

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

**SCHEDULE 14A INFORMATION**

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 Rule 14a-12

**Harbor BioSciences, 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)

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

1. Title of each class of securities to which transaction applies:

2. Aggregate number of securities to which transaction applies:

3. Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (Set forth the amount on which the filing fee is calculated and state how it was determined):

4. Proposed maximum aggregate value of transaction:

5. Total fee paid:

- Fee paid previously with preliminary materials.
- Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

1. Amount Previously Paid:

2. Form, Schedule or Registration Statement No.:

3. Filing Party:

4. Date Filed:

**HARBOR BIOSCIENCES, INC.**  
**4435 Eastgate Mall, Suite 400**  
**San Diego, California 92121**

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS**

**TO BE HELD ON May 27, 2010**

TO THE STOCKHOLDERS OF HARBOR BIOSCIENCES, INC.:

**NOTICE IS HEREBY GIVEN** that the Annual Meeting of Stockholders of **HARBOR BIOSCIENCES, INC.**, a Delaware corporation (the "Company"), will be held on Thursday, May 27, 2010 at 10:00 a.m. local time at Stradling Yocca Carlson & Rauth, 4365 Executive Drive, Suite 1500, San Diego, California 92121 for the following purposes:

1. To elect the two nominees for director named herein to hold office until the 2013 Annual Meeting of Stockholders.
2. To approve an amendment to the Company's Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of common stock from 50,000,000 to 100,000,000.
3. To ratify the selection by the audit committee of the board of directors of BDO Seidman, LLP as the independent registered public accounting firm of the Company for its fiscal year ending December 31, 2010.
4. To transact such other business as may properly come before the meeting or any adjournment or postponement thereof.

The foregoing items of business are more fully described in the Proxy Statement accompanying this Notice.

The board of directors has fixed the close of business on March 30, 2010, as the record date for the determination of stockholders entitled to notice of and to vote at this annual meeting and at any adjournment or postponement thereof.

**Important Notice Regarding the Availability of Proxy Materials For the Stockholder Meeting to be held on May 27, 2010 – Harbor BioSciences, Inc.'s Annual Report to Stockholders and the Proxy Statement for the Annual Meeting are available at <http://www.harborbiosciences.com>**

By Order of the Board of Directors

SALVATORE J. ZIZZA  
Chairman of the Board

San Diego, California  
April 21, 2010

**ALL STOCKHOLDERS ARE CORDIALLY INVITED TO ATTEND THE ANNUAL MEETING IN PERSON. WHETHER OR NOT YOU EXPECT TO ATTEND THE ANNUAL MEETING, PLEASE COMPLETE, DATE, SIGN AND RETURN THE ENCLOSED PROXY AS PROMPTLY AS POSSIBLE IN ORDER TO ENSURE YOUR REPRESENTATION AT THE ANNUAL MEETING. A RETURN ENVELOPE (WHICH IS POSTAGE PREPAID IF MAILED IN THE UNITED STATES) IS ENCLOSED FOR THAT PURPOSE. EVEN IF YOU HAVE GIVEN YOUR PROXY, YOU MAY STILL VOTE IN PERSON IF YOU ATTEND THE ANNUAL MEETING. PLEASE NOTE, HOWEVER, THAT IF YOUR SHARES ARE HELD OF RECORD BY A BROKER, BANK OR OTHER NOMINEE AND YOU WISH TO VOTE AT THE ANNUAL MEETING, YOU MUST OBTAIN FROM THE RECORD HOLDER A PROXY ISSUED IN YOUR NAME.**

**HARBOR BIOSCIENCES, INC.**  
4435 Eastgate Mall, Suite 400  
San Diego, California 92121

**PROXY STATEMENT  
FOR THE 2010 ANNUAL MEETING OF STOCKHOLDERS**

**May 27, 2010**

**QUESTIONS AND ANSWERS ABOUT THIS PROXY MATERIAL AND VOTING**

**Why am I receiving these materials?**

We sent you this proxy statement and the enclosed proxy card because the board of directors of Harbor BioSciences, Inc. (sometimes referred to in this proxy statement as “we,” “us,” the “Company” or “Harbor Biosciences”) is soliciting your proxy to vote at the 2010 annual meeting of stockholders. You are invited to attend the annual meeting to vote on the proposals described in this proxy statement. However, you do not need to attend the annual meeting to vote your shares. Instead, you may simply complete, sign and return the enclosed proxy card.

