, death, disability or termination of service on the Board. Any cessation of employment, for purposes of ISOs only, shall include any leave of absence in excess of ninety (90) days unless the Employee's reemployment rights are guaranteed by law or by contract. Notwithstanding anything to the contrary in this subsection, an Option may not be exercised by anyone after the expiration of its term. Notwithstanding anything to the contrary in this subsection, an Option shall not terminate if the Employee to whom it is granted ceases to be employed by the Company but continues to serve as a Non-Employee Director of the Company or its successor, in which event the Option shall terminate if the Eligible Person ceases to be a Non-Employee Director of the Company or its successor and the Eligible Person may at any time within ninety (90) days (or other applicable period described above) after ceasing to be a Non-Employee Director exercise his or her Option, but only to the extent that the Option was exercisable by him or her on the date on which he or she ceased to be a Non-Employee Director.

4.2 **Other Terms and Conditions.** Through the Option Agreements authorized under this Plan, the Committee may impose such other terms and conditions, not inconsistent with the terms hereof, on the grant or exercise of Options, as it deems advisable.

ARTICLE V STOCK APPRECIATION RIGHTS

5.1 **Grant of Stock Appreciation Rights.** The Committee, in its discretion, may from time to time grant Stock Appreciation Rights to Eligible Persons under this Plan. Such Stock Appreciation Rights may, but need not, be granted in conjunction with an Option grant.

5.2 **Exercise.** Stock Appreciation Rights shall entitle the holder, upon exercise thereof in whole or in part, to receive payment in the amount and form determined pursuant to Section 5.3(b). The exercise of Stock Appreciation Rights shall result in a termination of the Stock Appreciation Rights with respect to the number of shares covered by the exercise and, if granted in conjunction with an Option, shall also result in a termination of the related Option with respect to the number of shares covered by the exercise. The exercise period of a Stock Appreciation Right may be extended in accordance with Section 4.1(g) (as applied to Stock Appreciation Rights instead of Options as otherwise therein provided), provided that such extension is not beyond the latest date at which the Stock Appreciation Right would have otherwise expired.

5.3 **Terms and Conditions.** Stock Appreciation Rights granted under this Plan to Eligible Persons shall be evidenced by SAR Agreements, which shall be in such form and contain such provisions, consistent with this Plan, as the Committee, in its sole discretion, shall determine at the time the Stock Appreciation Right is granted.

(a) Stock Appreciation Rights shall not be exercisable during the first six months after their date of grant. Such rights shall be exercisable during the holder's lifetime only by the holder. Following the death of the Participant, the SAR may be exercised (to the extent permitted under the Plan) by the person designated as a beneficiary in a written notification delivered to the Committee prior to the death, or if there is no such written designation, by the executor or administrator of the Participant's estate or by the person or persons to whom such rights pass by will or by the laws of descent and distribution.

(b) Upon exercise of Stock Appreciation Rights, the holder shall be entitled to receive therefor payment, in the sole discretion of the Committee, in the form of shares of Common Stock (rounded down to the next whole number so that no fractional shares are issued), cash or any combination thereof. The amount of such payment shall be equal in value to the difference between the Stock Appreciation Right exercise price per share (which shall be at least equal to the Fair Market per share of the Common Stock as of the date of grant of the SAR) and the Fair Market Value per share of the Common Stock on the date the Stock Appreciation Right is exercised, multiplied by the number of shares with respect to which the Stock Appreciation Right shall have been exercised.

(c) Stock Appreciation Rights shall terminate in accordance with the provisions of Section 4.1(h) (as applied to Stock Appreciation Rights instead of Options as otherwise therein provided) if the holder's employment or service with the Company (or its successor, if applicable) terminates.

5.4 Effect on Related Stock Option. The number of shares of Common Stock with respect to which Stock Appreciation Rights are exercised (rather than the number of shares issued by the Company upon such exercise) shall be deemed for the purpose of Section 3.3 to have been issued under an Option granted pursuant to this Plan and shall not thereafter be available for the granting of further Benefits under this Plan.

