

OSIRIS THERAPEUTICS, INC.
Form DEF 14A
April 14, 2011

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

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

OSIRIS THERAPEUTICS, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

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 - (1) Title of each class of securities to which transaction applies:
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(1) Amount Previously Paid:

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(3) Filing Party:

(4) Date Filed:

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7015 Albert Einstein Drive
Columbia, MD 21046
Tel: 443.545.1800
Fax: 443.545.1701

www.Osiris.com

April 15, 2011

Dear Stockholders,

You are cordially invited to attend the 2011 Annual Meeting of Stockholders of Osiris Therapeutics, Inc. to be held at 1:00 p.m. Eastern Daylight Time ("EDT"), on Thursday, May 26, 2011, at our corporate offices located at 7015 Albert Einstein Drive, Columbia, Maryland 21046.

At the Annual Meeting, we will ask you to vote on:

1. The election of two directors, each for a term of three years and until their respective successors are duly elected and qualified;
2. The approval of the extension until May 24, 2015 of the expiration date of a warrant held by the Chairman of our Board of Directors;
3. The ratification of the appointment of Grant Thornton LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2011;
4. The approval, on a non-binding advisory basis, of the compensation paid to our named executive officers, as disclosed in this Proxy Statement;
5. The recommendation, on a non-binding advisory basis, of the frequency that we will hold a non-binding advisory stockholder vote in the future to approve the compensation paid to our named executive officers; and
6. Such other matters as may properly come before the Annual Meeting, or any adjournments or postponements thereof.

If you were a stockholder of record at the close of business on April 8, 2011, you are entitled to notice of, and to vote at, the annual meeting. Your vote is very important to us. You may vote over the Internet, by telephone or, if you request to receive a printed copy of the proxy materials, by completing, signing and mailing a proxy card.

Sincerely,

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

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OSIRIS THERAPEUTICS, INC.

NOTICE OF 2011 ANNUAL MEETING OF STOCKHOLDERS

- TIME:** 1:00 P.M. Eastern Daylight Time on Thursday, May 26, 2011
- PLACE:** Osiris Therapeutics, Inc.
7015 Albert Einstein Drive
Columbia, Maryland 21046
- ITEMS OF BUSINESS:**
1. To elect two members of the Board of Directors, each for a three-year term and until their respective successors are duly elected and qualified.
 2. To approve the extension until May 24, 2015 of the expiration date of a warrant held by the Chairman of our Board of Directors.
 3. To ratify the appointment of Grant Thornton LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2011.
 4. To approve, on a non-binding advisory basis, the compensation paid to our named executive officers, as disclosed in this Proxy Statement.
 5. To recommend, on a non-binding advisory basis, the frequency that we will hold a non-binding advisory stockholder vote in the future to approve the compensation paid to our named executive officers.
 6. To consider such other business as may properly be brought before the 2011 Annual Meeting and any adjournment or postponement thereof.
- RECORD DATE:** You are entitled to vote at the 2011 Annual Meeting if you were a stockholder of record at the close of business on April 8, 2011.
- ANNUAL MEETING ADMISSION:** We hope you will be able to attend the Annual Meeting. 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.
- PROXY VOTING:** It is important that your shares be represented and voted at the meeting. You may vote your shares by voting in person at the meeting, by Internet or by telephone, or by completing and returning a proxy card. See details under the heading "How do I vote?"
- INSPECTION OF LIST OF STOCKHOLDERS OF RECORD:** A list of the stockholders of record as of April 8, 2011 will be available for inspection at the 2011 Annual Meeting.

BY ORDER OF THE
BOARD OF
DIRECTORS

Philip R. Jacoby, Jr.
Corporate Secretary

April 15, 2011

**Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting
To Be Held on May 26, 2011:**

**The proxy statement and annual report to security holders are available
at www.proxyvote.com.**

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7015 Albert Einstein Drive
Columbia, MD 21046
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www.Osiris.com

April 15, 2011

PROXY STATEMENT FOR 2011 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 2011 Annual Meeting of Stockholders of Osiris Therapeutics, Inc. The 2011 Annual Meeting is scheduled to be held on Thursday May 26, 2011, at 1:00 p.m., EDT, at Osiris Therapeutics, Inc.'s principal executive office, located at 7015 Albert Einstein Drive, Columbia, Maryland 21046.

On or about April 15, 2011, we will begin mailing either a Notice of Internet Availability of Proxy Materials or, in certain cases, printed sets of the proxy materials, including the Notice of 2011 Annual Meeting of Stockholders, this proxy statement, the accompanying proxy card and Osiris Therapeutics, Inc.'s 2011 Annual Report to Stockholders, to stockholders who according to our records owned shares of our common stock at the close of business on April 8, 2011. For those stockholders located outside of the United States, notice is also being sent by email or facsimile to any email or facsimile number provided to us by the stockholder, and appearing on our records.

This proxy statement and the accompanying annual report to stockholders are also available electronically at <http://investor.osiris.com/documents.cfm>.

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GENERAL INFORMATION ABOUT THE ANNUAL MEETING

Why am I receiving these proxy materials?

We are providing you with proxy materials, or access thereto, in connection with the solicitation by the Board of Directors of Osiris Therapeutics, Inc., a Maryland corporation ("Osiris," the "Company," "we," "us" or "our"), of proxies to be used at our 2011 Annual Meeting of Stockholders and at any adjournment or postponement thereof. Stockholders are invited to attend the 2011 Annual Meeting, which is scheduled to be held at 1:00 p.m. on Thursday, May 26, 2011, and are requested to vote on the proposals described in this Proxy Statement.

A full set of printed proxy materials or a Notice of Internet Availability of Proxy Materials ("Notice of Internet Availability") will be sent to record and beneficial stockholders starting on or around April 15, 2011, and the proxy materials, including the Notice of Annual Meeting, Proxy Statement, Proxy Card and 2010 Annual Report, will be made available to stockholders on the Internet on the same date.

Why did I receive a Notice of Internet Availability of Proxy Materials instead of a full set of proxy materials? Alternatively, why did I receive a full set of printed proxy materials this year instead of a Notice of Internet Availability?

Pursuant to rules adopted by the Securities and Exchange Commission ("SEC"), we are providing access to the Company's proxy materials over the Internet rather than printing and mailing the proxy materials to all stockholders. We believe electronic delivery will expedite the receipt of materials and will help lower our costs and reduce the environmental impact of our annual meeting materials. Therefore, a Notice of Internet Availability will be mailed to stockholders (or e-mailed, in the case of stockholders that have previously requested to receive proxy materials electronically) starting on or around April 15, 2011. The Notice of Internet Availability will provide instructions as to how stockholders may access and review the proxy materials, including the Notice of Annual Meeting, Proxy Statement, Proxy Card and 2010 Annual Report, on the website referred to in the Notice of Internet Availability or, alternatively, how to request that a copy of the proxy materials, including a proxy card, be sent to them by mail. The Notice of Internet Availability will also provide voting instructions. In addition, stockholders may request to receive the proxy materials in printed form by mail or electronically by e-mail on an ongoing basis for future stockholder meetings. Please note that, while our proxy materials are available at the website referenced in the Notice of Internet Availability, and our Notice of Annual Meeting, Proxy Statement and 2010 Annual Report are available on our website, no other information contained on either website is incorporated by reference in or considered to be a part of this document.

Certain of our record and beneficial stockholders may receive a full set of printed proxy materials this year instead of a Notice of Internet Availability either because that stockholder previously requested to receive materials in printed form or because the Company has the option to stratify its mailing by sending a Notice of Internet Availability to certain stockholders and a full printed set of proxy materials to others. The following questions and answers about the proxy materials and the Annual Meeting, while generally referring to the Notice of Internet Availability, apply equally to those stockholders receiving a full set of printed proxy materials.

What information is contained in these materials?

The information included in this Proxy Statement relates to proposals you will vote on at the 2011 Annual Meeting, the voting process, the compensation of directors and our most highly paid executive officers in 2010 and certain other information.

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How may I obtain directions to attend the 2011 Annual Meeting of Stockholders and vote in person?

You may obtain directions to attend the meeting and vote in person by calling our toll-free number (800) 579-1639, visiting our website at <http://www.proxyvote.com> or sending us an e-mail at sendmaterial@proxyvote.com.

Why did I receive more than one Notice of Internet Availability or set of printed proxy materials?

You may receive multiple Notices of Internet Availability or sets of printed proxy materials if you hold your shares of Osiris's common stock in multiple accounts (such as through a brokerage account and an employee benefit plan). **If you hold your shares of Osiris's common stock in multiple accounts, you should vote your shares as described in each separate Notice of Internet Availability or set of printed proxy materials you receive.**

If you are a stockholder of record, you may contact the Corporate Secretary, Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, Maryland 21046 (telephone: (443) 545-1800) if you are currently receiving multiple Notices of Internet Availability or sets of printed proxy materials and want to request delivery of a single Notice of Internet Availability or set of printed proxy materials in the future. If your shares are held in "street name" and you want to increase or decrease the number of Notices of Internet Availability or sets of printed proxy materials delivered to your household in the future, you should contact your broker, bank or other custodian who holds the shares on your behalf.

What is the difference between a "stockholder of record" and a "street name" holder?

If your shares are registered directly in your name with Osiris's transfer agent, StockTrans, Inc. ("StockTrans"), you are considered a "stockholder of record" or a "registered stockholder" of those shares. In such case, your Notice of Internet Availability or set of printed proxy materials has been sent to you directly by Osiris.

If your shares are held in a stock brokerage account or by a bank, trust or other nominee or custodian, you are considered the "beneficial owner" of those shares, which are held in "street name." A Notice of Internet Availability or set of printed proxy materials has been forwarded to you by or on behalf of your broker, bank, trustee or other holder, who is considered the stockholder of record of those shares. As the beneficial owner, you have the right to direct your broker, bank, trustee or other holder of record as to how to vote your shares by following its instructions for voting.

Who is entitled to vote at the 2011 Annual Meeting?

Osiris's Board of Directors has established April 8, 2011 as the record date for the 2011 Annual Meeting of Stockholders. Only stockholders of record at the close of business on the record date are entitled to receive notice of, and to vote at, the 2011 Annual Meeting. At the close of business on April 8, 2011, there were 32,819,020 outstanding shares of Osiris's common stock. Each share of common stock is entitled to one vote on each matter properly brought before the 2011 Annual Meeting.

What will I vote on?

There are five proposals scheduled to be voted on at the 2011 Annual Meeting:

the election of two members of our Board of Directors, each to serve for a three-year term expiring at the annual meeting of stockholders to be held in 2014 and until their successors shall be duly elected and qualified;

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a proposal to approve the extension until May 24, 2015 of the expiration date of a warrant held by the Chairman of our Board of Directors, Mr. Peter Friedli;

the ratification of the appointment of Grant Thornton LLP as our independent registered public accounting firm for the fiscal year ended December 31, 2011;

a proposal to approve, on a non-binding advisory basis, the compensation paid to our named executive officers, as disclosed in this Proxy Statement; and

a proposal to recommend, on a non-binding advisory basis, the frequency of us obtaining a non-binding advisory stockholder vote in the future on our executive compensation program.

How many votes must be present to hold the 2010 Annual Meeting?

A "quorum" is necessary to call the 2011 Annual Meeting to order and transact business. A quorum is established if the holders of a majority of the votes entitled to be cast by stockholders are present at the meeting, either in person or by proxy. Abstentions and broker non-votes are counted as present for purposes of determining a quorum. Shares of common stock represented by executed proxies received by the Company will be counted for purposes of establishing a quorum at the meeting, regardless of how or whether such shares are voted on any specific proposal.