We intend to begin mailing this proxy statement and accompanying proxy card on or about April 21, 2010 to all stockholders of record entitled to vote at the annual meeting.

**Who can vote at the annual meeting?**

Only stockholders of record at the close of business on March 30, 2010, will be entitled to vote at the annual meeting. On this record date, there were 29,433,939 shares of our common stock outstanding and entitled to vote.

*Stockholder of Record: Shares Registered in Your Name*

If on March 30, 2010, your shares were registered directly in your name with our transfer agent, American Stock Transfer & Trust Company, then you are a stockholder of record. As a stockholder of record, you may vote in person at the annual meeting or vote by proxy. Whether or not you plan to attend the annual meeting, we urge you to fill out and return the enclosed proxy card to ensure your vote is counted.

*Beneficial Owner: Shares Registered in the Name of a Broker or Bank*

If on March 30, 2010, your shares were held in an account at a brokerage firm, bank, dealer, or other similar organization, then you are the beneficial owner of shares held in “street name” and these proxy materials are being forwarded to you by that organization. The organization holding your account is considered the stockholder of record for purposes of voting at the annual meeting. As a beneficial owner, you have the right to direct your broker or other agent on how to vote the shares in your account. You are also invited to attend the annual meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the meeting unless you request and obtain a valid proxy from your broker or other agent.

**What am I voting on?**

There are three matters scheduled for a vote:

- Election of the two nominees for director named herein to hold office until the 2013 annual meeting of stockholders;
- Approval of an amendment to the Company’s Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of common stock from 50,000,000 to 100,000,000; and

- Ratification of the selection of BDO Seidman, LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2010.

### **How do I vote?**

You may either vote “For” all the nominees to our board of directors or you may “withhold” your vote for any nominee you specify. For each of the other matters to be voted on, you may vote “For” or “Against” or abstain from voting. The procedures for voting are fairly simple:

#### *Stockholder of Record: Shares Registered in Your Name*

If you are a stockholder of record, you may vote in person at the annual meeting or vote by proxy using the enclosed proxy card. Whether or not you plan to attend the annual meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the annual meeting and vote in person if you have already voted by proxy.

- To vote in person, come to the annual meeting and we will offer you a ballot when you arrive.
- To vote using the proxy card, simply complete, sign and date the enclosed proxy card and return it promptly in the envelope provided. If you return your signed proxy card to us before the annual meeting, we will vote your shares as you direct.

#### *Beneficial Owner: Shares Registered in the Name of Broker or Bank*

If you are a beneficial owner of shares registered in the name of your broker, bank, or other agent, you should have received a proxy card and voting instructions with these proxy materials from that organization rather than from us. Simply complete and mail the proxy card to ensure that your vote is counted. To vote in person at the annual meeting, you must obtain a valid proxy from your broker, bank, or other agent. Follow the instructions from your broker or bank included with these proxy materials, or contact your broker or bank to request a proxy form.

### **How many votes do I have?**

On each matter to be voted upon, you have one vote for each share of common stock you own as of March 30, 2010, the record date for the determination of stockholders entitled to notice of, and to vote at, the annual meeting and at any adjournment or postponement thereof.

### **What if I return a proxy card but do not make specific choices?**

If you return a signed and dated proxy card without marking any voting selections, your shares will be voted “For” the election of both nominees for director named herein, “For” the amendment to the Company’s Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of common stock from 50,000,000 to 100,000,000, and “For” the ratification of the selection of BDO Seidman, LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2010. If any other matter is properly presented at the annual meeting, your proxy (one of the individuals named on your proxy card) will vote your shares using his best judgment.

### **Who is paying for this proxy solicitation?**

We will pay for the entire cost of soliciting proxies. In addition to these mailed proxy materials, our directors and employees may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

### **What does it mean if I receive more than one proxy card?**

If you receive more than one proxy card, your shares are registered in more than one name or are registered in different accounts. Please complete, sign and return **each** proxy card to ensure that all of your shares are voted.