5.5 No Rights as a Stockholder. Holders of Stock Appreciation Rights hereunder shall have no rights as stockholders in respect thereof. No adjustments shall be made for dividends (ordinary or extraordinary, whether in cash, securities or other property) or distributions or other rights for which the record date is prior to the date such stock certificate is issued, except as provided in Section 4.1(e), as applied to Stock Appreciation Rights.

ARTICLE VI PERFORMANCE SHARES

6.1 Award of Performance Shares. The Committee shall have the authority to grant Performance Shares to any Eligible Person, subject to the maximum number of shares of Common Stock that may be issued under this Plan pursuant to Section 3.3, above. The Committee shall determine the Eligible Persons to whom, and the time or times at which, Performance Shares shall be awarded, the number of Performance Shares to be included in each award, the duration of the period (the "Performance Period") during which, and the conditions under which, receipt of the shares of Common Stock will be deferred, and the other terms and conditions of the award in addition to those set forth in Section 6.2. The provisions of Performance Share awards need not be the same with respect to each grantee, and such awards to individual grantees need not be the same in subsequent years.

6.2 Terms and Conditions. Performance Shares awarded pursuant to this Article VI shall be subject to the following terms and conditions and such other terms and conditions, not inconsistent with the terms of this Plan, as the Committee shall deem desirable:

(a) **Conditions.** The Committee, in its sole discretion, shall specify the Performance Period during which, and the conditions under which, the receipt of shares of Common Stock covered by the Performance Share award will be deferred. The receipt of shares of Common Stock pursuant to a Performance Share award may be conditioned upon the attainment of one or more pre-established performance goals, which if applicable, may be established in accordance with the requirements of Section 162(m) of the Code and the regulations promulgated thereunder. To meet such requirements, objective performance goals must be established by the Committee in writing not later than 90 days after the commencement of the Performance Period, provided that the outcome is substantially uncertain at the time the goal is established. The performance goals may be based on the Company's stock price, return on assets, return on capital employed, return on shareholders' equity, earnings, earnings per share, total shareholder return, sales, costs, success in

meeting specified product development or other milestones, or otherwise, whether related to the performance of Osiris, a particular business unit, individual performance, or otherwise, as may be established by the Committee from time to time. Except as provided in any applicable Agreement, when circumstances occur that cause predetermined performance objectives to be an inappropriate measure of performance, the Compensation Committee, in its discretion, may adjust the performance goals.

(b) **Award Certificate.** Each Performance Share award shall be evidenced by, and subject to the terms of, a Performance Share certificate executed by the Company. The Performance Share certificate shall specify the number of shares of Common Stock subject to the award, the applicable Performance Period, the applicable performance goals, and the other terms and conditions applicable to such award.

(c) **Stock Certificates.** If the Committee determines, after the expiration of the Performance Period, that the performance goals specified in the Performance Share certificate and all other material terms of the Performance Share award have been satisfied, stock certificates representing the number of shares of Common Stock covered by the Performance Share award shall be issued and registered in the name of, and delivered to, the grantee.

(d) **Termination of Employment or Service.** Unless otherwise determined by the Committee at the time of grant, the Performance Shares will be forfeited upon a grantee's termination of employment or service during the Performance Period for any reason (including death, disability or retirement).

(e) **Payouts.** At the end of a Performance Period, the Committee shall determine the extent to which the applicable performance goals have been satisfied. In the event of a payout with respect to a Performance Share award, such payout shall be made no later than two and one-half ($2\frac{1}{2}$) months following the end of the Performance Period.

(f) **Effect of Recapitalization; Reorganization.** In the event of a transaction described in Section 4.1(e), each outstanding Performance Share award shall be adjusted as provided in Section 4.1(e).

6.3 **Individual Limit.** The maximum number of shares of Common Stock that may be subject to Performance Share awards granted to any individual Eligible Person during any calendar year shall be 50,000 shares (subject to any increase or decrease pursuant to the adjustment provisions of this Plan).