What are the voting recommendations of Osiris's Board of Directors?

Osiris's Board of Directors recommends that you vote your shares as follows:

"**FOR**" the election of each of the two nominees to the Board;

"**FOR**" the proposal to extend the expiration of the warrant;

"**FOR**" the ratification of the appointment of Grant Thornton LLP as Osiris' independent registered public accounting firm for the fiscal year ended December 31, 2011;

"**FOR**" the approval of the non-binding advisory resolution relating to the compensation paid to our named executive officers as disclosed in this Proxy Statement; and

"**THREE YEARS**" when voting on the frequency of the non-binding advisory stockholder vote on executive compensation.

How do I vote?

You may vote in several different ways:

In person at the 2011 Annual Meeting

You may vote in person at the 2011 Annual Meeting. You may also be represented by another person at the meeting by executing a proxy properly designating that person. If you are the beneficial owner of shares held in "street name," you must obtain a legal proxy from your broker,

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bank or other holder of record and present it to the inspectors of election with your ballot to be able to vote at the meeting.

By telephone

You may vote by calling the telephone number specified on the proxy card. Please have your proxy card handy when you call and use any touch-tone phone to transmit your voting instructions.

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By Internet

You may vote by using the Internet at www.proxyvote.com to submit your voting instructions. Please have your proxy card handy when you go online. If you vote on the Internet, you may also request electronic delivery of future proxy materials.

By mail

You may vote by completing, signing, dating and returning a proxy card. A proxy card is available on line at the website provided in the Notice of Internet Availability, and a proxy card will also be mailed to you with a full set of proxy materials upon request. If you did not receive a Notice of Internet Availability, but instead received delivery of a full set of proxy materials, a proxy card is included with the full set of proxy materials mailed to you. In either case, a postage-paid envelope will be provided along with the proxy card.

Unless in the unlikely event the meeting is adjourned or postponed, in which case the time may be extended, telephone and Internet voting for stockholders of record will be available until 11:59 PM Eastern Time on May 25, 2011, and mailed proxy cards must be received by May 25, 2011 in order to be voted at the Annual Meeting. The availability of telephone and Internet voting for beneficial owners of other shares held in "street name" will depend on your broker, bank or other holder of record and we recommend that you follow the voting instructions on the Notice of Internet Availability that you receive from them.

If you are mailed or otherwise receive or obtain a proxy card or voting instruction card, and you choose to vote by telephone or by Internet, you do not have to return your proxy card or voting instruction card. However, even if you plan to attend the 2011 Annual Meeting, we recommend that you vote your shares in advance so that your vote will be counted if you later decide not to attend the meeting.

How can I change my vote?

If you are a stockholder of record, you may revoke your proxy before it is exercised by:

Sending a written notice to the Corporate Secretary, Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, Maryland 21046, stating that your proxy is revoked. The notice must be received prior to the 2011 Annual Meeting;

Signing and delivering a later-dated proxy card to the Corporate Secretary after voting by telephone or using the Internet, so that it is received prior to the 2011 Annual Meeting;

Voting by telephone or using the Internet after the date of your proxy card and before the 2011 Annual Meeting; or

Attending the 2011 Annual Meeting and voting in person by ballot. Your attendance at the 2011 Annual Meeting in person will not cause your previously granted proxy to be revoked unless you specifically so request or you vote by ballot at the meeting.

If you are a beneficial owner of shares held in "street name", you may submit new proxy voting instructions by contacting your bank, broker or other holder of record.

Who will count the votes?

A stockholder will be appointed at the 2011 Annual Meeting to serve as the Company's inspector of election at the 2011 Annual Meeting and will tabulate the votes.

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What is an abstention?

An "abstention" occurs when a stockholder executes a proxy using the Internet, by phone or by returning a proxy card, but he or she refrains from voting as to a particular matter by indicating that he or she "abstains" as to that matter.

What is a broker non-vote?

Broker non-votes occur when a broker, such as a bank holding shares on behalf of beneficial owners, does not receive voting instructions from the beneficial holders at least ten days before the meeting. If that happens, the broker may vote those shares only on matters deemed "routine," such as the ratification of the appointment of the independent registered public accounting firm. On non-routine matters, brokers cannot vote unless they receive voting instructions from beneficial owners, resulting in the submission by the brokers of proxies indicating so called "broker non-votes." All of the items being considered at the 2011 Annual Meeting, except for the ratification of the appointment of the independent registered public accounting firm, are considered "non-routine" matters.

What vote is required to approve each proposal and how are votes counted?

Proposal 1: Election of Director Nominees A plurality of the votes cast is required to elect a director, assuming the presence of a quorum. The two individuals receiving the most votes will be elected. Abstentions are not counted for purposes of electing directors. You may vote FOR each nominee or WITHHOLD your vote from either or both nominees. Votes that are withheld will not be included in the vote tally for the election of directors. Assuming that only two nominees are proposed for election and at least one vote is cast for each of the two nominees, broker non-votes will have no effect on the result of the vote.

Proposal 2: Approval of the Extension until May 24, 2015 of the Expiration Date of a Warrant Held by the Chairman of our Board of Directors, Mr. Peter Friedli A majority of the votes cast is required to approve this proposal, assuming the presence of a quorum. You may vote FOR, AGAINST or ABSTAIN on this proposal. Abstentions and broker non-votes are not considered as votes cast on the matter and thus will have no effect on the result of the vote.

Proposal 3: Ratify Appointment of Independent Registered Public Accounting Firm Approval of the proposal to ratify the appointment of Grant Thornton LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2011 requires the affirmative vote of the holders of a majority of the votes cast at the Annual Meeting, assuming the presence of a quorum.. Brokers may vote on this proposal on a discretionary basis without direction from stockholders. Abstentions and broker non-votes are not considered as votes cast on the motion and thus will have no effect on the results 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 appointment of Grant Thornton LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2011, the Audit Committee of our Board of Directors may determine to reconsider the appointment.

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Proposal 4: Approve, on a Non-Binding Advisory Basis, the Compensation Paid to our Named Executive Officers, as disclosed in this Proxy Statement

The "say-on-pay" vote is an advisory vote only, and therefore, it will not bind Osiris or the Board. However, the Board and the Compensation Committee will consider the voting results as appropriate when making future compensation decisions for our named executive officers. The compensation paid to our named executive officers, as disclosed in this Proxy Statement, will be approved, on a non-binding advisory basis, if a majority of the votes cast on this proposal at the Annual Meeting vote "FOR" this proposal, assuming the presence of a quorum. Abstentions and broker non-votes are not considered as votes on the matter and thus will have no effect on the result of the vote.

Proposal 5: Approve, on a Non-Binding Advisory Basis, the Frequency of Non-Binding Advisory Stockholder Vote to Approve the Compensation Paid to our Named Executive Officers

The frequency of "say-on-pay" vote is a non-binding advisory vote only, and therefore, it will not bind Osiris or the Board. However, the Board will consider the voting results as appropriate when establishing the agenda for future annual meetings. The frequency (one, two or three years) of the advisory stockholder vote to approve to the compensation paid to our named executive officers receiving the most votes at the Annual Meeting will be the frequency deemed to have been recommended by the stockholders.

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. We do not expect to engage a third party to assist us in the solicitation.

Where can I find the voting results of the 2011 Annual Meeting?

We will announce preliminary voting results at the 2011 Annual Meeting and will publish final results in a Current Report on Form 8-K to be filed with the SEC within four business days of the 2011 Annual Meeting.

How do I obtain a separate Notice of Internet Availability or set of printed proxy materials if I share an address with other stockholders?

When more than one stockholder of record of Osiris's common stock shares the same address, we may deliver only one Notice of Internet Availability or set of printed proxy materials to that address unless we have received contrary instructions from one or more of those stockholders. Similarly, brokers and other nominees holding shares of Osiris's common stock in "street name" for more than one beneficial owner with the same address may deliver only one Notice of Internet Availability or set of printed proxy materials to that address if they have received consent from those beneficial owners. We will deliver promptly upon written or oral request a separate Notice of Internet Availability or set of printed proxy materials to any stockholder, including a beneficial owner of shares held in "street name," at a shared address to which a single Notice of Internet Availability or set of printed proxy materials was delivered. To receive additional Notices of Internet Availability or sets of printed proxy materials, or if you are a stockholder of record and would like to receive separate Notices of Internet Availability or sets of printed proxy materials for future annual meetings, you may call or write the Corporate Secretary, Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, Maryland 21046

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(telephone: 443-545-1800). If you are a beneficial owner of shares held in "street name" and would like to receive separate Notices of Internet Availability or sets of printed proxy materials, you may contact your bank, broker or other holder of record. In addition, if you are a stockholder of record who shares the same address with another stockholder of record and you currently receive separate copies of the Notice of Internet Availability or set of printed proxy materials, you may write or call the Office of the Secretary as indicated above to request that a single Notice of Internet Availability or set of printed proxy materials be delivered to that address.

How can I obtain a copy of Osiris's Annual Report on Form 10-K for the year ended December 31, 2010?

Osiris will upon receipt of a request in writing provide without charge to each person from whom proxies are being solicited for the 2011 Annual Meeting a copy of our Annual Report on Form 10-K for the year ended December 31, 2010, including the financial statements and any schedules, required to be filed with the Securities and Exchange Commission, excluding exhibits. We may impose a reasonable fee for providing the exhibits to the Form 10-K. Requests should be made to Corporate Secretary, Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, MD 21046. Osiris's Annual Report on Form 10-K is also available free of charge through the Investor Relations SEC Filings link on our website, <http://investor.osiris.com/documents.cfm>.

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 2013; C. Randal Mills and Felix Gutzwiller constitute the Class II directors, with a term ending at this Annual Meeting to be held in 2011; and Peter Friedli constitutes the Class III director, with a term ending at the Annual Meeting to be held in 2012. In each case, subject to earlier death, resignation, removal or retirement, the directors remain in office until their respective successors are duly elected and qualified, notwithstanding the expiration of the otherwise applicable term.

On February 14, 2011, our Board accepted the recommendation of its Nominating Committee comprised of 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 2014 Annual Meeting of Stockholders, and until their 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 Dr. Mills and Dr. 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 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.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE ELECTION OF C. RANDAL MILLS AND FELIX GUTZWILLER AS DIRECTORS.

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PROPOSAL NO. 2 APPROVAL OF THE EXTENSION UNTIL MAY 24, 2015 OF THE EXPIRATION DATE OF A WARRANT HELD BY THE CHAIRMAN OF OUR BOARD OF DIRECTORS, MR. PETER FRIEDLI

We are seeking stockholder approval of the extension of the expiration date of a Warrant issued to Mr. Peter Friedli, the Chairman of our Board of Directors and our Co-Founder. This Warrant was originally issued in 2006, in connection with and just prior to our initial public offering, and is currently exercisable for up to 1,000,000 shares of our common stock at \$11.00 per share, the price for which shares were sold in our initial public offering. The Warrant was scheduled to expire on May 24, 2011, but it has recently been amended and restated, pursuant to which the expiration date was extended for four years, until May 24, 2015, subject to stockholder approval.

Mr. Friedli or entities with which he is affiliated, have been responsible for procuring since 1993, an aggregate of approximately \$270 million in debt and equity financing for us and our predecessor company. The Warrant was issued in recognition of Mr. Friedli's successful efforts in procuring for us, prior to the IPO, accommodations relative to then previously existing financing transactions.