### **Can I change my vote after submitting my proxy?**

Yes. You can revoke your proxy at any time before the final vote at the annual meeting. You may revoke your proxy in any one of three ways:

- You may submit another properly completed proxy card with a later date.
- You may send a written notice that you are revoking your proxy to our Chief Financial Officer at 4435 Eastgate Mall, Suite 400, San Diego, California 92121.
- You may attend the annual meeting and vote in person. Simply attending the annual meeting will not, by itself, revoke your proxy.

### **When are stockholder proposals due for next year's annual meeting?**

To be considered for inclusion in next year's proxy materials, your proposal must be submitted in writing by December 22, 2010 to our Chief Financial Officer at 4435 Eastgate Mall, Suite 400, San Diego, California 92121. If you wish to submit a proposal that is not to be included in next year's proxy materials, your proposal generally must be submitted in writing to the same address no later than March 28, 2011 but no earlier than February 26, 2011.

### **How are votes counted?**

Directors are elected by a plurality of votes cast, so the two nominees who receive the most votes will be elected. Abstentions and broker non-votes will not be taken into account in determining the election of directors. A "broker non-vote" occurs when a nominee holding shares for a beneficial owner does not vote on a particular proposal because the nominee does not have discretionary voting power with respect to that proposal and has not received instructions with respect to that proposal from the beneficial owner.

Pursuant to the Delaware General Corporation Law, our Restated Certificate of Incorporation, as amended, and our Bylaws, as amended, approval of the amendment to the Company's Restated Certificate of Incorporation, as amended, to increase the amount of authorized shares of Common Stock requires the affirmative vote of the holders of a majority of the shares entitled to vote thereon. Therefore, at least 14,716,970 shares of the Company's common stock as of the Record Date must be voted in favor of this proposal for the amendment contemplated thereby to be approved. Abstentions will have the same effect as votes against this proposal. Because this proposal is a discretionary matter, broker non-votes will not result for this proposal.

Ratification of the independent registered public accounting firm will require an affirmative vote of a majority of shares present or represented by proxy at the Annual Meeting and entitled to vote on the matter. Abstentions will have the same effect as votes against the ratification and the proposal. Because the ratification of the independent registered public accounting firm is a discretionary matter, broker non-votes will not result for this item.

If on March 30, 2010, your shares were held in an account at a brokerage firm, bank, dealer, or other similar organization, then you are the beneficial owner of shares held in "street name" and these proxy materials are being forwarded to you by that organization. The organization holding your account is considered the stockholder of record for purposes of voting at the annual meeting. As a beneficial owner, you have the right to direct your broker or other agent on how to vote the shares in your account. You are also invited to attend the annual meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the meeting unless you request and obtain a valid proxy from your broker or other agent.

### **How many votes are needed to approve each proposal?**

- For the election of directors, the two nominees receiving the most "For" votes (among votes properly cast in person or by proxy) will be elected. Abstentions and broker non-votes will have no effect.
- To be approved, Proposal No. 2, the approval of an amendment to the Company's Restated Certificate of Incorporation, as amended, to authorize an increase in the authorized number of shares of common stock, must receive a "For" vote from the majority of outstanding shares entitled to vote thereon. Abstentions will have the same effect as negative votes. Because this proposal is a discretionary matter, broker non-votes will not result for this proposal.

- To be approved, Proposal No. 3, the ratification of the selection of BDO Seidman, LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2010, must receive a “For” vote from the majority of shares present and entitled to vote either in person or by proxy. If you “Abstain” from voting, it will have the same effect as an “Against” vote. Because this proposal is a discretionary matter, broker non-votes will not result for this proposal.

### **What is the quorum requirement?**

A quorum of stockholders is necessary to hold a valid annual meeting. A quorum will be present if stockholders holding at least a majority of the outstanding shares are present at the annual meeting in person or represented by proxy. On the record date of March 30, 2010, there were 29,433,939 shares outstanding and entitled to vote.

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your broker, bank or nominee) or if you vote in person at the meeting. Abstentions and broker non-votes will be counted towards the quorum requirement. If there is no quorum, the holders of a majority of the shares present at the meeting in person or represented by proxy may adjourn the meeting to another date.

