

OSIRIS THERAPEUTICS, INC.

April 30, 2007

Dear Stockholder,

You are cordially invited to attend the 2007 Annual Meeting of Stockholders of Osiris Therapeutics, Inc. to be held at 2:00 p.m. Eastern Daylight Time (“EDT”), on Thursday, May 31, 2007, at the offices of Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, MD 21046. The attached Notice of Annual Meeting and Proxy Statement describe the business we will conduct at the Annual Meeting and provide information about Osiris Therapeutics, Inc. that you should consider when you vote your shares.

At the Annual Meeting, two persons will be elected to the Board of Directors. In addition, we will ask stockholders to ratify the selection of Stegman & Company as our independent registered public accounting firm for our fiscal year ending December 31, 2007. The Board of Directors recommends the approval of each of these proposals. Such other business will be transacted as may properly come before the Annual Meeting.

We hope you will be able to attend the Annual Meeting. Whether you plan to attend the Annual Meeting or not, it is important that your shares are represented. Therefore, when you have finished reading the proxy statement, you are urged to complete, sign, date and return the enclosed proxy card promptly in accordance with the instructions set forth on the card. We encourage you to vote by proxy so that your shares will be represented and voted at the meeting, whether or not you can attend.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Randal Mills', written in a cursive style.

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

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

OSIRIS THERAPEUTICS, INC.

NOTICE OF 2007 ANNUAL MEETING OF STOCKHOLDERS

TIME: 2:00 p.m. EDT

DATE: May 31, 2007

PLACE: The offices of OSIRIS THERAPEUTICS, INC., 7015 Albert Einstein Dr, Columbia,
MD 21046

PURPOSES:

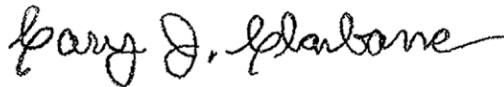
1. To elect two members to the Board of Directors to serve three-year terms expiring at the annual meeting of stockholders to be held in 2010 and until their respective successors shall be duly elected and qualified.
2. To ratify the selection of Stegman & Company as our independent registered public accounting firm for the fiscal year ending December 31, 2007.
3. To consider any other business that is properly presented at the Annual Meeting and any postponements or adjournments thereof.

WHO MAY VOTE:

You may vote if you were the record owner of OSIRIS THERAPEUTICS, INC. common stock at the close of business on April 30, 2007. A list of stockholders of record will be available at the meeting and, during the 10 days prior to the meeting, at the office of the Corporate Secretary at the above address.

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

BY ORDER OF THE BOARD OF DIRECTORS



Cary J. Claiborne
Corporate Secretary

April 30, 2007

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OSIRIS THERAPEUTICS, INC.

PROXY STATEMENT FOR THE OSIRIS THERAPEUTICS, INC. 2007 ANNUAL MEETING OF STOCKHOLDERS

GENERAL INFORMATION ABOUT THE ANNUAL MEETING

Why Did You Send Me this Proxy Statement?

We sent you this proxy statement and the enclosed proxy card because the Board of Directors of OSIRIS THERAPEUTICS, INC. is soliciting your proxy to vote at the 2007 Annual Meeting of stockholders to be held at our offices, 7015 Albert Einstein Drive, Columbia, MD 21046, on Thursday, May 31, 2007, at 2:00 p.m. EDT, and at any adjournments or postponements of the meeting. This proxy statement, along with the accompanying Notice of Annual Meeting of Stockholders, summarizes the purposes of the meeting and information you need to know to vote at the Annual Meeting.

On May 1, 2007 we began sending this proxy statement, the attached Notice of Annual Meeting and the enclosed proxy card to all stockholders entitled to vote at the meeting. Although not part of this proxy statement, we are also sending along with the proxy statement, our 2006 Annual Report on Form 10-K.

Who Can Vote?

Only stockholders who owned our common stock of record at the close of business on April 30, 2007, the record date for the Annual Meeting, are entitled to vote at the Annual Meeting. On this record date, there were 27,467,632 shares of our common stock outstanding and entitled to vote. We have no shares of any other class of capital stock outstanding.

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

How Many Votes Do I Have?

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

How Do I Vote?

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

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

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

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

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

The Board of Directors recommends that you vote as follows:

- **“FOR”** the election of the two nominees for director; and
- **“FOR”** ratification of the selection of Stegman & Company as our independent registered public accounting firm for our fiscal year ending December 31, 2007.

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

May I Revoke My Proxy?

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

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

What if I Receive More Than One Proxy Card?

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

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

If your shares are registered in your name or if you have stock certificates, they will not be voted if you do not return your proxy card by mail or vote at the meeting as described above under “How Do I Vote?” If your shares are held in street name and you do not provide voting instructions to the bank, broker or other nominee that holds your shares as described above under “How Do I Vote?,” the bank, broker or other nominee has the discretionary authority to vote your unvoted shares on both Proposals 1 and 2 even

if it does not receive instructions from you. We encourage you to provide voting instructions. This ensures your shares will be voted at the meeting in the manner you desire. If your broker cannot vote your shares on a particular matter because it has not received instructions from you and does not have discretionary voting authority on that matter or because your broker chooses not to vote on a matter for which it does have discretionary voting authority, this is referred to as a “broker non-vote.”

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

Proposal 1: Elect Directors The affirmative vote of a plurality of the shares voted affirmatively is required to elect a director. The two individuals receiving the most votes will be elected. Abstentions are not counted for purposes of electing directors. You may vote either FOR all of the nominees, WITHHOLD your vote from all of the nominees or WITHHOLD your vote from any one or more of the nominees. Votes that are withheld will not be included in the vote tally for the election of directors. Brokerage firms have authority to vote customers’ unvoted shares held by the firms in street name for the election of directors. If a broker does not exercise this authority, such broker non-votes will have no effect on the results of this vote.

Proposal 2: Ratify Selection of Independent Registered Public Accounting Firm The affirmative vote of a majority of the shares voted affirmatively or negatively on this proposal is required to ratify the selection of the independent registered public accounting firm. Abstentions will have no effect on the results of this vote. Brokerage firms generally have authority to vote customers’ unvoted shares held by the firms in street name on this proposal. If a broker does not exercise this authority, such broker non-votes will have no effect on the results of this vote. We are not required to obtain the approval of our stockholders to select our independent registered public accounting firm. However, if our stockholders do not ratify the selection of Stegman & Company as our independent registered public accounting firm for the fiscal year ending December 31, 2007, the Audit Committee of our Board of Directors may determine to reconsider its selection.