In light of Mr. Friedli's unwavering support of Osiris over a period of many years, and in recognition of his invaluable contributions to Osiris, as founder, as a director and as Chairman of our Board, and to encourage his continued support, our Board of Directors and Compensation Committee, by the unanimous vote of all independent and disinterested members of each, approved on April 1, 2011, the amended and restated terms of the Warrant, including the extension of its expiration date, for a period of four additional years, until May 24, 2015, subject to stockholder approval of the extension.

Under the Listing Rules of the NASDAQ Stock Market on which our common stock is listed for trading, the extension of the expiration date of the Warrant constitutes a material amendment to a director compensation plan or arrangement, and therefore requires the approval of our stockholders. More specifically, our Board has approved the extension of the expiration date subject to the condition that the Warrant not be exercisable at any time after May 24, 2011, unless stockholder approval of the extension of the expiration date is first obtained, and provided that such approval is obtained prior to September 1, 2011. If approval is not obtained prior to that date, then absent action by our Board extending that date, the Warrant will immediately expire. The Warrant, as amended and restated, remains fully exercisable at any time prior to its originally scheduled expiration date, May 24, 2011.

As noted, the Warrant is for 1,000,000 shares of our common stock, with an initial exercise price of \$11.00 per share. There is no change to either the stated exercise price or number of shares covered by the Warrant. Under the terms of the Warrant, as originally issued, and as amended and restated, Mr. Friedli may elect to convert the Warrant or any portion thereof into shares of common stock on a non-cash net basis. The number of shares of common stock into which the Warrant may be converted is subject to adjustment to reflect stock splits and dividends, or a reorganization. At present, Mr. Friedli is the beneficial owner of approximately 45.1% of our issued and outstanding common stock, including the shares of our common stock issuable upon exercise of the Warrant. The Warrant relates to approximately 3.0% of our outstanding common stock, assuming for purposes of this calculation that the Warrant is fully exercised. In light of the significant existing beneficial ownership of our common stock by Mr. Friedli, neither the expiration nor extension of the Warrant is expected to have a material effect on his overall ownership of Osiris common stock.

If approved by the stockholders, we will incur and record a non-cash charge against earnings on account of the extension of the Warrant expiration date in the amount of its net increase in dollar value (*see* New Plan Benefits Table below), but we do not anticipate any significant tax consequences as a result of the extension. Any future amendments of the Warrant would be subject to further stockholder approval when required by the NASDAQ Rules or other applicable governance or similar principals.

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The foregoing description of the Warrant issued to Mr. Friedli is only a summary. The full text of the Warrant, as amended and restated, is attached as *Appendix 1* to this Proxy Statement, and is incorporated herein by reference. The obligations of the parties to the Warrant are governed by its terms and not by this summary. This summary may not contain all of the information that is of importance to you and is qualified in its entirety by reference to the complete text of the amended and restated Warrant attached as *Appendix 1*, which you are encouraged to read carefully.

New Plan Benefits

The following New Plan Benefits Table provides information relative to the Warrant in tabular format. This includes the estimated value of the Warrant as of March 31, 2011, assuming that extension of the expiration date is not approved, the estimated value of the Warrant as of May 26, 2011 (the scheduled date for the Annual Meeting) assuming approval by the stockholders of the extension, and the net increase in the estimated fair value. These estimated values are calculated using the Black-Scholes model, based upon the volume weighted market price per share of our common stock over the thirty day period ended March 31, 2011 of \$6.56 per share, and the fixed exercise price of the Warrant of \$11.00 per share. The market value of the shares of common stock underlying the Warrant is \$7,260,000 as of March 31 2011.

Name and Principal Position	WARRANT			Number of Shares Covered
	Current Dollar Value (\$)	Dollar Value if Extension Approved (\$)	Net Increase in Dollar Value (\$)	
Peter Friedli Chairman of the Board of Directors	\$	\$ 1,739,500	\$ 1,739,500	1,000,000

The Black-Scholes option pricing model used herein is by its nature only capable of estimating the value of the Warrant. Implicit in the Black-Scholes formula are several assumptions, including among others the efficiency of the market, a static risk-free interest rate, and no payment of dividends by the Company, some of which may prove not to be accurate.

Vote Required

Approval of Proposal No. 2 requires the affirmative vote at the Annual Meeting, in person or by proxy, of a majority of the votes cast at the Annual Meeting, assuming that a quorum is present. Abstentions and broker non-votes are not counted as votes cast under Maryland law and therefore, provided that a quorum is present at the Annual Meeting, will have no effect on the outcome of the vote.

Recommendation of the Board of Directors

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" APPROVAL OF THE EXTENSION UNTIL MAY 24, 2015 OF THE EXPIRATION DATE OF THE WARRANT HELD BY THE CHAIRMAN OF OUR BOARD OF DIRECTORS, MR. PETER FRIEDLI, AS DESCRIBED ABOVE, SUBMITTED PROXIES WILL BE VOTED IN FAVOR OF PROPOSAL NO. 2 UNLESS A STOCKHOLDER INDICATES OTHERWISE WHEN SUBMITTING ITS PROXY.

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PROPOSAL NO. 3 RATIFICATION OF THE APPOINTMENT OF GRANT THORNTON LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2011

Our Board and management are committed to the quality, integrity and transparency of our 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 Grant Thornton LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2011. A representative of Grant Thornton LLP 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 Grant Thornton LLP, the audit committee may reconsider its selection, but is not required to do so. Notwithstanding the proposed ratification of the appointment of Grant Thornton LLP 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 Grant Thornton LLP to serve as our independent registered public accounting firm for our fiscal year ending December 31, 2011, although such ratification is not required under Maryland law or our Articles of Restatement or By-Laws.

Grant Thornton LLP has served as our independent registered public accounting firm since April 17, 2009 and audited our financial statements for the two years ended December 31, 2010. The audit report of Grant Thornton LLP on the Company's financial statements as of and for the two fiscal years ended December 31, 2010, did not contain any adverse opinion or disclaimer of opinion, nor was such report qualified or modified as to uncertainty, audit scope or accounting principles.

The audit report of Grant Thornton LLP on the effectiveness of internal control over financial reporting as of December 31, 2010, did not contain any adverse opinion or disclaimer of opinion, and was not qualified or modified as to uncertainty, audit scope, or accounting principles.

During the fiscal years ended December 31, 2010 and December 31, 2009: (1) the Company had no disagreements with Grant Thornton LLP on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Grant Thornton LLP, would have caused Grant Thornton LLP to make reference to the subject matter of the disagreement in connection with its report; and (2) there have been no "reportable events" (as defined in Regulation S-K Item 304(a)(1)(v)).

Recommendation of the Board of Directors

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE RATIFICATION OF THE APPOINTMENT OF GRANT THORNTON LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDED DECEMBER 31, 2011, AND SUBMITTED PROXIES WILL BE VOTED IN FAVOR OF SUCH RATIFICATION UNLESS A STOCKHOLDER INDICATES OTHERWISE WHEN SUBMITTING ITS PROXY.

PROPOSAL NO. 4 NON-BINDING ADVISORY VOTE ON EXECUTIVE COMPENSATION

In accordance with the requirements of Section 14A of the Securities Exchange Act of 1934, as amended, the Board of Directors is requesting that stockholders approve, pursuant to a non-binding advisory vote, the compensation of the Company's named executive officers as disclosed in this Proxy Statement.

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The Board of Directors encourages stockholders to review the Compensation Discussion and Analysis, beginning on page 23 of this Proxy Statement, carefully in connection with this advisory vote. The Compensation Discussion and Analysis describes Osiris' executive compensation program and the decisions made by the Compensation Committee and the Board of Directors with respect to the Company's named executive officers for 2010.

As discussed in Compensation Discussion and Analysis, pay for performance is a significant structural element of Osiris' executive compensation program. Cash bonuses and annual equity awards are performance based as follows:

cash bonus payouts are driven primarily by the company's, and the individual's, annual performance; and

the overall performance of the company's common stock determines the value of the equity compensation, which is typically granted in the form of stock options.

The Board of Directors believes that Osiris' executive compensation program is designed to meet the objectives discussed in the Compensation Discussion and Analysis. Accordingly the Board recommends that shareholders vote in favor of the following resolution:

RESOLVED, that the shareholders of Osiris Therapeutics, Inc. approve on an advisory basis the compensation paid to the Company's named executive officers as described in the Company's Proxy Statement for the 2011 Annual Meeting of Stockholders pursuant to the compensation disclosure rules of the Securities and Exchange Commission under "Executive Compensation," including the Compensation Discussion and Analysis, the compensation tables and other related tables and disclosure contained therein.

This advisory vote, commonly referred to as a "say-on-pay" advisory vote, is non-binding on the Board. Although the vote is non-binding, the Board and the Compensation Committee will review and thoughtfully consider the voting results when making future decisions concerning the compensation of the company's named executive officers.

Recommendation of the Board of Directors

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" APPROVAL, ON A NON-BINDING ADVISORY BASIS, OF THE COMPENSATION OF THE COMPANY'S NAMED EXECUTIVE OFFICERS.

PROPOSAL NO. 5 FREQUENCY OF NON-BINDING ADVISORY VOTE ON EXECUTIVE COMPENSATION

In accordance with the requirements of Section 14A of the Securities Exchange Act of 1934, as amended, stockholders are being asked to vote on a resolution to determine, pursuant to a non-binding advisory vote, how frequently "say-on-pay" advisory votes should be held. Stockholders will be able to cast their votes on whether to hold "say-on-pay" advisory votes every one, two or three years. Alternatively, shareholders may abstain from casting a vote. For the reasons discussed below, the Board is recommending that stockholders vote every **THREE YEARS** with respect to "say-on-pay". Regardless of the outcome, the Board and Compensation Committee will continue to engage in a dialogue with stockholders with respect to executive compensation.

The Board of Directors recognizes the value of maintaining a dialogue with stockholders on executive compensation, including with respect to the frequency of "say-on-pay" advisory votes, and encourages stockholders to express their views on Osiris' executive compensation program whether pursuant to a "say-on-pay" advisory vote or otherwise. The structure of Osiris' executive compensation program suggests that a vote on executive compensation every three years would be advisable for

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Osiris. The company's executive compensation program is straightforward and driven by a few key defining principles and objectives, with pay for performance being significant. The primary components of the program consist of a base salary, annual cash bonus and annual equity awards, with the equity component representing at least a third or more of each named executive officer's compensation. The simplicity of the design is beneficial both to stockholders and to employees. Stockholders benefit from being able to understand the compensation being provided and the value of each component as it relates to company and individual performance. Employees benefit by being able to understand company expectations with respect to their performance. The simplicity also allows for a stable executive compensation program that may be modified over time as appropriate but does not require significant modifications on an annual basis. The emphasis on equity and the structure of the awards granted within Osiris' compensation program are designed to drive the long-term performance of the company. The performance of Osiris' common stock over a four-year period determines the value of the stock options granted under Osiris' compensation program as these awards vest over a four-year period. A vote every three years on executive compensation will allow for a more meaningful dialogue between stockholders and the company as a longer period of time between votes will allow the company to engage more substantively with a larger number of stockholders. This period of time would also help ensure that changes made to the program are responsive to stockholders and in the best interest of the company.

Although this advisory vote on the frequency of "say-on-pay" advisory votes is non-binding, the Board and the Compensation Committee will thoughtfully consider the outcome of the frequency vote and other stockholders communications when making future decisions concerning the frequency of "say-on-pay" advisory votes.