### **How can I find out the results of the voting at the annual meeting?**

Preliminary voting results will be announced at the annual meeting. Final voting results will be published in a Current Report on Form 8-K within four business days of the annual meeting.

## **PROPOSAL 1**

### **ELECTION OF DIRECTORS**

Our Restated Certificate of Incorporation, as amended, and bylaws, as amended, provide that our board of directors shall be divided into three classes, each class consisting, as nearly as possible, of one-third of the total number of directors, with each class having a three-year term. Vacancies on our board may be filled only by persons elected by a majority of the remaining directors. A director elected by our board to fill a vacancy (including a vacancy created by an increase in the size of our board of directors) shall serve for the remainder of the full term of the class of directors in which the vacancy occurred and until such director’s successor is elected and qualified. It is our policy to invite nominees for directors to attend the annual meeting. All of our directors attended last year’s annual meeting.

Our board of directors is presently composed of four members with three vacancies that will not be filled by vote of our stockholders at the upcoming annual meeting. There are two directors whose terms of office expire at the upcoming annual meeting. Our nominees for election to this class, Jerome M. Hauer and Marc R. Sarni, are current members of our board of directors, having been elected by the stockholders. If elected at the annual meeting, each of Mr. Hauer and Mr. Sarni would serve until the 2013 annual meeting and until their successors are elected and have qualified, or until their earlier death, resignation or removal.

Directors are elected by a plurality of the votes present in person or represented by proxy and entitled to vote at the meeting. Proxies cannot be voted for a greater number of persons than the number of nominees named. In the event that any nominee should be unavailable for election as a result of an unexpected occurrence, such shares will be voted for the election of a substitute nominee as our board of directors may propose upon recommendation from our nominating and corporate governance committee.

Set forth below is biographical information for the two persons nominated, Jerome M. Hauer and Marc R. Sarni and each person whose term of office as a director will continue after the annual meeting.

## NOMINEES FOR ELECTION FOR A THREE-YEAR TERM EXPIRING AT THE 2013 ANNUAL MEETING

### *Jerome M. Hauer*

Mr. Hauer, age 58, has served as a member of our board of directors since June 2004. Mr. Hauer has served as chief executive officer at The Hauer Group, a consulting services firm, since March 2006. Mr. Hauer served as senior vice president and co-chair of the homeland security practice of Fleishman-Hillard Government Relations, a government relations service firm, from January 2005 to March 2006. Prior to joining Fleishman-Hillard, Mr. Hauer served as the director of Response to Disaster and Emergencies Institute and assistant professor at the George Washington University School of Public Health from November 2003 to December 2004. Mr. Hauer served as acting assistant secretary for public health emergency preparedness of the U.S. Department of Health and Human Services, or HHS, from June 2002 to November 2003 and as director of the office of public health preparedness of HHS from May 2002 to June 2002. He also served as managing director of the crisis and consequence management group at Kroll Associates, a risk consulting firm, from October 2000 to February 2002. Mr. Hauer served as the first director of the New York City Mayor's Office of Emergency Management under Mayor Rudolph Giuliani. He also served as the director of Emergency Medical Services and Emergency Management as well as director of the Department of Fire and Buildings for the State of Indiana under Governor Evan Bayh. Mr. Hauer serves on the board of directors of Emergent BioSolutions, Inc., a publicly held pharmaceutical company. Mr. Hauer previously served as a member of the Health Advisory Board of the Johns Hopkins School of Public Health and as a member of the National Academy of Science's Institute of Medicine's Committee to Evaluate the R&D Needs for Improving Clinical Medical Response to Chemical or Biological Terrorism Incidents. Mr. Hauer received an M.H.S. in public health from Johns Hopkins University School of Hygiene and Public Health and a B.A. in Psychology and History from New York University.

Mr. Hauer brings extensive experiences in public health with various federal and state agencies as well as proven management skills from his Managing Director and Director positions with multiple organizations. His knowledge and experience in government affairs and operations contributes to the Board's overall expertise.