Who Will Bear the Costs of Soliciting these Proxies?

We will pay all of the costs of soliciting these proxies. Our directors and employees may solicit proxies in person or by telephone, fax or email. We will pay these employees and directors no additional compensation for these services. We will ask banks, brokers and other institutions, nominees and fiduciaries to forward these proxy materials to their principals and to obtain authority to execute proxies. We will then reimburse them for their expenses.

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

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

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of April 24, 2007 for (a) the executive officers named in the Summary Compensation Table on page 19 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 24, 2007 pursuant to the exercise of options or warrants to be outstanding for the purpose of computing the percentage ownership of such individual or group, but 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 29,866,014 shares of common stock outstanding on April 24, 2007.

| <u>Name and Address</u> | <u>Number</u> | <u>Percent</u> |
|--|-------------------|----------------|
| Executive Officers and Directors | | |
| Gregory H. Barnhill..... | 7,421 | — |
| Harry E. Carmitchel, Jr. | 93,250 | — |
| Cary J. Claiborne | 75,000 | — |
| Lode Debrabandere..... | — | — |
| Earl R. Fender | — | — |
| Peter Friedli(1)..... | 14,102,984 | 47.2% |
| Felix Gutzwiller | 46,000 | — |
| C. Randal Mills(2)..... | 375,000 | 1.3% |
| Jay M. Moyes | 1,500 | — |
| All directors and executive officers as a group (9 persons)..... | <u>14,701,155</u> | <u>49.2%</u> |
| Other 5% Stockholders | | |
| Venturetec, Inc.(3)..... | 3,822,222 | 12.8% |
| c/o Osiris Therapeutics, Inc. | | |
| 7015 Albert Einstein Drive | | |
| Columbia, Maryland 21046 | | |
| Thomas Schmidheiny(4)..... | 1,964,440 | 6.6% |
| c/o BIH SA | | |
| 23 Fraubourg de'Hopital | | |
| 2000 Neuchatel, Switzerland | | |

- (1) Includes 7,807,274 shares owned directly by Peter Friedli; 1,000,000 shares issuable upon the exercise of outstanding warrants, assuming the warrants are exercised in full for cash; and 250,000 shares issuable upon the conversion of a certain Convertible Promissory Note, which may be converted at the discretion of the holder; 625 shares owned by Margrit Friedli, Mr. Friedli's mother; 3,600,000 shares owned by Venturetec, Inc.; 222,222 shares issuable to Venturetec, Inc. upon the conversion of a certain Convertible Promissory Note; 1,000,000 shares owned by US Venture 05, Inc.; 217,863 shares of common stock owned by Nikatech, Inc.; and 5,000 shares owned by Joyce, Ltd. Peter Friedli is the President of Venturetec, Inc. and US Venture 05, Inc., the investment manager and 17% owner of Nikatech, Inc. and the owner of Joyce, Lt.

- (2) Includes 123,000 shares owned directly by C. Randal Mills, 2,000 shares owned in custodial accounts where Dr. Mills is the custodian and 250,000 shares issuable upon the exercise of options.
- (3) Includes 3,600,000 shares owned directly by Venturetec, Inc. and 222,222 shares issuable upon the conversion of a certain Convertible Promissory Note, which may be converted at the discretion of the holder.
- (4) Includes 239,214 shares owned directly by Thomas Schmidheiny; 111,111 shares issuable upon the conversion of a certain Convertible Promissory Note, which may be converted at the discretion of the holder; 1,503,004 shares owned by BIH, SA; and 111,111 shares issuable upon the conversion of a certain Convertible Promissory Note, which may be converted at the discretion of the holder. Mr. Schmidheiny is the Chairman and controlling shareholder of BIH, SA.

MANAGEMENT

The Board of Directors

Our Amended and Restated Certificate of Incorporation and Amended and Restated By-Laws provide that our business is to be managed by or under the direction of our Board of Directors (the “Board”). Our Board is divided into three classes for purposes of election. One class is elected at each annual meeting of stockholders to serve for a three-year term and until their respective successors are duly elected and qualified. Our Board currently consists of five members, classified into three classes as follows: Gregory H. Barnhill and Jay M. Moyes, constitute a class with a term which expires at the Annual Meeting (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 the Annual Meeting of Stockholders in 2008 (the “Class II directors”); and Peter Friedli constitutes a class with a term ending at the Annual Meeting of stockholders in 2009 (the “Class III directors”), and in each case, until their respective successors have been duly elected and qualified or until their earlier death, resignation, retirement or removal.

On April 12, 2007, our Board, upon the recommendation and with the approval of our Independent directors determined to nominate Messrs. Barnhill and Moyes for election at the Annual Meeting for a term of three years to serve until the 2010 annual meeting of stockholders, and until their respective successors have been elected and qualified, or until their earlier death, resignation, retirement or removal.

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

Peter Friedli, age 52, is our Chairman of the Board and was co-founder of Osiris. Mr. Friedli has been a director of Osiris since January 1996, except for the period between February and June 2004. He has since 1996 been a principal of the investment-banking firm Friedli Corporate Finance, Inc., a leading Swiss venture capital firm which has made significant investments in the biotechnology industry and has been the primary source of financing for Osiris. Mr. Friedli is also President of New Venturetec Ltd., a Swiss publicly traded investment company. Mr. Friedli has extensive experience as an independent investment manager in venture capital and has specialized in investments domiciled in the United States in the areas of biotechnology and technology. Prior thereto, he worked in the field of international management consulting for service and industrial companies in Europe and the United States. Mr. Friedli is a director of E-centives, Inc., a publicly traded provider of interactive database marketing technologies and services. He also serves as a director in certain private companies.

C. Randal Mills, age 35, is our President and Chief Executive Officer and joined us in this capacity in July 2004. Dr. Mills has also been a member of our Board since July 2004. Prior to joining Osiris, Dr. Mills was an executive officer of Regeneration Technologies, Inc. (“RTI”) (NASDAQ—RTIX). Dr. Mills served in several leadership positions at RTI from its formation in 1998 until 2004, including Vice President of Business Development and Vice President of Operations and R&D. Prior to RTI, Dr. Mills was a member of the founding management team of the University of Florida Tissue Bank, Inc., the predecessor company to RTI. Dr. Mills received a bachelor’s degree in microbiology and cell science and a Ph.D. in drug development, both from the University of Florida.