Recommendation of the Board of Directors

THE BOARD OF DIRECTORS RECOMMENDS THAT YOU SELECT "THREE YEARS" WHEN VOTING WITH RESPECT TO HOW FREQUENTLY A NON-BINDING ADVISORY STOCKHOLDER VOTE TO APPROVE THE COMPENSATION OF EXECUTIVE OFFICERS SHOULD BE HELD IN THE FUTURE. IF STOCKHOLDERS FOLLOW THE BOARD'S RECOMMENDATION, THE NEXT "SAY-ON-PAY" ADVISORY VOTE WILL BE HELD AT THE 2014 ANNUAL MEETING OF STOCKHOLDERS.

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 17, 2011. Any such proposal shall be subject to the requirements of the proxy rules adopted under the Securities Exchange Act of 1934.

Our By-Laws require advance notice of business to be brought before a stockholders meeting, including nominations of persons for election as directors. Generally, under our By-laws, to be timely, notice must be received by our Corporate Secretary no later than ninety (90) days prior to the day we released our proxy statement in connection with our previous year's annual meeting (or one hundred twenty (120) days if the business is to be included in our proxy statement, or in the case of stockholder nominations for election of directors); 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. Any such notice must include information specified in our By-Laws, including information concerning the nominee or proposal, as the case may be, and information about the stockholder's ownership of our stock.

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The following table sets forth certain information with respect to the beneficial ownership of our common stock as of April 8, 2011 for (a) the executive officers named in the Summary Compensation Table on page 28 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 8, 2011 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 32,819,020 shares of common stock outstanding on April 8, 2011.

Name and Address of Beneficial Owners	Amount and Nature of Beneficial Ownership	Percent of Class(8)
Executive Officers and Directors(1)		
Gregory H. Barnhill	27,421	
Lode Debrabandere	91,250(2)	
Peter Friedli	15,263,470(3)	45.1%
Felix Gutzwiller	63,500	
Philip R. Jacoby, Jr.	34,500(4)	
C. Randal Mills	585,000(5)	1.8%
Jay M. Moyes	13,500	
Michelle LeRoux Williams	66,270(6)	
All directors and executive officers as a group (8 persons)	16,145,036	46.8%
Other 5% Stockholders		
Venturetec, Inc. c/o Osiris Therapeutics, Inc. 7015 Albert Einstein Drive Columbia, Maryland 21046	4,153,301	12.7%
Thomas Schmidheiny Zurcherstrasse 156 8645 Jona Switzerland	3,053,267(7)	9.3%
BIH SA 3 Faubourg de'Hopital 2000 Neuchatel, Switzerland	2,658,113	8.2%

- (1) Mailing address for all directors and officers is c/o Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, Maryland 21046.
- (2) Represents 91,250 shares issuable upon exercise of options.
- (3) Consists of 10,106,794 shares owned by Peter Friedli & Co.; 1,000,000 shares issuable upon the exercise of outstanding warrants, assuming the warrants are exercised in full for cash; 2,750 shares owned by Mr. Friedli's spouse; 625 shares owned by Mr. Friedli's mother; and 4,153,301 shares

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owned by Venturetec, Inc. Mr. Friedli is President of Venturetec, Inc. and the 100% beneficial owner and President of Peter Friedli & Co.

- (4) Consists of 10,000 shares owned directly by Mr. Jacoby and 24,500 shares issuable upon the exercise of options.
- (5) Consists of 122,500 shares owned directly by Dr. Mills; 2,500 shares owned in custodial accounts where Dr. Mills is the custodian; and 460,000 shares issuable upon the exercise of options.
- (6) Represents 66,270 shares issuable upon exercise of options.
- (7) Consists of 395,154 shares owned directly by Mr. Schmidheiny and 2,658,113 shares owned by BIH SA. Mr. Schmidheiny is the Chairman and controlling shareholder of BIH SA.
- (8) Percentage not provided if less than 1%.

MANAGEMENT Information About the Board of Directors and Committees / Corporate Governance

Board of Directors

Our Charter and 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.

The members of our Board, as well as their respective committee memberships, are as follows:

Name	Age	Positions	Committee Membership		
			Audit	Compensation	Nominating
Peter Friedli	57	Chairman of the Board of Directors			
C. Randal Mills, Ph.D.	39	President & Chief Executive Officer			
Felix Gutzwiller, M.D., Dr.P.H.	63	Chairman, Compensation and Nominating Committees	X	X	X
Jay M. Moyes	57	Chairman, Audit Committee	X		X
Gregory H. Barnhill	57	Director	X	X	X

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 to be held in 2013 (the "Class I directors"); C. Randal Mills, Ph.D., and Felix Gutzwiller, M.D., Dr.P.H. constitute a class with a term ending at this Annual Meeting (the "Class II directors"); and Peter Friedli constitutes a class with a term ending at the Annual Meeting in 2012 (the "Class III director"). In each case, the directors remain in office notwithstanding the expiration of the otherwise applicable term, until their respective successors have been duly elected and qualified, or until their earlier death, resignation, retirement or removal.

On February 14, 2011, our Nominating Committee and Board, upon the recommendation and with the approval of our independent directors determined to nominate Dr. Mills and Dr. Gutzwiller for re-election at the Annual Meeting for terms of three years to serve until the 2014 Annual Meeting of Stockholders, and until their respective successors have been elected and qualified, or until 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 officer positions held by them at Osiris, if any, their principal

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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 57, 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. Since 1986, he has 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 the President and a director 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. Previously, he worked in the field of international management consulting for service and industrial companies in Europe and the United States. He serves as a director in certain private companies. Mr. Friedli's business experience and service on the boards of other companies and organizations, and particularly his longtime commitment to Osiris and extensive experience in finance, enable him to contribute extensively to the work of the Osiris board.

C. Randal Mills, Ph.D., age 39, 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"). 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. Dr. Mills' leadership and management experience, as well as his day-to-day service as Chief Executive Officer and technical expertise, make him a valued member of the Osiris board.

Felix Gutzwiller, M.D., Dr.P.H., age 63, 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. Dr. Gutzwiller has served on the board of Siegfried AG, a Swiss public company, since 1999 and is the chairing member of the Products and Markets Committee. Dr. Gutzwiller's extensive experience across the full spectrum of the health sciences field is of significant value to the Osiris board. Dr. Gutzwiller makes important contributions as chairman of the Nominating and Compensation Committees, including its evaluation of the performance and compensation of Osiris's management team.

Jay M. Moyes, age 57, has been a member of our Board since the completion of our initial public offering in August 2006. From May 2008 through July 2009, Mr. Moyes served as the Chief Financial Officer of XDx, Inc. Prior to that, 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 formerly 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. Mr. Moyes' extensive background in finance and accounting in the context of life sciences industry enables him to make significant contributions to the Board in general, and particularly to the Audit Committee.

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Gregory H. Barnhill, age 57, 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 has been a member of the board of PURE Biosciences since 2001 and is a member of both its audit and compensation committees. He is also a member of numerous philanthropic 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. Through his leadership as part of various philanthropic and corporate boards, as well as his business experience, Mr. Barnhill is a valued member of the Board, has extensive experience in the securities industry, and makes important contributions to the work of the Audit Committee, Nominating and Compensation Committee.

Our Board has determined that the following members of the Board qualify as "independent" under the definition promulgated by The NASDAQ Stock Market, Inc: Messrs. Moyes and Barnhill, and Dr. Gutzwiller. Furthermore, our Board has determined that none of the members of the three 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.

Board Leadership Structure

Our Corporate Governance Principles, which can be found on the Investor Relations Corporate Governance section of our website at <http://investor.osiris.com/documents.cfm>, describe our policies concerning, among other things, the role of the Board and management, proper Board functions, independence, and committee matters. The positions of Chairman of the Board and Chief Executive Officer are currently held by different persons, although we do not have a policy requiring that to be the case. Instead, our Board has the authority to choose its Chairman in any way it deems best for us at any given point in time. Accordingly, our Board reserves the right to vest the responsibilities of the Chief Executive Officer and Chairman in the same person or in two different individuals depending on what it believes is in our best interest. At this time, our Board has determined that separation of these roles most appropriately suits us. Mr. Friedli is uniquely qualified to serve as our Chairman given his historical leadership of our Board, his long history with us, and his skills and experience in the biotechnology industry and in matters of corporate finance. Further, our Board believes that this division of roles allows Dr. Mills to focus more of his efforts toward the management of our business. Our Board believes that there is no single leadership structure that would be most effective in all circumstances and, therefore, retains the authority to modify our Board's structure to best address our circumstances as and when appropriate.

Board's Role in Risk Oversight

At the direction of our Board of Directors, we have instituted an enterprise-wide risk management system to assess, monitor and mitigate risks that arise in the course of our business. The Board has determined that the Board of Directors as a whole, and not a separate committee, will oversee the Company's risk management process. Each of our Board Committees has historically focused on specific risks within their areas of responsibility, but the Board believes that the overall enterprise risk management process is more properly overseen by all of the members of the Board. Our Audit Committee is primarily responsible to the Board in the planning, assessment and reporting of our risk profile. At this stage in the implementation of our risk management system, the Board reviews the status of the implementation of the process and findings at every regularly scheduled Board meeting.

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Committees of the Board of Directors and Meetings

As described below, our Board has an Audit Committee, a Compensation Committee and a Nominating Committee.

Meeting Attendance. During the year ended December 31, 2010, there were five meetings of the Board, and the various committees of the Board met a total of nine times. During 2010, 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. Four directors attended last year's annual meeting.

Audit Committee. Our Audit Committee met five times during 2010. 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 quarterly and 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 Marketplace Rules, 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 SEC. None of the 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 on page 32 of this proxy statement.

Compensation Committee. Our Compensation Committee met three times during 2010. 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 Marketplace Rules. Please also see the report of the Compensation Committee set forth on page 27 of this proxy statement. Our Compensation may delegate authority to our President and Chief Executive Officer with regard to select compensation matters, but that delegation has generally been limited. Our Compensation Committee has not to date used compensation consultants in making compensation decisions.

Nominating Committee. Our Nominating Committee met one time during 2010. This committee currently has three members, Dr. Gutzwiller (Chairman), Mr. Moyes and Mr. Barnhill. Our Nominating Committee is responsible for developing and implementing policies and procedures that are intended to assure that the Board will be appropriately constituted and organized to meet its fiduciary obligations to the company and the shareholders on an ongoing basis. All members of the Compensation Committee qualify as "independent" under the definition promulgated by the NASDAQ Marketplace Rules.

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

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governance documents are publicly available on the Investor Relations Corporate Governance section of our website at <http://investor.osiris.com/documents.cfm>:

Corporate Governance Principles

Corporate Code of Conduct

Audit Committee Charter

Compensation Committee Charter

Nominating 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. No member of the compensation committee who served on the compensation committee in 2010 (Dr. Gutzwiller (Chairman) and Mr. Barnhill) was an officer or employee of the Company during 2010, was formerly an officer of the registrant, or had any relationships requiring disclosure by the Company under the SEC's rules regarding certain relationships and related party transactions. None of our executive officers served as a member of the compensation committee (or other board committee performing similar functions or, in the absence of such committee, the entire board) of another corporation, where one of the executive officers of the other corporation served on our compensation committee or as one of our directors. None of our executive officers served as a director of another corporation, where one of the executive officers of the other corporation served on our compensation committee.