6.4 **Deferrals.** The Committee, in its discretion, may provide an opportunity for Eligible Persons to defer Performance Share awards beyond the scheduled payment date described in Section 6.2(e). In such event, the deferral election and deferred payout shall comply with the requirements of Section 409A of the Code. Accordingly, (i) the deferral election shall be made no later than twelve (12) months prior to the end of the Performance Period (or six months prior to the end of the Performance Period if the Performance Shares qualify as "performance-based compensation" within the meaning of Section 409A), (ii) the deferred payout date shall be a specified date or other permissible payment event under Section 409A that is at least five (5) years after the date described in Section 6.2(e), and (iii) in the case of an Eligible Person who is a "specified employee" within the meaning of Section 409A of the Code and such deferred payment is made on account of his or her separation from service with the Company, the payment is made at least six (6) months following such separation from service.

ARTICLE VII PERFORMANCE UNITS

7.1 **Award of Performance Units.** The Committee shall have the authority to grant Performance Units to any Eligible Person, subject to Section 3.3. The Committee shall determine the Eligible Person to whom, and the time or times at which, Performance Units shall be awarded, the number of

Performance Units to be included in each award, the duration of the period (the "Performance Cycle") during which, and the conditions under which, a grantee's right to Performance Units will be vested, and the other terms and conditions of the award in addition to those set forth in Section 7.2. A Performance Unit shall have a fixed dollar value. The provisions of Performance Unit awards need not be the same with respect to each grantee, and such awards to individual grantees need not be the same in subsequent years.

7.2 Terms and Conditions. The Performance Units awarded pursuant to this Article VII shall be subject to the following terms and conditions and such other terms and conditions, not inconsistent with the terms of this Plan, as the Committee shall deem desirable:

(a) **Conditions.** The Committee, in its sole discretion, shall specify the Performance Cycle during which, and the conditions under which, the grantee's right to Performance Units will be vested. The vesting of Performance Units shall be conditioned upon the attainment of one or more pre-established performance goals, which if applicable may be objective and established in accordance with the requirements of Section 162(m) of the Code and the regulations promulgated thereunder. To meet such requirements, objective performance goals must be established by the Committee in writing not later than 90 days after the commencement of the Performance Cycle, provided that the outcome is substantially uncertain at the time the goal is established. The performance goals may be based on the Company's stock price, return on assets, return on capital employed, return on shareholders' equity, earnings, earnings per share, total shareholder return, sales, costs, success in meeting specified product development or other milestones, or otherwise, whether related to the performance of Osiris, a particular business unit, individual performance, or otherwise, as may be established by the Committee from time to time. Except as provided in any applicable Agreement, when circumstances occur that cause predetermined performance objectives to be an inappropriate measure of performance, the Committee, in its discretion, may adjust the performance goals.

(b) **Award Certificate.** Each Performance Unit Award shall be evidenced by, and subject to the terms of, a Performance Unit certificate executed by the Company. The Performance Unit certificate shall specify the dollar value of the award, the applicable Performance Cycle, the applicable performance goals, and the other terms and conditions applicable to such award.

(c) **Termination of Employment.** Unless otherwise determined by the Committee at the time of grant, the Performance Units will be forfeited upon an Eligible Person's termination of employment or service during the Performance Cycle for any reason (including death, disability or retirement).

(d) **Payouts.** At the end of a Performance Period, the Committee shall determine the extent to which the applicable performance goals have been satisfied. In the event of a payout with respect to a Performance Unit award, such payout shall be made no later than two and one-half ($2\frac{1}{2}$) months following the end of the Performance Period. Payment may be made in cash, shares of Common Stock or a combination of both, as determined by the Committee in its sole discretion.

(e) **Effect of Recapitalization; Reorganization.** In the event of a transaction described in Section 4.1(e), each outstanding Performance Unit award shall be adjusted as provided in Section 4.1(e).

7.3 Individual Limit. The maximum dollar amount of Performance Unit awards that may be granted to any individual during any calendar year shall be \$4,000,000.