Felix Gutzwiller, M.D., Dr.P.H., age 58, has been a member of our Board since 2003, and is Professor and Chairman of the Department of Public Health of the University of Zurich Medical School. Dr. Gutzwiller is also an elected member of the Swiss Parliament. Dr. Gutzwiller received a medical degree from the University of Basel in 1974 and did his post-graduate training at both Harvard University and Johns Hopkins University. He received his Dr.P.H. from the Johns Hopkins University School of

Hygiene and Public Health in 1980. Dr. Gutzwiller has received many honors and awards over the years in the health profession.

Jay M. Moyes, age 53, has been a member of our Board since the completion of our initial public offering in August 2006. Mr. Moyes has served as the Chief Financial Officer of Myriad Genetics, Inc. since June 1996, and served as Myriad's Vice President of Finance from July 1993 until July 2005. From 1991 to 1993, Mr. Moyes served as Vice President of Finance and Chief Financial Officer of Genmark, Inc. Mr. Moyes held various positions with the accounting firm of KPMG LLP from 1979 through 1991, most recently as a Senior Manager. He holds an M.B.A. degree from the University of Utah, a B.A. degree in economics from Weber State University, and is a Certified Public Accountant. Mr. Moyes has also served as a member of the Board of Trustees of the Utah Life Science Association from 1999 through 2006.

Gregory H. Barnhill, age 53, has been a member of our Board since the completion of our initial public offering in August 2006. Mr. Barnhill has served as a Partner and Member of the board of directors of Brown Advisory Securities, LLC since 2003. Mr. Barnhill is also a member of numerous philanthropic and corporate boards. From 1975 to 2003, Mr. Barnhill held various positions with Deutsche Bank Securities, Inc., most recently as Managing Director and Regional Manager, North American Equity Sales. He holds a B.A. degree in economics from Brown University. Mr. Barnhill holds NYSE/NASD licenses series 7, 63, 9 and 10 as well as life, health and variable annuities insurance licenses.

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

Committees of the Board of Directors and Meetings

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

Meeting Attendance. During the year ended December 31, 2006 there were twelve meetings of the Board, and the various committees of the Board met a total of four times. During 2006, no then-incumbent director attended fewer than 75% of the total number of meetings of the Board and committees on which the Director served. The Company does not have a policy on director attendance at Annual Meetings, but all of our directors are invited and encouraged to attend Annual Meetings.

Audit Committee. Our Audit Committee met three times during 2006. This committee currently has three members, Mr. Moyes (Chairman), Dr. Gutzwiller and Mr. Barnhill. Our Audit Committee has the authority to retain and terminate the services of our independent registered public accounting firm, reviews annual financial statements, considers matters relating to accounting policy and internal controls and reviews the scope of annual audits. All members of the Audit Committee satisfy the current independence standards promulgated by the Securities and Exchange Commission and by The Nasdaq Stock Market, Inc., as such standards apply specifically to members of audit committees. The Board has determined that Mr. Moyes is an "audit committee financial expert," as defined by the rules and regulations of the Securities and Exchange Commission. None of the members of the Audit Committee, or the proposed members of the Audit Committee, have participated in the preparation of any financial statements of the Company at any time during the last three fiscal years. Please also see the report of the Audit Committee set forth elsewhere in this proxy statement.

Compensation Committee. Our Compensation Committee met one time during 2006. This committee currently has two members, Dr. Gutzwiller (Chairman) and Mr. Barnhill. Our Compensation Committee administers our stock plans and reviews, approves and makes recommendations on our compensation policies, practices and procedures to ensure that legal and fiduciary responsibilities of the Board are carried out and that such policies, practices and procedures contribute to our success. The Compensation Committee is also responsible for recommending to the independent members of our Board the compensation of our Chief Executive Officer and our other officers, and conducts its decision-making process with respect to that issue without the Chief Executive Officer present. All members of the Compensation Committee qualify as “independent” under the definition promulgated by The Nasdaq Stock Market, Inc. Please also see the report of the Compensation Committee set forth elsewhere in this proxy statement.

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

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

Compensation Committee Interlocks and Insider Participation. During 2006, our Compensation Committee consisted of two members, Dr. Gutzwiller (Chairman) and Mr. Barnhill. None of our executive officers is a member of the Compensation Committee, nor do any of our executive officers serve as a member of the board of directors or compensation committee (or other board committee performing equivalent functions or, in the absence of any such committee, the entire board of directors) of any entity that has one or more executive officers serving as a member of our Board or Compensation Committee.

Director Nominations

We do not have a formally constituted nominating committee but instead our Board on July 19, 2006 adopted Corporate Governance Principles which provide for the nomination of persons to serve on our Board upon the approval of a majority of our independent directors. The qualifications of recommended candidates will be also be reviewed and approved by the full Board. Stockholders may recommend director candidates for inclusion by the Board in the slate of nominees recommended to stockholders for election as described below.

The process followed by our Board and independent directors to identify and evaluate potential candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by independent directors and the Board. In considering whether to recommend any candidate for inclusion in the Board’s slate of recommended director nominees, the Board and the independent directors apply the standards established for service on the Board in the Corporate Governance Principles, as follows: directors should possess the highest personal and professional ethics, integrity and values, and be committed to representing the long-term interests of the stockholders; they must also have an inquisitive and objective perspective, practical wisdom and mature judgment; the

selection of director nominees should further an objective of having a board representing diverse experience at policy-making levels in business, government, education and technology, and in areas that are relevant to our global activities; directors must be willing to devote sufficient time to carrying out their duties and responsibilities effectively, and should be committed to serve on the Board for an extended period of time; directors should offer their resignation in the event of any significant changes in their personal circumstances, including a change in their principal job responsibilities. The Board does not believe that arbitrary term limits on directors' service are appropriate, nor does it believe that directors should expect to be re-nominated annually. The Board and the independent directors do not assign specific weights to particular criteria and no particular criterion is necessarily applicable to all prospective nominees. Although we do not have a specific policy with respect to the nomination of directors by stockholders, nominations made by stockholders will be considered. We believe that it is not necessary to have a policy for director nominations by stockholders because the Board, including the independent directors, is able to effectively locate and evaluate potential candidates for nomination to the Board due to the directors' intimate knowledge of our business and the life science industry. Stockholders may communicate directly with the Board by written communication as described below.