Director Nominations

Our Nominating Committee follows the Corporate Governance Principles initially adopted by our Board of Directors on July 19, 2006, 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 Nominating Committee and 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; and 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

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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. To have a candidate considered by the Nominating Committee, a stockholder must submit the recommendation in writing and must include the name of the stockholder and evidence of the person's ownership of Company stock, including the number of shares owned and the length of time of ownership, and the name of the candidate, the candidate's resume or a listing of his or her qualifications to be a director of the Company and the person's consent to be named as a director if selected and nominated. The shareholder recommendation and information must be sent to the Corporate Secretary at 7015 Albert Einstein Drive, Columbia, Maryland 21046. Once a potential candidate has been identified, the Nominating Committee may collect and review information regarding the candidate to assess whether the person should be considered further. If the Nominating Committee determines that the candidate warrants further consideration, personal contact with the candidate may be made and further review of the candidate's accomplishments, qualifications and willingness to serve may be undertaken and compared to other candidates. The Nominating Committee's evaluation process does not vary based on whether or not a candidate is recommended by a stockholder, although, as stated above, the Board may take into consideration other factors, such as the number of shares held by the recommending shareholder and the length of time that such shares have been held. 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.

The Board does not have a specific policy with regard to the consideration of diversity in identifying director nominees, although our Board's policies on director qualifications emphasize the Company's commitment to diversity at the Board level diversity not only of sex, sexual orientation, race, religion or national origin, but also diversity of experience, expertise and training. As a company, we are committed to creating and sustaining a culture of inclusion and fairness. We believe diversity is important to our success in many ways, including the recruitment and retention of top talent.

Stockholder Communications to the Board

Generally, stockholders who have questions or concerns should contact our Investor Relations department at (443) 545-1800. However, any stockholder who wishes 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.

Table of Contents**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. Director compensation is determined by the Compensation Committee, subject sometimes to approval by the Board as a whole. In determining compensation for directors, the Compensation Committee's 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 2010, 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 7,500 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 2010.

Director Compensation

Name	Fees Earned or Paid in Cash(\$)	Stock Awards\$(1)	Option Awards(\$)	All Other Compensation(\$)	Total(\$)
Gregory Barnhill		32,300			32,300
Peter Friedli	64,600				64,600
Felix Gutzwiller	9,690	22,610			32,300
Jay Moyes	12,920	19,380			32,300

(1)

Reflects the grant of awards in May 2010 under our Amended & Restated 2006 Omnibus Plan for 10,000 shares of common stock to Mr. Friedli (all of which was paid in cash), 5,000 shares of common stock to Dr. Felix Gutzwiller (\$9,690 of which was paid in cash) and 5,000 shares of common stock to Messrs. Barnhill and Moyes (\$12,920 of which was paid in cash to Mr. Moyes) for their service on our Board in 2009. The fair value of these shares at the time of grant was \$6.46 per share and the directors were provided the option of receiving their award in shares, cash or a combination of cash and shares.

Options granted during 2010 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 Board of Directors."

Name	Age	Positions	Employment Date
C. Randal Mills, Ph.D.	39	President and Chief Executive Officer	July 2004
Philip R. Jacoby, Jr.	58	Chief Financial Officer, Treasurer and Secretary	October 2005
Stephen W. Potter	54	Senior Vice President of Operations and Corporate Development	February 2011
Lode Debrabandere, Ph.D.	46	Senior Vice President, Therapeutics	July 2006
Michelle LeRoux Williams, Ph.D.	36	Chief Scientific Officer	October 2001

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Philip R. Jacoby, Jr., age 58, is our Chief Financial Officer (since July 2009), Treasurer (since May 2010) and Corporate Secretary. Mr. Jacoby joined us in a consulting capacity in April 2005 and became our employee in October 2005. Mr. Jacoby previously served as our Vice President of Finance, 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.

Stephen W. Potter, age 54, is our Senior Vice President of Operations and Corporate Development (since February 2011). Prior to joining us, Mr. Potter was employed by Genzyme Corporation for over ten years, most recently as Senior Vice President of Corporate and Business Development. Prior to Genzyme, Mr. Potter was Senior Vice President of Business Development for DuPont's pharmaceutical subsidiary in Wilmington, Delaware. Before joining DePont, Mr. Potter was a Principal at Booz, Allen & Hamilton based in Chicago. Mr. Potter graduated from the Harvard Business School in 1989 with an MBA in general management. He earned a BS in Economics from the University of Massachusetts in 1979.

Lode Debrabandere, Ph.D., age 46, is our Senior Vice President, Therapeutics and joined us 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 36, is our Chief Scientific Officer and joined us in October 2001. Dr. Williams previously served as our 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 bachelor's degree in mechanical engineering from Rice University and a Ph.D. in biomedical engineering from Duke University.

Codes of Conduct and Ethics

We have adopted a Corporate Code of Conduct that applies to all of our employees, including our chief executive officer and chief financial and accounting officers, and every member of our Board. We have also adopted a Code of Business Conduct and Ethics for Members of the Board of Directors and Executive Officers. Copies of these documents are publicly available on the Investors Relations Corporate Governance section of our website at <http://investor.osiris.com/documents.cfm>. Disclosure regarding any amendments to, or waivers from, provisions of our Corporate Code of Conduct or our Code of Business Conduct and Ethics for Members of the Board of Directors and Executive Officers 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.

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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.

The executive compensation programs are designed to promote the attraction, performance and retention of executives. The Compensation Committee reviews the allocation of compensation components regularly to help ensure alignment with strategic and operating goals, competitive market practices and legislative changes. The Compensation Committee does not apply a specific formula to determine the allocation between cash and non cash forms of compensation. Certain compensation components, such as base salaries, benefits and perquisites, are intended primarily to attract and retain qualified executives. Other compensation elements, such as annual and long-term incentive opportunities, are designed to motivate and reward performance. The annual incentive motivates named executive officers to achieve specific operating objectives for the fiscal year. Long-term incentives are intended to reward long-term Company performance and achievement of specific financial goals and to strongly align named executive officers' interest with those of stockholders.

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 individual excellence; 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 the members' understanding of the compensation packages of companies who compete with us to attract and retain employees. The Compensation Committee does not employ a third party compensation consultant, nor does it benchmark in any formal manner against the compensation practices of others.

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

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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.

Risk Considerations in Compensation Decisions

The Compensation Committee believes that payment for performance is an important part of its compensation philosophy, but recognizes the risk that incentivizing specific measures of performance may pose to the performance of Osiris as a whole if personnel were to act in ways designed primarily to maximize their compensation. Our Compensation Committee engages in ongoing and active discussion with management regarding our progress in the pursuit of our overall corporate objectives and the contributions made by members of our management team and our employees. Through this process, and given our relative size and number of employees, our Compensation Committee, is able to develop an understanding of the issues of importance relative to its duties and responsibilities, including in matters of risk management associated with our compensation programs. On an annual basis, typically in February, the Compensation Committee meets both with and without management present, and considers annual compensation issues, including salary adjustments, bonus amounts and equity compensation awards. One of the issues considered at that meeting is the mix of compensation to be paid or awarded to management and our employees, and the implication of that mix and specific compensation elements on risk. The Compensation Committee considers whether our compensation programs and practices reward reasonable, without encouraging unreasonable, risk-taking and whether the incentive opportunities achieve the proper balance between the need to reward employees for our overall success and the need to protect the company. While our compensation program is in part performance-based, our Compensation Committee does not believe that it encourages excessive risk-taking.

The Compensation Committee believes that in a company of our size, an approach of ongoing and active discussion with management regarding progress on short-term and long-term goals enables informed decisions while avoiding the risks sometimes associated with managing short-term results to achieve pre-determined formulaic outcomes. We believe that our compensation program provides appropriate incentives to create long-term value for stockholders while taking thoughtful and prudent risks to grow the value of the Company. Accordingly, our Compensation Committee has determined that our compensation policies and practices do not create risks that are reasonably likely to have a material adverse effect on us.

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 the understanding of the Compensation Committee of the compensation practices of other companies in the biotechnology industry and other comparable companies. In determining salaries, the Compensation Committee also takes into consideration

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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. The Compensation Committee does not, however, employ a third party compensation consultant, nor does it benchmark in any formal manner against the compensation practices of others.

Our goal is to pay each named executive officer a base salary sufficient to remain competitive in the market. On February 14, 2011, the Compensation Committee of the Board approved the 2010 annual base salaries for each of the named executive officers, effective February 1, 2010 as follows:

Name	Position(s)	2011 Base Salary	2010 Base Salary
C. Randal Mills	President & Chief Executive Officer	\$ 470,000	\$ 470,000
Philip R. Jacoby, Jr.	Chief Financial Officer, Treasurer & Secretary	190,000	180,000
Stephen W. Potter(1)	Senior Vice President of Operations and Corporate Development	275,000	
Lode Debrabandere	Senior Vice President, Therapeutics	287,000	275,000
Michelle LeRoux Williams	Chief Scientific Officer	267,000	255,000

(1)

Mr. Potter joined our management team on February 7, 2011.

We believe the 2011 base salaries for Dr. Mills, Messrs Jacoby and Potter, 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

Our overriding objective, and the objective of our executive officers, during calendar year 2010 was to advance our clinical and regulatory programs and to obtain regulatory approval for our biological drug candidates. Our product development programs are based on novel technologies. As a result, the development and commercialization pathway for our therapies, and therefore how we define elements of our overall success, is subject to greater variability, as compared to traditional drug development companies, and even more so, as compared to more traditional businesses.

Given this variability, and the overall nature of our business, the determination of annual bonuses for our executives remains discretionary. For these purposes, we did not establish individual performance metrics as objectives for the year ending December 31, 2010, but instead reviewed the performance of our executives following the close of the fiscal year and evaluated the contributions of each to our progress over the preceding calendar year. These evaluations were subjective and retrospective and focused on a number of factors, including individual tasks accomplished, teamwork, leadership, and inventiveness and creativity in the area of the individual's scope of responsibility. We also evaluated the overall progress of the Company in advancing our clinical and regulatory programs and obtaining regulatory approval of our biological drug candidates, and the extent to which the Company had met clinical trial objectives, including initial patient dosing, completion of clinical trial enrollment, receipt and processing of clinical trial data, the success of our interactions with the FDA, including BLA submissions and success in the procurement of Orphan Drug and Fast Track designation, and whether other objectives, such as patent filings and maintenance of minimum cash on hand, were met. None of these individual factors or company objectives were weighted, nor was there

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any identifiable direct correlation between any one factor or objective and the bonus determination for any executive. Our Compensation committee evaluated the mix of individual and company information, together with other or additional information is available to it or known to its members, and exercised its discretion in establishing annual bonus amounts.

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 and the factors described above, Dr. Mills was awarded a bonus of \$130,000 for the year ending December 31, 2010. The range of bonuses paid for our named executive officers on the basis of 2010 performance was \$18,000 to \$130,000.

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 any 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 any pre-established goals. For 2010, 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 40,000 shares at the exercise price of \$7.74 in 2010, 50,000 shares at the exercise price of \$18.60 per share in 2009, 100,000 shares at the exercise price of \$12.01 per share in 2008 and 100,000 shares at the exercise price of \$23.62 per share in 2007.

We granted stock options to Mr. Jacoby to purchase 20,000 shares at the exercise price of \$7.74 and 7,500 shares at the exercise price of \$6.46 in 2010, 10,000 shares at the exercise price of \$18.60 per share in 2009 and 10,000 shares at the exercise price of \$17.10 per share in 2008 upon his appointment as an executive officer.

We granted stock options to Mr. Potter to purchase 100,000 shares at the exercise price of \$6.49 on February 7, 2011 upon his employment as an executive office.