7.4 Deferrals. The Committee, in its discretion, may provide an opportunity for Eligible Persons to defer Performance Unit awards beyond the scheduled payment date described in Section 7.2(d). In such event, the deferral election and deferred payout shall comply with the requirements of Section 409A of the Code. Accordingly, (i) the deferral election shall be made no later than twelve (12) months prior to the end of the Performance Period (or six months prior to the end of the

Performance Period if the Performance Units qualify as "performance-based compensation" within the meaning of Section 409A), (ii) the deferred payout date shall be a specified date or other permissible payment event under Section 409A that is at least five (5) years after the date described in Section 7.2(d), and (iii) in the case of an Eligible Person who is a "specified employee" within the meaning of Section 409A of the Code and such deferred payment is made on account of his or her separation from service with the Company, the payment is made at least six (6) months following such separation from service.

ARTICLE VIII RESTRICTED STOCK

8.1 Restricted Stock. The Committee, in its discretion, may from time to time award and direct the Company to issue and transfer Restricted Stock to any Eligible Person eligible to receive Benefits under this Plan. Each Eligible Person who is awarded Restricted Stock subject to continuing restrictions shall receive a Restricted Stock Agreement from the Company in a form specified by the Committee and containing the terms and conditions, consistent with this Plan, as the Committee, in its sole discretion, shall determine at the time the award is made.

Restricted Stock awarded to Eligible Persons may not be sold, transferred, pledged or otherwise encumbered during the Restriction Period. The Eligible Person shall otherwise have the entire beneficial ownership of the Restricted Stock awarded to him or her, including the right to receive dividends and the right to vote such Restricted Stock.

If an Eligible Person ceases to be employed by, or serve as a Non-Employee Director of, the Company prior to the expiration of the Restriction Period, or if the specified conditions are not met, then he or she shall forfeit all of his or her Restricted Stock with respect to which the Restriction Period has not yet expired and those shares of Common Stock must be immediately returned to the Company; provided, however, that the Restricted Stock Agreements, in the discretion of the Committee and pursuant to such terms and conditions as it may impose, may provide: (1) that, if such Eligible Person's employment or service terminates for any reason other than conduct that in the judgment of the Committee involves dishonesty or action by the Eligible Person that is detrimental to the best interests of the Company, then the Restricted Stock or any related compensation deferral or a portion thereof shall not be forfeited; (2) that, if such Eligible Person's employment or service terminates on account of total and permanent disability, then the Eligible Person shall not forfeit his or her Restricted Stock or any related compensation deferral or a portion thereof; and (3) that, if such Eligible Person dies while employed by, or serving as a Non-Employee Director of, the Company, then his or her Restricted Stock or any related compensation deferral or a portion thereof is not forfeited. In addition, the Committee shall, in accordance with its authority under Section 2.3 hereof, have the power to make any determinations as to the lapse of restrictions in respect of any Restricted Stock upon the occurrence of any event described above.

Subject to Section 10.10, each Eligible Person who is awarded Restricted Stock may, but need not, be issued a stock certificate in respect of such shares of Restricted Stock. Each certificate registered in the name of an Eligible Person, if any, shall bear an appropriate legend referring to the terms, conditions and restrictions applicable to such award as specifically set forth in the Restricted Stock Agreement.

The Committee shall require that any stock certificate issued in the name of an Eligible Person representing shares of Restricted Stock be held in the custody of the Company until the expiration of the Restriction Period applicable to such Restricted Stock and that, as a condition of such issuance of a certificate for Restricted Stock, the Eligible Person shall have delivered a stock power, endorsed in blank, relating to the shares covered by such certificate. In no event shall the Restriction Period end prior to the payment, or the making by the Eligible Person to the Company of adequate provision for

the payment, of the amount of any federal, state or local income or employment tax withholding that may be required with respect to the Restricted Stock.

During the Restriction Period, the individual who owns Restricted Stock shall have the right to vote shares of Restricted Stock and to receive any dividends or other distributions paid on such shares, subject to any restrictions deemed appropriate by the Committee.

If any change is made in the Common Stock by reason of any merger, consolidation, reorganization, recapitalization, stock dividend, split up, combination of shares, exchange of shares, change in corporate structure, or otherwise, then any shares received by an Eligible Person with respect to Restricted Stock shall be subject to the same restrictions applicable to such Restricted Stock and the certificates representing such shares shall be deposited with the Company.