Stockholder Communications to the Board

Generally, stockholders who have questions or concerns should contact our Investor Relations department at (443) 545-1800. However, any stockholders who wish to address questions regarding our business directly to the Board, or any individual director, may do so by sending a written communication addressed to: Corporate Secretary, 7015 Albert Einstein Drive, Columbia, MD 21046. All such communications will be compiled by the Corporate Secretary and submitted to the Board or the individual director so designated on a periodic basis. The Board has instructed the Corporate Secretary, prior to forwarding any correspondence, to review such correspondence and, in his discretion, not to forward items if they are deemed of a commercial, irrelevant or frivolous nature or otherwise inappropriate for consideration by the Board. These screening procedures are designed to assist the Board in reviewing and responding to stockholder communications in an appropriate manner. All communications directed to the Audit Committee in accordance with the procedures set forth in this paragraph that relate to questionable accounting or auditing matters will be forwarded promptly and directly to the Chairman (or another member) of the Audit Committee.

Compensation of Directors

All directors are reimbursed for their out-of pocket expenses incurred in attending meetings. Each director who is not an employee is eligible to receive compensation from us for his or her services as a member of our Board or any of its standing committees. In determining compensation for directors, the decision is generally guided by three goals: compensation should fairly pay the directors for work required of directors of a company of our size and scope; compensation should align directors' interests with the long-term interests of stockholders; and the structure of the compensation should be simple, transparent and easy for stockholders to understand. Consistent with this, in 2006, prior to the completion of our initial public offering, our non-employee directors received a retainer of 2,500 shares of our common stock plus an additional amount of common stock up to 2,500 shares based on active Board participation.

The following table summarizes compensation paid to our non-employee directors during 2006.

| <u>Name</u> | <u>Fees Earned or Paid in Cash(\$)</u> | <u>Stock Awards(\$)(1)</u> | <u>Option Awards(\$)</u> | <u>All Other Compensation(\$)(3)</u> | <u>Total(\$)</u> |
|--------------------------|--|----------------------------|--------------------------|--------------------------------------|------------------|
| Gregory Barnhill(2)..... | — | — | — | — | — |
| Peter Friedli | — | 55,000 | — | 3,860,185 | 3,915,185 |
| Felix Gutzwiller | — | 55,000 | — | — | 55,000 |
| Jay Moyes(2)..... | — | — | — | — | — |

- (1) Reflects the grant in April 2006 of 5,000 shares of common stock to each of Peter Friedli and Felix Gutzwiller for their service on our Board in 2005. The fair value of these shares at the time of grant was \$11.00 per share as determined by our Board pursuant to a retrospective analysis conducted for financial reporting purposes.
- (2) Mr. Barnhill and Mr. Moyes joined the Board in August 2006 upon the completion of our initial public offering.
- (3) Includes \$3,527,435, the non-cash value of a Warrant as determined using the Black-Scholes option pricing model, for 1,000,000 shares of our common stock awarded to Mr. Friedli in connection with financing transactions, at an initial exercise price of \$11.00 per share (the price at which shares were sold to the public in our initial public offering). Also includes \$85,500, the value of 12,500 shares of our common stock awarded in connection with financing transactions, \$200,000 paid in cash as fees in connection with the October 2006 issuance of \$20.0 million in Convertible Promissory Notes and \$47,250 paid under a consulting agreement which was terminated in August 2006.

Options granted during 2006 to any named executive officers serving on the Board are reported under “Executive Compensation—Option Grants in Last Fiscal Year.”

Executive Officers

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

Harry E. Carmitchel, age 56, is our Chief Operating Officer and joined us in this capacity in September 2004. Mr. Carmitchel has over 20 years of general management and operations experience in the medical field. Prior to joining us, Mr. Carmitchel was a Principal with the Pacific Consulting Group for four years, where he specialized in corporate turnarounds. Prior to this time, Mr. Carmitchel was a General Manager with McQuay International and spent eight years as President of the Medical Division for Stryker Corporation. Previously, he also served as Vice President of Operations and Vice President of Marketing for Everest and Jennings, Inc. Mr. Carmitchel earned an M.B.A. from the University of Southern California and a Bachelors degree in electrical engineering from the General Motors Institute.

Cary J. Claiborne, age 46, is our Chief Financial Officer and joined us in this capacity in December 2004. Mr. Claiborne previously was Vice President, Financial Planning and Analysis at Constellation Energy, a diversified energy company from December 2001 to June 2004. Prior to Constellation Energy, he served as Vice President, Financial Planning and Analysis for Home Depot from April 2000 to July 2001. Mr. Claiborne spent the first 15 years of his career at GE, in several leadership positions, including CFO for GE Capital Business Services and President of New Enterprise Wholesale Services. Mr. Claiborne earned an M.B.A. from Villanova University and a B.A. in business administration from Rutgers University.

Earl R. Fender, age 59, is our Vice President and General Manager for Orthopedics and joined us in this capacity in June 2006. Prior to joining us, Mr. Fender served for over ten years with DePuy Spine, a Johnson & Johnson company, holding positions as Vice President, Sales, U.S. President, and finally as Worldwide President. Most recently Mr. Fender served as Worldwide Vice President, Public Policy, for the five global businesses of DePuy, Inc., leading and shaping DePuy's response to key external environmental issues. Mr. Fender's academic credentials include a B.A. in Business Administration from Thiel College and the completion of Harvard Business School's Program for Management Development.

Lode Debrabandere, age 42, is our Vice President and General Manager for Inflammatory Diseases and joined us in this capacity in July 2006. Prior to joining us, Dr. Debrabandere served for over four years with Bristol-Myers Squibb as Vice President for Strategic Marketing for Neuroscience and Infectious Diseases. Prior to that, Dr. Debrabandere led the Marketing department of UCB Pharma Inc., focusing in the areas of allergy/respiratory and neurology and before that held various positions in the Research and Development Department at UCB Pharma, including the management of clinical development activities in the U.S., Europe, and Japan. Dr. Debrabandere earned an M.B.A., a Ph.D. in pharmaceutical sciences, toxicology, and a Pharm. D. degree in pharmaceutical sciences, all from the University of Leuven, Belgium.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Overview

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

General Compensation Policy

The objectives of our executive compensation programs are to:

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

Elements of Executive Officer Compensation

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

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

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

Management's Role in Determining Executive Compensation

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

own analysis and judgment and the recommendations of the Chief Executive Officer, whether to approve any recommended changes in compensation.