We granted stock options to Dr. Debrabandere to purchase 25,000 shares at the exercise price of \$7.74 and 15,000 shares at the exercise price of \$6.46 in 2010, 35,000 shares at the exercise price of \$18.60 per share in 2009, 15,000 shares at the exercise price of \$12.01 in 2008 and 15,000 shares at the exercise price of \$23.62 in 2007.

We granted stock options to Dr. Williams to purchase 25,000 shares at the exercise price of \$7.74 and 15,000 shares at the exercise price of \$6.46 in 2010, 25,000 shares at the exercise price of \$18.60 per share in 2009, 20,000 shares at the exercise price of \$12.01 in 2008 and 20,000 shares at the exercise price of \$14.19 in 2007 upon her appointment as an executive officer.

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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.

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 and include health and welfare benefits, paid time-off, etc.

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. The Company has not made any contributions to the 401(k) plan since its inception.

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.

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The following table shows the total compensation paid or accrued during 2010, 2009 and 2008 to our Chief Executive Officer, our Chief Financial Officer, and our two next most highly compensated executive officers who earned more than \$100,000 during 2010.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)(1)	Option Awards (\$)(2)	All Other Compensation (\$)	Total (\$)
C. Randal Mills	2010	468,333	130,000	158,400		756,733
President and Chief Executive Officer	2009	445,441	160,000	368,550		973,991
	2008	423,829	265,000	594,972		1,283,801
Philip R. Jacoby, Jr. Chief Financial Officer, Treasurer & Secretary	2010	179,167	18,000	103,950		301,117
	2009	165,462	18,000	73,710		257,172
	2008	153,374	30,000	80,968		264,342
Lode Debrabandere Senior Vice President, Therapeutics	2010	273,917	45,000	148,500		467,417
	2009	259,272	45,000	257,985		562,257
	2008	239,907	75,000	89,246		404,153
Michelle LeRoux Williams Chief Scientific Officer	2010	253,750	45,000	148,500		447,250
	2009	234,139	45,000	184,275		463,414
	2008	220,005	75,000	118,994		413,999

(1) Represents bonus payments that were paid in February 2011 on account of named executive officer performance in 2010, and bonus payments made in 2010 on account of named executive officer performance in 2009, and bonus payments made in 2009 on account of named executive officer performance in 2008, as applicable.

(2) These amounts reflect the non-cash aggregate grant date fair value of these awards computed in accordance with FASB ASC Topic 718 "Stock Compensation," which includes the effect of estimated forfeitures. The assumptions and methodologies used to calculate the amounts reported are discussed in Note 7 (Share-Based Compensations) to the Company's Financial Statements in its 2010 Annual Report filed on Form 10-K with the SEC (or, in the case of grants made prior to 2009, the corresponding footnote in the Company's Form 10-K for the applicable year). Under generally accepted accounting principles, compensation expense with respect to stock awards and option awards granted to our employees is generally recognized over the vesting periods applicable to the awards. The SEC's disclosure rules previously required that we present stock award and option award information for 2008 based on the amount recognized during the corresponding year for financial statement reporting purposes with respect to these awards (which meant, in effect, that in any given year we could recognize for financial statement reporting purposes amounts with respect to grants made in that year as well as with respect to grants from past years that vested in or were still vesting during that year). However, the recent changes in the SEC disclosure rules require that we now present the stock award and option award amounts in the applicable columns of the table above with respect to 2008 on a similar basis as the 2010 and 2009 presentation using the grant date fair value of the awards granted during the corresponding year (regardless of the period over which the awards are scheduled to vest). Since this requirement differs from the SEC's past disclosure rules, the amounts reported in the table above for stock award and option awards in 2008 differ from the amounts previously reported in our Summary Compensation Table for that year. As a result, to the extent applicable, each named executive officer's total compensation amounts for 2008 also differ from the amounts previously reported in our Summary Compensation Table for that year.

Table of Contents**Grants of Plan-Based Awards**

The following table provides information on equity awards granted in 2010 to each of our named executive officers:

Name	Grant Date	All Other Option Awards: Number of Securities Underlying Options (#)(1)	Exercise or Base Price of Option Awards (\$/Sh)	Grant Date Fair Value of Stock and Option Awards
C. Randal Mills	3/12/2010	40,000	\$ 7.74	\$ 158,400
Lode Debrabandere	3/12/2010	25,000	7.74	99,000
	5/27/2010	15,000	6.46	49,500
Michelle LeRoux Williams	3/12/2010	25,000	7.74	99,000
	5/27/2010	15,000	6.46	49,500
Philip R. Jacoby, Jr.	3/12/2010	20,000	7.74	79,200
	5/27/2010	7,500	6.46	24,750

- (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, assuming the named executive officer is still employed by us on that date.

Equity Compensation Plan Information

We have two equity compensation plans: (1) the Amended and Restated 1994 Stock Option and Incentive Plan, and (2) the Amended and Restated 2006 Stock Option and Incentive Plan. A total of 2,157,084 shares of common stock are currently reserved for issuance pursuant to the plans. Currently, awards under the stock option and incentive plans consist of qualified and non-qualified stock options. Our stockholders have approved both plans. As of December 31, 2010:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (\$/Sh)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by security holders	1,349,261	9.75	807,823
Equity compensation plans not approved by security holders(1)	1,000,000	11.00	

- (1) Warrant issued to purchase shares of Common Stock, exercisable at any time at the option of the holder, prior to its scheduled expiration in May 2011. The extension of the expiration of this warrant to May 2015 has been approved by our Board of Directors, subject to approval by our stockholders at the 2011 Annual Meeting.

Table of Contents**Outstanding Equity Awards at Fiscal Year-End**

	Option Awards			
	Number of Securities Underlying Unexercised Options (#)		Option Exercise Price (\$)	Option Expiration Date(1)
	Exercisable	Unexercisable		
C. Randal Mills	150,000		0.40	5/14/2014
	100,000		0.40	1/10/2016
	75,000	25,000	23.62	2/4/2017
	50,000	50,000	12.01	2/5/2018
	12,500	37,500	18.60	2/23/2019
		40,000	7.74	3/12/2020
Lode Debrabandere	37,500		6.84	7/30/2016
	11,250	3,750	23.62	2/4/2017
	7,500	7,500	12.01	2/5/2018
	8,750	26,250	18.60	2/23/2019
		25,000	7.74	3/12/2020
		15,000	6.46	5/27/2020
Michelle LeRoux Williams	250		0.40	4/8/2013
	270		0.40	4/8/2013
	5,750		0.40	11/21/2014
	7,500		0.40	12/1/2015
	15,000	5,000	14.19	6/30/2017
	10,000	10,000	12.01	2/5/2018
	6,250	18,750	18.60	2/23/2019
		25,000	7.74	3/12/2020
		15,000	6.46	5/27/2020
Philip R. Jacoby, Jr.	2,500		0.40	10/9/2015
	1,500	1,500	23.62	2/4/2017
	1,500	1,500	12.50	7/25/2017
	5,000	5,000	17.10	10/2/2018
	2,500	7,500	18.60	2/23/2019
		20,000	7.74	3/12/2020
		7,500	6.46	5/27/2020

(1) Options expire on the tenth anniversary of the award date and vest in equal installments on the first, second, third and fourth anniversary of the award date.

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				
Lode Debrabandere				
Michelle LeRoux Williams				
Philip R. Jacoby, Jr.	1,250	7,162		

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Employment Contracts, Termination of Employment and Change in Control Arrangements

Except in the case of Dr. Mills, Mr. Potter 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, Mr. Potter and Dr. Debrabandere.

Under Dr. Mills' employment agreement, dated as of May 15, 2004, he served as our Chief Executive Officer for an initial three-year term. Thereafter, the agreement provides for automatic renewal for successive one-year renewal terms, unless either party provides notice of termination at least ninety days prior to the commencement of a renewal term. 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 2011 annual base salary of \$470,000, this amount equals \$235,000) and provide six months of medical, life and disability benefits (having an extended value of approximately \$10,000). 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 2011 annual base salary of \$470,000, this amount equals \$470,000) and provide one full year of medical, life, and disability benefits (having an estimated value of approximately \$20,000).

Under Mr. Potter's employment agreement, dated as of February 7, 2011, he is serving as our Senior Vice President of Operations and Corporate Development for an initial three-year term. Thereafter, the agreement provides for automatic renewal for successive one-year renewal terms, unless either party provides notice of termination at least ninety days prior to the commencement of a renewal term. We may otherwise terminate Mr. Potter'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. Mr. Potter may terminate his employment for good reason. If we terminate Mr. Potter for inability to perform his duties or for cause, or if Mr. Potter terminates his employment for other than good reason, we have no obligations to Mr. Potter other than the payment of amounts otherwise owed at the time of termination. If we terminate Mr. Potter 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 2011 annual base salary of \$275,000, this amount equals \$68,750) and provide six months of medical, life and disability benefits (having an estimated value of approximately \$10,000). If we terminate Mr. Potter 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 2011 annual base salary of \$275,000, this amount equals \$137,500) and provide six months of medical, life, and disability benefits (having an estimated value of approximately \$20,000).

Under Dr. Debrabandere's employment agreement, dated as of July 31, 2006, he served as our Senior Vice President, Therapeutics for an initial three-year term. Thereafter, the agreement provides for automatic renewal for successive one-year renewal terms, unless either party provides notice of termination at least ninety days prior to the commencement of a renewal term. 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

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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 2011 annual base salary of \$287,000, this amount equals \$71,750) 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 2011 annual base salary of \$287,000, this amount equals \$143,500) 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, Mr. Potter 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, Mr. Potter 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.

AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Members of the Audit Committee are Jay M. Moyes (Chairman), Gregory H. Barnhill and Felix Gutzwiller, M.D., Dr.P.H. Pursuant to its charter, the Audit Committee's general responsibilities include:

Overseeing financial and compliance functions as assigned by the Board;

Reviewing areas of potential significant financial risk to the Company;

Monitoring the independence and performance of the independent registered public accounting firm;

Providing an avenue of communication among the independent auditors, management, our internal audit function and the Board of Directors.

AUDIT COMMITTEE REPORT

Among its duties, the Audit Committee is responsible for appointing, setting compensation and overseeing the work of the independent registered public accounting firm. The Committee has established a policy wherein it pre-approves all of the audit and permissible non-audit services provided to the Company by the independent registered public accounting firm and actively monitors these services (both spending level and work content) to maintain the appropriate objectivity and independence in Grant Thornton LLP's core work, which is the audit of the Company's financial statements and internal control over financial reporting. All services and fees are pre-approved for up to one year, which approval includes the appropriate detail with regard to each particular service and its related fees.

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During the fiscal year ended December 31, 2010, all of the fees and services described as "audit fees," "audit-related fees," "tax fees," and "all other fees" under "Audit Fees, Audit Related Fees, Tax Fees, and Other Fees" below were approved under such pre-approval policy and pursuant to Section 202 of the Sarbanes-Oxley Act of 2002.

The Audit Committee of the Board of Directors is responsible for assisting the Board of Directors with its oversight of the integrity of the Company's financial statements, the Company's compliance with legal and regulatory requirements, the independent auditors' qualifications and independence and the performance of the independent auditors and the Company's internal audit function, and the corporate finance matters of the Company. The Audit Committee operates under a written charter approved by the Board of Directors. A copy of the charter is available on our website at <http://investor.osiris.com/documents.cfm> under "Investor Relations," "Corporate Governance."