ARTICLE IX CHANGE OF CONTROL

9.1 Upon a Change of Control where the Company is not the surviving corporation (or survives only as a subsidiary of another corporation), unless the Committee determines otherwise, all outstanding Benefits shall be assumed by, or replaced with comparable rights granted by, the surviving corporation.

9.2 Notwithstanding the foregoing, subject to Section 9.3, in the event of a Change of Control, the Committee may take any of the following actions: (a) require that holders surrender their outstanding Options and Stock Appreciation Rights in exchange for a payment by the Company, in cash or Common Stock as determined by the Committee, in an amount equal to the amount by which the then Fair Market Value of the shares subject to the holder's unexercised Options and Stock Appreciation Rights exceeds the exercise price of the Options and Stock Appreciation Rights; (b) after giving holders an opportunity to exercise their outstanding Options and Stock Appreciation Rights, terminate any or all unexercised Options and Stock Appreciation Rights, at such time as the Committee deems appropriate; or (c) declare all (or a portion of all) outstanding Options and Stock Appreciation Rights to be fully exercisable and declare that all (or certain) restrictions and conditions on outstanding Performance Shares, Performance Unit, and Restricted Stock shall immediately lapse. Any surrender or termination of rights under this Section 9.2 shall take place as of the date of the Change of Control or such other date as the Committee may specify.

9.3 Notwithstanding anything in the Plan to the contrary, in the event of a Change of Control, the Committee shall not have the right to take any actions described in the Plan (including without limitation actions described in Section 9.2) that would make the Change of Control ineligible for favorable accounting treatment or that would make the Change of Control ineligible for desired tax treatment if, in the absence of such right, the Change of Control would qualify for such treatment and the Company intends to use such treatment with respect to the Change of Control.

ARTICLE X MISCELLANEOUS

10.1 **Withholding Taxes.** An Eligible Person granted Options, Restricted Stock, Stock Appreciation Rights, Performance Shares or Performance Units under this Plan shall be conclusively deemed to have authorized the Company to withhold from the salary, commissions, fees or other compensation of such Eligible Person funds in amounts or property (including Common Stock) in value equal to any federal, state and local income, employment or other withholding taxes applicable to the income recognized by such Eligible Person and attributable to the Options, Option Shares, Restricted Stock, Stock Appreciation Rights, Performance Shares or Performance Units as, when and to the extent, if any, required by law; provided, however, that, in lieu of the withholding of federal, state and local taxes as herein provided, the Company may require that the Eligible Person (or other person exercising such Option, Stock Appreciation Rights, Performance Shares or Performance Units or

holding such Restricted Stock) pay the Company an amount equal to the federal, state and local withholding taxes on such income at the time such withholding is required or such other time as shall be satisfactory to the Company.

10.2 Amendment, Suspension, Discontinuance or Termination of Plan. The Committee may from time to time amend, suspend or discontinue this Plan or revise it in any respect whatsoever for the purpose of maintaining or improving the effectiveness of this Plan as an incentive device, for the purpose of conforming this Plan to applicable governmental regulations or to any change in applicable law or regulations or for any other purpose permitted by law; provided, however, that no such action by the Committee shall adversely affect any Benefit theretofore granted under this Plan without the consent of the holder so affected; and provided further that the Committee may not materially increase the number of shares of Common Stock authorized under Section 3.3 of this Plan or materially modify this Plan's requirements as to eligibility for participation or materially increase the benefits accruing to participants under this Plan, in any such case without the approval of the stockholders of the Company. Unless sooner terminated by the Committee, this Plan will terminate on April 16, 2016.

10.3 Governing Law. This Plan shall be governed by, and construed in accordance with, the laws of the State of Delaware (without giving effect to principles of conflict of laws).

10.4 Designation. This Plan may be referred to in other documents and instruments as the "Osiris Therapeutics, Inc. Amended and Restated 2006 Omnibus Plan."