Base Salary

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

Our goal is to pay each named executive officer a base salary sufficient to remain competitive in the market. Dr. Mills, Messrs. Claiborne, Carmitchel, and Fender, and Dr. Debrabandere received annual base salaries of \$315,000, \$184,500, \$153,750, \$225,000 and \$225,000, respectively for the year ended December 31, 2006. On February 5, 2007, the Compensation Committee of the Board approved the 2007 annual base salaries for each of the named executive officers, effective February 5, 2007 as follows:

| <u>Name and Position</u> | <u>2007 Base Salary (\$)</u> |
|---|------------------------------|
| C. Randal Mills, Chief Executive Officer. | 400,000 |
| Harry E. Carmitchel, Chief Operating Officer(1) | 175,000 |
| Cary J. Claiborne, Chief Financial Officer | 190,000 |
| Earl R. Fender, Vice President and General Manager for Orthopedics | 235,000 |
| Lode Debrabandere, Vice President and General Manager for Inflammatory Diseases | 230,000 |

(1) Reflective of Mr. Carmitchel’s less than full-time employment status, as described in his employment agreement, his base salary represents 75% of a full-time base salary of \$233,333.33.

The 2007 base salaries for Dr. Mills, Messrs. Claiborne, Carmitchel, and Fender, and Dr. Debrabandere are consistent with the range of salaries received by their respective counterparts in companies in the biotechnology industry and other comparable companies, and represent percentage increases from 2006 to 2007 of approximately 27%,3%, 14%, 4% and 2%, respectively.

Annual Incentive Bonuses

Bonuses for executive officers are discretionary and are awarded on an annual basis by the Compensation Committee after fiscal year end. Bonus amounts are determined based upon overall company performance, together with a subjective review of the individual executive officer’s performance over the past fiscal year and achievement of management objectives or goals related to the executive officer’s areas of responsibility. The Compensation Committee believes Dr. Mills has managed Osiris well in a challenging business climate and has continued to move it towards its long-term objectives. Consistent with this assessment, Dr. Mills was awarded a bonus of \$90,000 for the year ending December 31, 2006. The range of bonuses paid for our named executive officers on the basis of 2006 performance was \$26,600 to \$90,000.

Exercise of Discretion in Executive Compensation Decisions

Subject to the terms of any binding agreements that provide otherwise, the Compensation Committee has complete discretion to withhold payment pursuant to any of our incentive compensation plans irrespective of whether we or our executive officers have successfully met the goals set under these plans. The Compensation Committee also typically has the authority to grant payment under any of the plans despite the non-attainment by us or our executive officers of the pre-established goals. For 2006, the Compensation Committee did not exercise such discretion in the payment of awards to our executive officers.

Long-term Incentive Compensation

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

- We granted stock options to Dr. Mills to purchase 100,000 shares at a weighted average exercise price of \$0.40 in 2006, compared to 150,000 shares at a weighted average exercise price of \$0.40 in the year ended December 31, 2004. Dr. Mills did not receive any stock option grants in the year ended December 31, 2005. Dr. Mills also received a grant of 125,000 restricted stock units in 2004 that vested in September 2005 and were converted into common stock.
- We granted stock options to Mr. Claiborne to purchase 15,000 shares at a weighted average exercise price of \$0.40 in 2006, compared to 60,000 shares at a weighted average exercise price of \$0.40 in the year ended December 31, 2004. Mr. Claiborne did not receive any stock option grants in the year ended December 31, 2005.
- We granted stock options to Mr. Carmitchel to purchase 25,000 shares at a weighted average exercise price of \$0.40 in 2006, compared to 100,000 shares at a weighted average exercise price of \$0.40 in the year ended December 31, 2004. Mr. Carmitchel did not receive any stock option grants in the year ended December 31, 2005.
- We granted stock options to Mr. Fender to purchase 75,000 shares at a weighted average exercise price of \$6.84 in 2006.
- We granted stock options to Dr. Debrabandere to purchase 75,000 shares at a weighted average exercise price of \$6.84 in 2006.

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

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

Executive Benefits and Perquisites

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

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

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

Retirement/Post-Employment Benefits.

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

Compensation Committee Report

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

Compensation Committee Members:

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

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

Summary Compensation Table

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

| <u>Name and Principal Position</u> | <u>Year</u> | <u>Salary (\$)</u> | <u>Bonus \$(1)</u> | <u>Stock Awards \$(2)</u> | <u>Option Awards \$(2)</u> | <u>All Other Compensation \$(3)</u> | <u>Total (\$)</u> |
|--|-------------|------------------------|------------------------|-----------------------------------|------------------------------------|---|-----------------------|
| C. Randal Mills. President and Chief Executive Officer | 2006 | 315,000 | 90,000 | — | 594,428 | — | 999,428 |
| Harry E. Carmitchel Chief Operating Officer | 2006 | 153,750 | 36,000 | — | 148,607 | — | 338,357 |
| Cary J. Claiborne Chief Financial Officer | 2006 | 184,500 | 40,000 | — | 89,164 | — | 313,664 |
| Earl R. Fender Vice President and General Manager of Orthopedics | 2006 | 125,337 | 42,000 | — | — | 108,267 | 275,064 |
| Lode Debrabandere. Vice President and General Manager, Inflammatory Diseases | 2006 | 94,615 | 26,600 | — | — | — | 121,215 |

- (1) Represents bonus payments that were paid in 2007 on account of named executive officer performance in 2006.
- (2) These amounts reflect the non-cash amounts recognized for financial statement purposes for 2006, in accordance with FAS Statement 123(R) of stock based awards pursuant to our stockholder approved equity plans. Assumptions used in the calculations of these amounts are included in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Note 2—Description of Business and Significant Accounting Policies” and “Note 6—Share-Based Compensation” to the Financial Statements of our Company in our Annual Report on Form 10-K for the year ended December 31, 2006 and filed with the SEC on March 26, 2007.
- (3) Represents relocation expenses paid to the named executive officer pursuant to his employment agreement.