Management is responsible for the preparation, presentation and integrity of our financial statements; accounting and financial reporting principles; establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)); establishing and maintaining internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f)); evaluating the effectiveness of disclosure controls and procedures; evaluating the effectiveness of internal control over financial reporting; and evaluating any change in internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, internal control over financial reporting. The independent registered public accounting firm, Grant Thornton LLP, is responsible for performing an independent audit of our financial statements in accordance with the standards of the Public Company Accounting Oversight Board (PCAOB) of the United States and to issue a report thereon, as well as expressing an opinion on the effectiveness of our internal control over financial reporting. The Audit Committee's responsibility is to monitor and oversee these processes.

In this context, the Audit Committee met with management and Grant Thornton LLP to review and discuss the financial statements, the effectiveness of our internal control over financial reporting and Grant Thornton LLP's audit of the financial statements and our internal control over financial reporting.

The Audit Committee also discussed with Grant Thornton LLP the matters required by Statement on Auditing Standards No. 61 (Communication with Audit Committees) and received a letter covering these matters. The Audit Committee also received written disclosures and the letter from Grant Thornton LLP required by PCAOB Rule 3526 (Communications with Audit Committees Concerning Independence) and has discussed with Grant Thornton LLP such firm's independence from the Company and its management.

Based upon the discussions and reviews referred to above, and subject to the limitations on the role and responsibilities of the Committee and in the Audit Committee Charter, the Audit Committee recommended to the Board of Directors that the Company's audited financial statements be included in the Annual Report on Form 10-K for the year ended December 31, 2010 filed with the Securities and Exchange Commission.

AUDIT COMMITTEE

Jay M. Moyes, Chairman
Gregory H. Barnhill
Felix Gutzwiller

Table of Contents**Audit Fees, Audit Related Fees, Tax Fees, and Other Fees**

Pursuant to the rules of the Securities and Exchange Commission, the fees paid for professional services rendered by Grant Thornton LLP for the audit of the Company's annual financial statements and the effectiveness of internal control over financial reporting for the years ended December 31, 2009 and 2010 and fees billed for other services rendered by Grant Thornton LLP during this period are described below.

	2010 (\$)	2009 (\$)
Audit Fees(1)	\$ 170,424	\$ 157,500
Audit-Related Fees(2)		
Tax Fees(3)	11,594	15,300
All Other Fees(4)		
Total	\$ 182,018	\$ 172,800

- (1) Audit fees consisted principally of fees billed to the Company for professional services performed for the audit of financial statements included in the Form 10-K, for review of financial statements included in the Forms 10-Q, for the audit of the Company's internal control over financial reporting and for services generally only the independent registered public accounting firm can reasonably be expected to provide, such as statutory and regulatory filings or engagements.
- (2) Audit-related fees consisted principally of fees billed to the Company for assurance and related services performed that are reasonably related to the performance of the audit or review of the Company's financial statements, including due diligence related to mergers and acquisitions, audits of employee benefit and compensation plans, audits of carve-out entities, and other agreed upon procedures to meet various statutory and regulatory requirements.
- (3) Tax fees consisted principally of fees billed to the Company for professional services performed with respect to U.S. federal, state and local tax planning, advice and compliance, assistance with tax audits and appeals and the preparation of original and amended tax returns for the Company.
- (4) All other fees are fees for any permissible services performed that do not meet the above category descriptions, however, the Company generally does not engage its independent registered public accountants for "other" services.

Under its pre-approval policy, concurrent with the appointment of the independent registered public accounting firm, the Audit Committee specifically pre-approves the recurring audit and audit-related services and estimated fees. All the work performed for the Company by Grant Thornton LLP pertaining to 2010 and the related fees were pre-approved by the Audit Committee.

The Audit Committee has considered whether the provision of audit and non-audit services by Grant Thornton LLP to the Company in fiscal 2010 is compatible with maintaining the auditor's independence. The Company has been advised by Grant Thornton LLP that neither the firm, nor any member of the firm, has any financial interest, direct or indirect, in any capacity in the Company.

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. 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 2010, 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.

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CERTAIN RELATIONSHIPS AND RELATED PARTY 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://investor.osiris.com/documents.cfm>. 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 of Directors, or entities with which he is affiliated, have been responsible for procuring since 1993, an aggregate of approximately \$270 million in debt and equity financing for us and our predecessor company. Mr. Friedli is the beneficial owner of approximately 45% of our common stock as of December 31, 2010. Of the shares beneficially owned by Mr. Friedli at December 31, 2010, 45,000 shares were received by him as Board compensation since 1996, 12,500 shares and warrants for 1,000,000 shares were granted in recognition of his efforts in matters related to fund raising, and the remaining shares were acquired through investment or through purchase from third parties.

Since January 1, 2009, there have been no related party transactions.

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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, 2010. 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 ACCOMPANYING PROXY AT YOUR EARLIEST CONVENIENCE.

By order of the Board of Directors:

Philip R. Jacoby, Jr.
Corporate Secretary

Columbia, Maryland
April 15, 2011

THIS WARRANT AND THE SECURITIES TO BE ISSUED UPON EXERCISE OF THIS WARRANT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT") AND THIS WARRANT MAY NOT BE EXERCISED BY OR ON BEHALF OF ANY U.S. PERSON UNLESS REGISTERED UNDER THE SECURITIES ACT, OR UNDER ANY STATE SECURITIES LAWS OR AN EXEMPTION FROM SUCH REGISTRATION IS AVAILABLE. THESE SECURITIES HAVE BEEN ISSUED OFFSHORE IN ACCORDANCE WITH REGULATION S, AS PROMULGATED UNDER THE SECURITIES ACT. THESE SECURITIES (OR ANY BENEFICIAL INTEREST THEREIN) MAY NOT BE SOLD, MORTGAGED, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SHARES UNDER THE SECURITIES ACT, OR IN ACCORDANCE WITH REGULATION S OR OTHER EXEMPTIVE PROVISION UNDER THE SECURITIES ACT. HEDGING ACTIVITIES IN CONNECTION WITH THE COMPANY'S SECURITIES ARE PROHIBITED EXCEPT IN ACCORDANCE WITH THE SECURITIES ACT.

Warrant No. CS-3

Number of Shares: 1,000,000

Date of Issuance: May 24, 2006

(Amended as of August 9, 2006, and Amended and Restated as of April 1, 2011)

OSIRIS THERAPEUTICS, INC.

Common Stock Purchase Warrant

1. ***Exercise.***

(a) This Warrant certifies that **Peter Friedli** is the registered holder of Warrants to purchase initially, at any time after the date hereof until expiration of this Warrant at 5:30 p.m. New York time on May 24, 2013 ("Expiration Date"), up to 1,000,000 fully paid and non-assessable shares of common stock, \$.001 par value ("Common Stock"), of OSIRIS THERAPEUTICS, INC., a Maryland corporation (the "Company"), at the price of \$11.00 USD per share, subject to adjustment in certain events described herein, upon surrender of this Warrant, completion of *Exhibit A* attached to this Warrant, and payment of the Exercise Price at an office or agency of the Company, but all subject further to the conditions and limitations set forth herein, including the prohibition on exercise of this Warrant after 5:30 p.m. New York time on May 24, 2011 unless and until the Stockholder Approval is obtained, as described in Section hereof, prior to September 1, 2011. Payment of the Exercise Price shall be made by certified or official bank check in New York Clearing House funds payable to the order of the company, or through the provisions of the "Right to Convert" and "Method of Exercise" as defined herein.

No Warrant may be exercised after 5:30 p.m., New York time, on the Expiration Date which is hereby defined as May 24, 2013 (nor may this Warrant be exercised at any time after 5:30 p.m. New York time on May 24, 2011 unless and until the Stockholder Approval is obtained, as described in Section 14 hereof), at which time the Warrant evidenced hereby, unless exercised prior thereto (or unless earlier terminated in accordance with Section 14 below), shall thereafter be void. The shares of Common Stock issuable upon exercise of the Warrant are referred to herein as "Warrant Stock."

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(b) **Delivery to Holder.** Upon the exercise for less than all of the Warrant Stock evidenced by this Warrant the Company shall forthwith issue to the holder hereof a new Warrant certificate representing such number unexercised shares of Warrant Stock.

(c) **Right to Convert Warrant into Stock: Non-Cash Net Exercise.** In addition to and without limiting the rights of the Holder under the terms of this Warrant, the Holder shall have the right to convert this Warrant or any portion thereof, (the "Net Exercise Right") into shares of Common Stock as provided in this Section 1 at any time or from time to time during the term of this Warrant. Upon exercise of the Net Exercise Right with respect to a particular number of shares of Common Stock subject to this Warrant (the "Converted Warrant Shares"), the Company shall deliver to the Holder (without payment by the Holder of any exercise price or any cash or other consideration) (X) that number of fully paid and nonassessable shares of Common Stock equal to the (Y) Converted Warrant Shares multiplied by the quotient obtained by dividing the result of (B) the fair market value of one share of Common Stock less (A) the Warrant Price per share by (B) the fair market value of one share of Common Stock all on the Conversion Date (as herein defined).

Expressed as a formula such conversion shall be computed as follows:

$$X = \frac{(B - A)}{B} Y$$

Where: X = The number of shares of Common Stock that may be issued to holder.

Y = The number of shares of Common Stock being surrendered pursuant to this Net Exercise Right (i.e., the Converted Warrant Shares).

A = The Warrant Price per share.

B = The fair market value of one share of Common Stock (or if no shares of Common Stock are then outstanding, then Common Stock).

No fractional shares shall be issuable upon exercise of the Net Exercise Right, and, if the number of Converted Warrant Shares to be issued determined in accordance with the foregoing formula is other than a whole number, the Company shall pay to the Holder an amount in cash equal to the fair market value of the resulting fractional share on the Conversion Date. For purposes of this Section 1, shares issued pursuant to the Net Exercise Right shall be treated as if they were issued upon the exercise of this warrant.

(d) **Method of Exercise.** The Net Exercise Right may be exercised by the Holder by the surrender of this Warrant at the principal office of the Company together with the Exercise Notice duly completed and executed, specifying that the Holder thereby intends to exercise the New Exercise Right and indicating the number of shares subject to this Warrant which are being surrendered (referred to in Section 1(c) hereof as the Converted Warrant Shares) in exercise of the Net Exercise Right. Such conversion shall be effective upon receipt by the Company of this Warrant together with the aforesaid written statement, or on such later date as is specified therein (the "Conversion Date").

2. **Adjustments.**

(a) **Stock Splits and Dividends.** If outstanding shares of the Company's Common Stock shall be subdivided into a greater number of shares or a dividend in Common Stock shall be paid in respect of Common Stock, the Exercise Price in effect immediately prior to such subdivision or at

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the record date of such dividend shall simultaneously with the effectiveness of such subdivision or immediately after the record date of such dividend be proportionately reduced. If outstanding shares of Common Stock shall be combined into a smaller number of shares, the Exercise Price in effect immediately prior to such combination shall, simultaneously with the effectiveness of such combination, be proportionately increased. When any adjustment is required to be made in the Exercise Price, the number of shares of Warrant Stock purchasable upon the exercise of this Warrant shall be changed to the number determined by dividing (i) an amount equal to the number of shares issuable upon the exercise of this Warrant immediately prior to such adjustment, multiplied by the Exercise Price in effect immediately prior to such adjustment, by (ii) the Exercise Price in effect immediately after such adjustment.