10.5 Indemnification of Committee. In addition to such other rights of indemnification as they may have as directors or as members of the Committee, the members of the Committee shall be indemnified by the Company against the reasonable expenses, including attorneys' fees, actually and necessarily incurred in connection with the defense of any investigation, action, suit or proceeding, or in connection with any appeal therefrom, to which they or any of them may be a party by reason of any action taken or failure to act under or in connection with this Plan or any Benefit, and against all amounts paid by them in settlement thereof (provided such settlement is approved by independent legal counsel selected by the Company) or paid by them in satisfaction of a judgment in or dismissal or other discontinuance of any such investigation, action, suit or proceeding, except in relation to matters as to which it shall be adjudged in such investigation, action, suit or proceeding that such Committee member is liable for negligence or misconduct in the performance of his or her duties; provided that, within 60 days after institution of any such investigation, action, suit or proceeding, a Committee member shall in writing offer the Company the opportunity, at its own expense, to handle and defend the same.

10.6 Reservation of Shares. The Company shall at all times during the term of this Plan, and so long as any Benefit shall be outstanding, reserve and keep available (and will seek or obtain from any regulatory body having jurisdiction any requisite authority in order to issue) such number of shares of its Common Stock as shall be sufficient to satisfy the requirements of this Plan. Inability of the Company to obtain from any regulatory body of appropriate jurisdiction authority considered by the Company to be necessary or desirable to the lawful issuance of any shares of its Common Stock hereunder shall relieve the Company of any liability in respect of the nonissuance or sale of such Common Stock as to which such requisite authority shall not have been obtained.

10.7 Application of Funds. The proceeds received by the Company from the sale of Common Stock pursuant to the exercise of Options will be used for general corporate purposes.

10.8 No Obligation to Exercise. The granting of a Benefit shall impose no obligation upon the holder to exercise or otherwise realize the value of that Benefit.

10.9 Approval of Stockholders. No Benefit granted under this Plan shall be enforceable against the Company unless and until this Plan, insofar as it relates to such Benefit, has been approved or ratified by the stockholders of the Company in the manner and to the extent required by the Exchange Act and the General Corporation Law of the State of Delaware.

10.10 Uncertificated Shares. Each Eligible Person who exercises an Option to acquire Common Stock or is awarded Restricted Stock may, but need not, be issued a stock certificate in respect of the Common Stock so acquired. A "book entry" (*i.e.* , a computerized or manual entry) shall be made in the records of the Company to evidence the issuance of shares of Common Stock to an Eligible Person where no certificate is issued in the name of the Eligible Person. Such Company records, absent manifest error, shall be binding on Eligible Persons. In all instances where the date of issuance of shares may be deemed significant but no certificate is issued in accordance with this Section 10.10, the date of the book entry shall be the relevant date for such purposes.

10.11 Forfeiture for Competition. If a participant in this Plan provides services to a competitor of the Company or any of its subsidiaries, whether as an employee, officer, director, independent contractor, consultant, agent or otherwise, such services being of a nature that can reasonably be expected to involve the skills and experience used or developed by the participant while an Eligible Person, then that participant's rights to any Benefits hereunder shall automatically be forfeited, subject to a determination to the contrary by the Committee.

10.12 Successors. This Plan shall be binding upon any and all successors of the Company.

10.13 Employment/Service Rights. Nothing in this Plan or in any Agreement shall confer on any Employee any right to continue in the employ of the Company or any of its subsidiaries or shall interfere in any way with the right of the Company or any of its subsidiaries to terminate such person's employment at any time. Nothing in this Plan or in any Agreement shall confer on any Non-Employee Director any right to continue to serve as a member of the Board, nor is there any implied agreement or understanding that such Non-Employee Director will be nominated for reelection to the Board.

10.14 Other Actions. Nothing contained in the Plan shall be construed to limit the authority of the Company to exercise its corporate rights and powers, including, but not by way of limitation, the right of the Company to grant options for proper corporate purposes other than under the Plan with respect to any employee or other person, firm, corporation or association.

10.15 Tax Treatment and Characterization. Neither the Company nor any other person represents or warrants to any Plan participant (i) that any Option granted hereunder shall be considered an ISO for applicable tax purposes or (ii) that favorable or desirable tax treatment or characterization will be applicable in respect of any Benefit.