Grants of Plan-Based Awards

The following table provides information on equity and non-equity awards granted in 2006 to each of the named executive officers:

| <u>Name</u> | <u>Grant Date</u> | <u>All Other Option Awards: Number of Securities Underlying Options (#)</u> | <u>Exercise or Base Price of Option Awards (\$ / Sh)</u> | <u>Grant Date Fair Value of Stock and Option Awards (\$)</u> |
|------------------------------|-------------------|---|--|--|
| C. Randal Mills. | 1/11/2006 | 100,000 | 0.40 | 594,428 |
| Harry E. Carmitchel. | 1/11/2006 | 25,000 | 0.40 | 148,607 |
| Cary J. Claiborne. | 1/11/2006 | 15,000 | 0.40 | 89,164 |
| Earl R. Fender | 6/12/2006 | 75,000 | 6.84 | 637,666 |
| Lode Debrabandere. | 7/31/2006 | 75,000 | 6.84 | 498,357 |

Equity Compensation Plan Information

We have two equity compensation plans: (1) the Amended and Restated 1994 Stock Option and Incentive Plan, as amended, and (2) the 2006 Stock Option and Incentive Plan. A total of 1,586,379 shares of common stock are reserved for issuance pursuant to the plans. Currently, awards under the stock option and incentive plans consist of qualified and non-qualified stock options and restricted shares of common stock. Our stockholders have approved both stock option and incentive plans. As of December 31, 2006:

| <u>Plan Category</u> | <u>Number of Securities to be Issued Upon Exercise of Outstanding Options</u> | <u>Weighted-Average Exercise Price of Outstanding Options (\$ / Sh)</u> | <u>Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans</u> |
|--|---|---|---|
| Equity compensation plans approved by security holders..... | 695,915 | 2.05 | 785,010 |
| Equity compensation plans not approved by security holders(1)..... | 1,000,000 | 11.00 | 0 |

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

Outstanding Equity Awards at Fiscal Year-End

| <u>Name</u> | <u>Option Awards</u> | | | | | <u>Stock Awards</u> | | | |
|-------------------------------|--|--------|--|-----------------------------------|-------------------------------|--|---|--|---|
| | <u>Number of Securities Underlying Unexercised Options (#)</u> | | <u>Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Options (#)</u> | <u>Option Exercise Price (\$)</u> | <u>Option Expiration Date</u> | <u>Number of Shares or Units of Stock That Have Not Vested (#)</u> | <u>Market Value of Shares or Units of Stock That Have Not Vested (\$)</u> | <u>Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)</u> | <u>Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (\$)</u> |
| C. Randal Mills. | 150,000 | — | — | 0.40 | 05/14/14 | — | — | — | — |
| | 100,000 | — | — | 0.40 | 01/10/16 | — | — | — | — |
| Harry E. Carmitchel | 40,000 | — | — | 0.40 | 08/31/14 | — | — | — | — |
| Cary J. Claiborne | 15,000 | — | — | 0.40 | 01/10/16 | — | — | — | — |
| Earl R. Fender | — | 75,000 | — | 6.84 | 06/11/16 | — | — | — | — |
| Lode Debrabandere | — | 75,000 | — | 6.84 | 07/30/16 | — | — | — | — |

Option Exercises and Stock Vested

| <u>Name</u> | <u>Option Awards</u> | | <u>Stock Awards</u> | |
|-------------------------------|--|--|---|---------------------------------------|
| | <u>Number of Shares Acquired on Exercise (#)</u> | <u>Value Realized on Exercise (\$)</u> | <u>Number of Shares Acquired on Vesting (#)</u> | <u>Value Realized on Vesting (\$)</u> |
| C. Randal Mills. | — | — | — | — |
| Harry E. Carmitchel | 85,000 | 914,500 | — | — |
| Cary J. Claiborne | 60,000 | 541,200 | — | — |
| Earl R. Fender | — | — | — | — |
| Lode Debrabandere. | — | — | — | — |

Employment Contracts, Termination of Employment and Change in Control Arrangements

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

Under Dr. Mills' employment agreement, dated as of May 15, 2004, he serves as our Chief Executive Officer for an initial three-year term. Thereafter, the agreement renews automatically each May 15 for successive one-year terms, unless either party provides notice of termination at least ninety days prior to May 15. We may otherwise terminate Dr. Mills' employment (i) if he is unable to perform his duties due to some incapacity for three or more consecutive months or for four or more non-consecutive months, (ii) if he fails to perform his duties and such failure is not cured within thirty days after specific written notice by the Board, or (iii) for cause. Dr. Mills may terminate his employment for good reason. If we terminate Dr. Mills for failure to perform his duties, in addition to paying any amount otherwise owed, we must pay him a lump sum in an amount equal to one half of his annual base salary (based on his 2006 annual base salary of \$315,000, this amount equals \$157,500) and provide six months of medical, life and disability benefits (having an extended value of approximately \$8,812). 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 2006 annual base salary of \$315,000, this amount equals \$315,000) and provide one full year of medical, life, and disability benefits (having an estimated value of approximately \$17,624).

Under Mr. Claiborne's employment agreement, dated as of December 3, 2004, he serves as our Chief Financial Officer for an initial three-year term. Thereafter, the agreement renews automatically each December 3 for successive one-year terms, unless either party provides notice of termination at least ninety days prior to December 3. We may otherwise terminate Mr. Claiborne's 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. Mr. Claiborne may terminate his employment for good reason. If we terminate Mr. Claiborne 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 2006 annual base salary of \$184,500, this amount equals \$92,250) and provide six months of medical, life and disability benefits (having an estimated value of approximately \$6,764). If we terminate Mr. Claiborne 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 2006 annual base salary of \$184,500, this amount equals \$184,500) and provide one full year of medical, life, and disability benefits (having an estimated value of approximately \$13,528).

Under Mr. Carmitchel's employment agreement, dated as of September 1, 2004, he serves as our Chief Operating Officer for an initial three-year term. Thereafter, the agreement renews automatically each September 1 for successive one-year terms, unless either party provides notice of termination at least ninety days prior to September 1. We may otherwise terminate Mr. Carmitchel's employment (i) if he fails to perform his duties and such failure is not cured within thirty days after specific written notice by the Board or (ii) for cause. Mr. Carmitchel may terminate his employment for good reason. If we terminate Mr. Carmitchel for failure to perform his duties or without cause, or if Mr. Carmitchel terminates his employment for good reason, in addition to paying any amount otherwise owed, we must pay Mr. Carmitchel a lump sum in an amount equal to one half of his annual base salary (based on his 2006 annual base salary of \$153,750, this amount equals \$76,875) and provide six months of medical, life and disability benefits (having an estimated value of approximately \$13,528). Pursuant to his employment agreement, Mr. Carmitchel's employment relationship is less than full-time.