(b) **Reclassification, Etc.** In case of any reclassification or change of the outstanding securities of the Company or of any reorganization of the Company (or any other corporation the stock or securities of which are at the time receivable upon the exercise of this Warrant) or any similar corporate reorganization on or after the date hereof, then and in each such case the holder of this Warrant, upon the exercise hereof at any time after the consummation of such reclassification, change, reorganization, merger or conveyance, shall be entitled to receive, in lieu of the stock or other securities and property receivable upon the exercise hereof prior to such consummation, the stock or other securities or property to which such holder would have been entitled upon such consummation if such holder had exercised this Warrant immediately prior thereto, all subject to further adjustment as provided in Section 2(a); and in each such case, the terms of this Section 2 shall be applicable to the shares of stock or other securities properly receivable upon the exercise of this Warrant after such consummation.

(c) **Adjustment Certificate.** When any adjustment is required to be made in the Warrant Stock or the Exercise Price pursuant to this Section 2, the Company shall promptly mail to the Holder a certificate setting forth (i) a brief statement of the facts requiring such adjustment, (ii) the Exercise Price after such adjustment and (iii) the kind and amount of stock or other securities or property into which this Warrant shall be exercisable after such adjustment.

3. **Transfers.** This Warrant is not assignable or transferable, other than in accordance with the provisions of this Warrant. Upon receipt by the company of evidence satisfactory to it of the loss, theft, destruction or mutilation of this Warrant, and (in the case of loss, theft or destruction) of reasonably satisfactory indemnification, and upon surrender and cancellation of this Warrant, if mutilated, the Company will execute and deliver a new Warrant of like tenor and date. Any such new Warrant executed and delivered shall constitute an additional contractual obligation on the part of the Company, whether or not this Warrant so lost, stolen, destroyed or mutilated shall be at any time enforceable by anyone.

4. *[INTENTIONALLY DELETED]*

5. **Representations and Warranties.**

(a) The Holder hereby represents and warrants to the Company, as of the date hereof, that it is neither a U.S. person (as defined in Rule 902(k) under Regulation S promulgated under the Securities Act ("*Regulation S*")) nor acquiring the Warrant for the account or for the benefit of a U.S. person.

(b) The Holder agrees that it may only sell, mortgage, hypothecate or otherwise transfer the Warrant (including any beneficial interest therein) only in accordance with the provisions of Regulation S, pursuant to registration under the Securities Act or pursuant to an available exemption from registration. In addition, the Holder agrees not to engage in hedging transactions involving the Warrant unless in compliance with the Securities Act.

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(c) The Holder understands that at the time of exercise of this Warrant, the Holder must certify that such Holder is not a U.S. person and that this Warrant is not being exercised on behalf of a U.S. person, or the Holder must provide the Company with a written opinion of counsel to the effect that the Warrant and the Warrant Stock have been registered under the Securities Act or are exempt from registration under the Securities Act. The Holder understands that the Warrant may not be exercised within the United States, and that the Warrant Stock may not be delivered within the United States upon such exercise, other than in an offering deemed to meet the definition of an "offshore transaction" pursuant to Rule 902(h) under the Securities Act, unless registered under the Securities Act or an exemption from such registration is available.

(d) The Company hereby represents and warrants, as of the date hereof, that the Company did not employ any directed selling efforts, as such term is defined within Rule 902(c) of Regulation S, in connection with the sale of the Warrant.

6. **No Impairment.** The Company will not, by amendment of its charter or through reorganization, consolidation, merger, dissolution, sale of assets or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the holder of this Warrant against impairment. The Company may deem and treat the registered holder(s) hereof as the absolute owner(s) of this Warrant (notwithstanding any notation of ownership or other writing hereon made by anyone), for the purpose of any exercise hereof, and of any distribution to the holder(s) hereof, and for all other purposes, and the company shall not be affected by any notice to the contrary.

7. **Notices of Certain Transactions.** In case:

(a) the Company shall take a record of the holders of its Common Stock (or other stock or securities at the time deliverable upon the exercise of this Warrant) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of stock of any class or any other securities, or to receive any other right, to subscribe for or purchase any shares of stock of any class or any other securities, or to receive any other right, or

(b) of any capital reorganization of the Company, any reclassification of the capital stock of the Company, any consolidation or merger of the Company, any consolidation or merger of the Company with or into another corporation (other than a consolidation or merger in which the Company is the surviving entity), or any transfer of all or substantially all of the assets of the Company, or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Company,

then, and in each such case, the Company will mail or cause to be mailed to the Holder of this Warrant a notice specifying, as the case may be, (i) the date on which a record is to be taken for the purpose of such dividend, distribution or right, and stating the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other stock or securities at the time deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up) are to be determined. Such notice shall be mailed at least ten (10) days prior to the record date or effective date for the event specified in such notice.

8. **Reservation of Stock.** The Company will at all times reserve and keep available, solely for the issuance and delivery upon the exercise of this Warrant, such shares of Warrant Stock and other stock, securities and property, as from time to time shall be issuable upon the exercise of this Warrant.

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9. **Notices.** Any notice required or permitted by this Warrant shall be in writing and shall be deemed sufficient upon receipt, when delivered personally or by courier, overnight delivery service or confirmed facsimile, or forty-eight (48) hours after being deposited in the regular mail as certified or registered mail (airmail if sent internationally) with postage prepaid, addressed (a) if to the Holder, to the address of the Holder most recently furnished in writing to the Company and (b) if to the Company, to the address set forth below or subsequently modified by written notice to the Holder.

10. **No Rights as Stockholder.** Until the exercise of this Warrant, the Holder of this Warrant shall not have or exercise any rights by virtue hereof as a stockholder of the Company.

11. **Amendment or Waiver.** Any term of this Warrant may be amended or waived upon written consent of the Company and the Holder.

12. **Governing Law.** This Warrant shall be governed, construed and interpreted in accordance with the laws of the State of Maryland, without giving effect to principles of conflicts of law.

13. **Amendment and Restatement.** This Common Stock Purchase Warrant amends and restates in its entirety Warrant No. CS 3 bearing a Date of Issuance of May 26, 2006, as amended August 9, 2006, originally issued to the Holder by the Osiris Therapeutics, Inc., a Delaware corporation and predecessor to the Company, and by their respective signatures below, the Company and Holder do hereby agree to such amendment and restatement, and that this instrument shall evidence the entire agreement of the parties as to the subject matter hereof superseding all prior instruments identified as Warrant No CS-3 or otherwise preceding this instrument.

14. **Extension of the Expiration Date.** The Company and Holder acknowledge that the amendment and restatement of this Warrant effected, among other changes to the applicable terms of this Warrant, an extension of the Expiration Date of this Warrant from 5:30 p.m. on May 24, 2011 to 5:30 p.m. on May 24, 2015. Notwithstanding and as a condition to such extension, the Company and Holder agree that, anything herein to the contrary notwithstanding, this Warrant shall *not* be exercisable in whole or in part by the Holder or otherwise, at any time after 5:30 p.m. on May 24, 2011, unless and until (and subject to the condition that) the stockholders of the Company have also approved, by majority of the votes cast, the extension of the Expiration Date of this Warrant from May 24, 2011 until May 24, 2015 (the "Stockholder Approval"), whereupon the forgoing limitation on exercise of this Warrant at any time subsequent to 5:30 p.m. on May 24, 2011 shall immediately terminate. The Company agrees to present the issue of extension of the Expiration Date of the this Warrant to the stockholders for a vote at the annual meeting of stockholders scheduled to be held in May 2011. In the event that the Stockholder Approval is not obtained for any reason prior to 5:30 p.m. September 1, 2011, this Warrant will then immediately expire, notwithstanding the extension of the Expiration Date provided for herein.

[Signature Page Follows]

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This Warrant has been executed as of the date first written above.

OSIRIS THERAPEUTICS, INC.

By: _____

C. Randal Mills, President & CEO
Osiris Therapeutics, Inc.
7015 Albert Einstein Drive
Columbia, MD 21046

Address:

Fax Number:

(443) 545-1701

ACKNOWLEDGED AND AGREED TO:

By: _____

Title: Peter Friedli
Holder
Address: Neuhofstrasse 8
Schindellegi 8834
Switzerland
Fax Number: 41 44 283 2901

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EXHIBIT A

PURCHASE/EXERCISE FORM

To: Osiris Therapeutics, Inc.

Dated:

The undersigned, pursuant to the provisions set forth in the attached Warrant, hereby irrevocably elects to purchase _____ shares of the Common Stock covered by such Warrant and herewith makes payment of \$ _____, representing the full purchase price for such shares at the price per share provided for in such Warrant.

The undersigned certifies that (a) the undersigned is not a U.S. person (as defined under Regulation S ("Regulation S") promulgated under the Securities Act of 1933, as amended (the "Securities Act")) and that this Warrant is not being exercised on behalf of a U.S. person, or (b) the undersigned has provided the Company a written opinion of counsel to the effect that the Warrant and the securities issuable upon exercise thereof have been registered under the Securities Act or are exempt from registration under the Securities Act. The undersigned understands that the Warrant may not be exercised within the United States, and that the securities issuable upon exercise of the Warrant may not be delivered within the United States upon such exercise, other than in an offering deemed to meet the definition of an "offshore transaction" pursuant to Rule 902(h) under the Securities Act, unless registered under the Securities Act or an exemption from such registration is available.

Signature: _____

Name (print): _____

Title (if applic.): _____

Company (if applic.): _____

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 of 2011 Annual Meeting of Stockholders and Proxy Statement dated April 15, 2011, in connection with the 2011 Annual Meeting of Stockholders of Osiris Therapeutics, Inc. to be held at 1:00 p.m., EDT, on Thursday, May 26, 2011 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 in each, to appear for and 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 2011 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.

**PLEASE COMPLETE, DATE, SIGN, AND MAIL THIS PROXY CARD PROMPTLY IN THE ENCLOSED
POSTAGE-PAID ENVELOPE OR PROVIDE YOUR INSTRUCTIONS TO VOTE VIA
THE INTERNET OR BY TELEPHONE.**

(Continued, and to be marked, dated and signed, on the other side)

FOLD AND DETACH HERE

OSIRIS THERAPEUTICS, INC. ANNUAL MEETING, MAY 26, 2011

YOUR VOTE IS IMPORTANT!

Proxy materials are available online at:

<http://www.proxyvote.com>

You can vote in one of three ways:

1. Call **toll free 1-800-690-6903** on a touch-tone phone. There is **NO CHARGE** to you for this call.

or

2. Via the Internet at **<http://www.proxyvote.com>** and follow the instructions.

or

3. Mark, sign, and date your proxy card and return it promptly in the enclosed envelope.

PLEASE SEE REVERSE SIDE FOR VOTING INSTRUCTIONS

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x Please mark votes as in this example.

The Board of Directors recommends a vote **FOR** Proposals 1, 2, 3, 4 and 5.

1. Election of two Class I Directors (or if any nominee is not available for election, such substitute as the Board of Directors may designate) for a three-year term and until their respective successors are duly elected and qualified.

Nominees: C. Randal Mills, Ph.D. and Felix Gutzwiller, M.D., Dr.P.H.

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 extension until May 24, 2015 of the expiration date of a warrant held by the Chairman of our Board of Directors, Mr. Peter Friedli.

FOR AGAINST ABSTAIN

3. Proposal to ratify the appointment of Grant Thornton LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2011.

FOR AGAINST ABSTAIN

4. Proposal to approve, on a non-binding advisory basis, the compensation paid to our named executive officers, as disclosed in the Proxy Statement for the 2011 Annual Meeting.

FOR AGAINST ABSTAIN

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5. Proposal to approve, on a non-binding advisory basis, the frequency of stockholder input to the compensation paid to our named executive officers.

ONE YEAR

TWO YEARS

THREE YEARS

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, FOR Proposal No. 3, for Proposal No. 4 and FOR Proposal No. 5.

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).