10.16 Legend. The Committee may require each person exercising an Option to represent to and agree with the Company in writing that he or she is acquiring the Option Shares without a view to distribution thereof. In addition to any legend required by this Plan, the stock certificates representing such Option Shares may include any legend which the Committee deems appropriate to reflect any restrictions on transfer.

All certificates for Option Shares shall be subject to such stock transfer orders and other restrictions as the Committee may deem advisable under the rules, regulations and other requirements of the Securities and Exchange Commission, any stock exchange upon which the Common Stock is then listed, any applicable federal or state securities law, and any applicable corporate law, and the Committee may cause a legend or legends to be put on any such certificates to make appropriate reference to such restrictions.

OSIRIS THERAPEUTICS, INC.

**THIS PROXY IS BEING SOLICITED BY THE BOARD OF DIRECTORS
OF
OSIRIS THERAPEUTICS, INC.**

The undersigned, revoking any previous proxies relating to these shares, hereby acknowledges receipt of the Notice and Proxy Statement dated April 29, 2008 in connection with the 2008 Annual Meeting of Stockholders of Osiris Therapeutics, Inc. to be held at 2:00 p.m., EDT, on Wednesday, June 4, 2008 at the offices of Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, Maryland 21046, and hereby appoints C. Randal Mills and Philip R. Jacoby, Jr., and each of them (with full power to act alone), the attorneys and proxies of the undersigned, with power of substitution to each, to vote all shares of the Common Stock of OSIRIS THERAPEUTICS, INC. registered in the name provided herein which the undersigned is entitled to vote at the 2008 Annual Meeting of Stockholders, and at any postponements or adjournments thereof, with all the powers the undersigned would have if personally present. Without limiting the general authorization hereby given, said proxies are, and each of them is, instructed to vote or act as indicated on the reverse side hereof on the proposals set forth in said Proxy.

SEE REVERSE SIDE FOR ALL PROPOSALS. If you wish to vote in accordance with the Board of Directors' recommendations, just sign on the reverse side. You need not mark any boxes. Please mark, date and return this card promptly, using the enclosed envelope. No postage is required if mailed in the United States.

(SEE REVERSE SIDE)

Please Detach and Mail in the Envelope Provided

Please mark votes as in this example.

The Board of Directors recommends a vote FOR Proposals 1, 2 and 3.

1. Election of two Class II Directors (or if any nominee is not available for election, such substitute as the Board of Directors may designate) for a three-year term.

Nominees:

C. Randal Mills and Felix Gutzwiller

FOR ALL NOMINEES

WITHHOLD AUTHORITY FOR ALL NOMINEES

FOR ALL NOMINEES EXCEPT AS NOTED

TO VOTE "FOR ALL NOMINEES" OR TO WITHHOLD AUTHORITY TO VOTE FOR ALL NOMINEES MARK THE APPROPRIATE BOX ABOVE. TO WITHHOLD AUTHORITY ONLY FOR A SPECIFIC NOMINEE, PRINT THE NAME OF THE NOMINEE IN RESPECT OF WHICH AUTHORITY IS TO BE WITHHELD ON THE LINE ABOVE APPEARING BESIDE "FOR ALL NOMINEES EXCEPT AS NOTED"

2. Proposal to approve the Amended and Restated 2006 Omnibus Plan.

FOR

AGAINST

ABSTAIN

3. Proposal to ratify the appointment of Stegman & Company as Osiris Therapeutics, Inc.'s independent registered public accounting firm for the fiscal year ending December 31, 2008.

FOR

AGAINST

ABSTAIN

In their discretion, the proxies are authorized to vote upon such other matters as may properly come before the meeting or any adjournments or postponements thereof.

This Proxy when executed will be voted in the manner directed herein. If no direction is made this proxy will be voted FOR ALL NOMINEES in Proposal No. 1, FOR Proposal No. 2 and FOR Proposal No. 3.

PLEASE MARK, SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE.

Signature: _____

Date:

Signature: _____

Date:

NOTE: Please insert date and sign exactly as name(s) appears hereon. Joint owners should each sign. When signing as attorney, executor, administrator, trustee, guardian, or officer or other authorized person on behalf of a corporation or other entity, or in another representative capacity, please give full title as such under signature(s).

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