Under Mr. Fender's employment agreement, dated as of June 12, 2006, he serves as our Vice President and General Manager for Orthopedics for an initial three-year term. Thereafter, the agreement renews automatically each June 12 for successive one-year terms, unless either party provides notice of termination at least ninety days prior to June 12. We may otherwise terminate Mr. Fender's employment (i) if he is unable to perform his duties due to some incapacity for three or more consecutive months or four or more non-consecutive months, (ii) if he fails to perform his duties and such failure is not cured within thirty days after specific written notice by the Board or (iii) for cause. Mr. Fender may terminate his employment for good reason. If we terminate Mr. Fender for inability to perform his duties or for cause, or if Mr. Fender terminates his employment for other than good reason, we have no obligations to Mr. Fender other than the payment of amounts otherwise owed at the time of termination. If we terminate Mr. Fender 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 2006 annual base salary of \$225,000, this amount equals \$56,250) and provide six months of medical, life and disability benefits (having an estimated value of approximately \$9,272). If we terminate Mr. Fender without cause or if he terminates his employment for good reason, in addition to paying any amount otherwise owed, we must pay him a lump sum in an amount equal to six months of base salary (based on his 2006 annual base salary of \$225,000, this amount equals \$112,500) and provide six months of medical, life, and disability benefits (having an estimated value of approximately \$9,272).

Under Dr. Debrabandere's employment agreement, dated as of July 31, 2006, he serves as our Vice President and General Manager, Inflammatory Diseases for an initial three-year term. Thereafter, the agreement renews automatically each July 31 for successive one-year terms, unless either party provides notice of termination at least ninety days prior to July 31. We may otherwise terminate Dr. Debrabandere's employment (i) if he is unable to perform his duties due to some incapacity for three or more consecutive months or four or more non-consecutive months, (ii) if he fails to perform his duties and such failure is not cured within thirty days after specific written notice by the Board or (iii) for cause. Dr. Debrabandere may terminate his employment for good reason. If we terminate Dr. Debrabandere for inability to perform his duties or for cause, or if Dr. Debrabandere terminates his employment for other than good reason, we have no obligations to Dr. Debrabandere other than the payment of amounts otherwise owed at the time of termination. If we terminate Dr. Debrabandere for failure to perform his duties, in addition to paying any amount otherwise owed, we must pay him a lump sum in an amount equal to three months of his annual base salary (based on his 2006 annual base salary of \$225,000, this amount equals \$56,250) and provide six months of medical, life and disability benefits (having an estimated value of approximately \$9,272). If we terminate Dr. Debrabandere without cause or if he terminates his employment for good reason, in addition to paying any amount otherwise owed, we must pay him a lump sum in an amount equal to six months of base salary (based on his 2006 annual base salary of \$225,000, this amount equals \$112,500) and provide six months of medical, life, and disability benefits (having an estimated value of approximately \$9,272).

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

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

agreement between us and the executive, a material reduction in the executive's base pay or incentive compensation.

In addition, the options issued to each of our executive officers may become fully exercisable upon a change of control of Osiris pursuant to their terms. The value of this accelerated equity at December 31, 2006, was \$0, \$0, \$0, \$1,386,000 and \$1,386,000, in the case of Dr. Mills, Msrs. Claiborne, Carmitchel and Fender and Dr. Debrabandere, respectively. These amounts represent the value that the officer would have received if the option was accelerated on the last day of 2006 (*i.e.*, the difference between the exercise price per share and the closing price per share of \$25.32 reported for December 31, 2006) and assume that the officer would have then exercised the option in full.

REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

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

The Audit Committee assists the Board in overseeing and monitoring the integrity of Osiris' financial reporting process, compliance with legal and regulatory requirements and the quality of internal and external audit processes. The role and responsibilities of the Audit Committee are set forth in a written charter adopted by the Board. This committee reviews and reassesses the charter annually and recommends any changes to the Board for approval. The Audit Committee is responsible for overseeing Osiris' overall financial reporting process, and for the appointment, compensation, retention, and oversight of the work of Osiris' independent registered public accounting firm. In fulfilling its responsibilities for the financial statements for 2006, the Audit Committee took the following actions:

- Reviewed and discussed the audited financial statements for 2006 with management and Stegman & Company, the Company's independent registered public accounting firm for 2006;
- Discussed with Stegman & Company the matters required to be discussed by Statement on Auditing Standards No. 61 relating to the conduct of the audit; and
- Received written disclosures and the letter from Stegman & Company regarding its independence as required by Independence Standards Board Standard No. 1. The Audit Committee further discussed with Stegman & Company its independence. The Audit Committee also considered the status of taxation matters and other areas of oversight relating to the financial reporting and audit process that the committee determined appropriate.

Based on the Audit Committee's review of the audited financial statements and discussions with management and Stegman & Company, the Audit Committee recommended to the Board that the audited financial statements be included in the Annual Report on Form 10-K for 2006 for filing with the Securities and Exchange Commission.

THE AUDIT COMMITTEE

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

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Our records reflect that all reports which were required to be filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, as amended, were filed on a timely basis. An Annual Statement of Beneficial Ownership on Form 5 is not required to be filed if there are no previously unreported transactions or holdings to report. Nevertheless, we are required to disclose the names of directors, officers and 10% stockholders who did not file a Form 5 unless we have obtained a written statement that no filing is required or if we otherwise know that no Form 5 is required. For 2006, we received either a written statement from our directors, officers and 10% stockholders or know from other means that no Forms 5 that were required to be filed were not filed.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

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

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

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

Peter Friedli, the Chairman of our Board, has been responsible for procuring since 1993, either directly or through affiliated entities, an aggregate of approximately \$200 million in debt and equity financing for us and our predecessor company. Mr. Friedli is the beneficial owner of greater than 47% of our common stock as of December 31, 2006.

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

FCF was terminated upon the closing of our initial public offering. The base compensation paid by us under this agreement was \$47,250 in 2006.

Separate from the Consulting Agreement, FCF served as our agent in Europe in connection with the issuance and sale in 2006 of \$20 million of our Convertible Notes. In connection with these Convertible Notes, the Company paid an amount for costs equal to three percent (3%) of the aggregate amount of the Notes, of which one-third was paid to FCF, and two thirds was paid to others or FCF, as directed by FCF. Included among the purchasers of the Notes was Peter Friedli, individually, who purchased \$4,500,000, and New Venturetec, Inc., a Swiss publicly traded company approximately 3% owned by Mr. Friedli who serves as its President, which purchased an additional \$4,000,000 of the Notes. The Board, including all of the Company's independent directors, but with Mr. Friedli abstaining, unanimously approved the offering and sale of the Notes, including the sale of a portion of the Notes to Mr. Friedli and New Venturetec, Inc. and the arrangements with FCF.

In 2004, we obtained \$2.35 million in debt financing through two entities affiliated with Mr. Friedli. The first of these entities was a wholly owned subsidiary of New Venturetec, Inc. The other entity is Pine, Inc., a company which at the time of the financing was majority owned and managed by Mr. Friedli. These convertible demand notes accrued interest at 10% and included a 10% premium due upon redemption. In this financing, the New Venturetec subsidiary lent us \$1.35 million, and Pine lent us \$1.0 million. In consideration of these loans, we issued to the lenders promissory notes in the principal amount of the sums lent to us. To facilitate these borrowings and other financings, and for commitments of consideration in respect of yet additional financing if needed, we issued warrants for an aggregate of 1,250,000 shares at an exercise price of \$0.40 per share. Mr. Friedli subsequently arranged for the acquisition of those warrants and they have since been cancelled. In recognition of his efforts in procuring the cancellation of all of these warrants, we issued an additional warrant to Mr. Friedli, 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 the initial public offering. This warrant expires in May 2011.

On October 30, 2006, we entered into a Lockup Agreement with Mr. Friedli and certain entities with which he is affiliated, Venturetec, Inc. and U.S. Venture 05, Inc. Pursuant to the Lockup Agreement, Mr. Friedli and such entities have agreed with the Company, subject to limited exceptions, not to transfer Company securities held by them without the approval of the Company, until January 30, 2008.

CORPORATE CODE OF CONDUCT AND ETHICS

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

ELECTION OF DIRECTORS

(Proposal No. 1)

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 upcoming Annual Meeting; C. Randal Mills and Felix Gutzwiller constitute the Class II directors, with a term ending at the Annual Meeting to be held in 2008; and Peter Friedli constitutes the Class III director, with a term ending at the Annual Meeting to be held in 2009.

On April 12, 2007, our Board accepted the recommendation of its Independent directors to nominate Messrs. Barnhill and Moyes for election at the Annual Meeting for a term of three years to serve until the 2010 annual meeting of stockholders, and until their respective successors have been elected and qualified, or until their earlier death, resignation, retirement or removal.

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

OUR BOARD OF DIRECTORS RECOMMENDS THE ELECTION OF GREGORY BARNHILL AND JAY MOYES AS DIRECTORS, AND PROXIES SOLICITED BY THE BOARD WILL BE VOTED IN FAVOR THEREOF UNLESS A STOCKHOLDER HAS INDICATED OTHERWISE ON THE PROXY.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

(Proposal No. 2)

Our Board and management are committed to the quality, integrity and transparency of the financial reports. Independent auditors play an important part in our system of financial control. In accordance with the duties set forth in its written charter, the Audit Committee of our Board has appointed Stegman & Company as our independent registered public accounting firm for the fiscal year ending December 31, 2007. A representative of Stegman & Company is expected to attend this year's Annual Meeting, to be available to respond to appropriate questions from stockholders, and have the opportunity to make a statement if he or she desires to do so.

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

The Board proposes that the stockholders ratify the appointment of Stegman & Company to serve as our independent registered public accounting firm for our fiscal year ending December 31, 2007, although such ratification is not required under Delaware law or our Amended and Restated Certificate of Incorporation or Amended and Restated By-Laws.

Audit and Non-Audit Fees

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

| <u>Type of Fee</u> | <u>Fiscal Year Ended 12/31/06</u> | <u>Fiscal Year Ended 12/31/05</u> |
|-------------------------|---------------------------------------|---------------------------------------|
| Audit Fees | \$ 95,813 | \$47,648 |
| Audit-Related Fees..... | \$115,558 | \$18,591 |
| Tax Fees | \$ 7,500 | \$10,500 |
| All Other Fees | \$ — | \$ — |
| Total..... | <u>\$218,871</u> | <u>\$76,739</u> |

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

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

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

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

Pre-Approval Policy

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

Committee Charter, all services performed by Stegman & Company have been pre-approved in accordance with the Audit Committee Charter.

Prior to or as soon as practicable following the beginning of each fiscal year, a description of audit, audit-related, tax, and other services expected to be performed by the independent registered public accounting firm in the following fiscal year is presented to the Audit Committee for approval. Following such approval, any requests for audit, audit-related, tax, and other services not presented and pre-approved must be submitted to the Audit Committee for specific pre-approval and cannot commence until such approval has been granted. Normally, pre-approval is provided at regularly scheduled meetings. However, the authority to grant specific pre-approval between meetings, as necessary, may be delegated to one or more members of the Audit Committee who are independent directors. In the event such authority is so delegated, the full Audit Committee must be updated at the next regularly scheduled meeting with respect to any services that were granted specific pre-approval by delegation. During 2006 and following adoption of the Audit Committee Charter, the Audit Committee has functioned in conformance with these procedures.

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

STOCKHOLDER PROPOSALS AND NOMINATIONS FOR DIRECTOR

In order to be eligible for inclusion in the Company's 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, MD 21046, no later than December 31, 2007. Any such proposal shall be subject to the requirements of the proxy rules adopted under the Securities Exchange Act of 1934.

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

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, 2006. Requests for such copies should be addressed to:

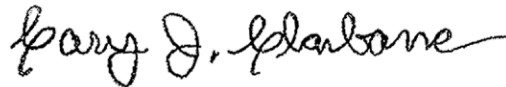
Osiris Therapeutics, Inc., 7015 Albert Einstein Drive, Columbia, Maryland 21046, Attn: Investor Relations, Telephone (443) 545-1800

OTHER MATTERS

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

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

By order of the Board of Directors:

A handwritten signature in black ink that reads "Cary J. Claiborne". The signature is written in a cursive, flowing style.

Cary J. Claiborne
Corporate Secretary

Columbia, Maryland
April 30, 2007