### *Marc R. Sarni*

Mr. Sarni, age 51, has served as a member of our board of directors since June 2004. Mr. Sarni is a Managing Director of NEW Holdings, LLC, a Principal at Howard Commercial Corp., and formerly a Principal at Cornerstone Investment, LLC, companies engaged in the investment in, and development, brokerage and property management of commercial real estate and formerly residential real estate. Mr. Sarni worked as an investment banker at A.G. Edwards and Sons, Inc., for 17 years, and from 1997 until 2003, Mr. Sarni was the Managing Director responsible for establishing and managing the Healthcare Industry Group within the corporate finance department's Emerging Growth Sector. The Healthcare Industry Group of A.G. Edwards focused primarily on emerging growth medical technology, biotechnology, specialty pharmaceutical and healthcare services companies. Prior to joining A.G. Edwards, Mr. Sarni spent three years working as a Certified Public Accountant at PriceWaterhouse (now PricewaterhouseCoopers LLP). Mr. Sarni currently serves as a member of the Boards of Directors of NEW Holdings, LLC, and Howard Commercial Corp., and the Board of Managers for Ascension Health Ventures, the strategic health venture-investing subsidiary of Ascension Health, the nation's largest Catholic and not-for-profit healthcare system. Mr. Sarni also previously served as a director of Young Innovations, Inc., a publicly held manufacturer and marketer of medical products used primarily in the dental industry, and Microtek Medical Holdings, Inc., a publicly held developer of infection and fluid control, safety, and other medical products directed at the healthcare industry, and Cornerstone Investments, LLC. Mr. Sarni graduated from the University of Missouri at Columbia with a BSBA degree in Accounting and from the University of Chicago with an M.B.A. in Finance.

Mr. Sarni's extensive public accounting and investment banking background provides the Board invaluable financial and accounting expertise. As a certified public accountant with proven management skills, having served as the Managing Director of an investment bank, Mr. Sarni brings to the Board strong accounting and financial oversight required for our financial reporting and enterprise and operational risk management.

**OUR BOARD OF DIRECTORS RECOMMENDS  
A VOTE IN FAVOR OF THE NAMED NOMINEES**

## **DIRECTORS CONTINUING IN OFFICE UNTIL THE 2012 ANNUAL MEETING**

### *Salvatore J. Zizza*

Mr. Zizza, age 64, has served as a member of our board of directors since March 1997 and the non-executive Chairman of our board of directors since March 2009. Mr. Zizza has also served as Lead Independent Director of our board of directors since March 2006. He served as Chairman of our board, President and Treasurer of Initial Acquisition Corp., from 1992 until March 1997, at which time Initial Acquisition Corp. merged with the Company. Mr. Zizza is presently Chairman of Metropolitan Paper Recycling, Inc. Mr. Zizza is also Chairman of Bethlehem Advanced Materials. Mr. Zizza was President and Chief Financial Officer of NICO Construction Company, Inc., until 1985, when NICO merged with The LVI Group, Inc. Prior to joining The LVI Group, Inc., Mr. Zizza was an independent financial consultant and had been a lending officer for Chemical Bank. Mr. Zizza's current and former directorships include: The Gabelli Equity Trust (NYSE), The Gabelli Asset Fund, The Gabelli Growth Fund, The Gabelli Convertible and Income Securities Fund, The Gabelli Utility Trust Fund (NYSE), The Gabelli Global Multimedia Trust (NYSE), The Gabelli Equity Series Fund, The Gabelli Dividend and Income Trust, The Gabelli Gold Fund, the Gabelli International Growth Fund, The Gabelli Global Gold Natural Resources, Westwood Funds, Gabelli 787 Fund, GEE (Amex), Translux (Amex), St. David's School, Board of Governors St. John University, and formerly Earl Scheib Inc. (NASDAQ), Mr. Zizza received a B.S. in Political Science and an M.B.A. from St. John's University.

As the lead independent director, Mr. Zizza brings corporate governance expertise to the Board garnered through his leadership positions and board service with other entities. His experience and qualifications provide sound governance leadership to the Board.

### *James M. Frincke, Ph.D.*

Dr. Frincke, age 59, joined Harbor BioSciences as Vice President, Research and Development in 1997. Dr. Frincke was promoted to Executive Vice President in 1999, to Chief Scientific Officer in 2001, to Chief Operating Officer in February 2008, and to Chief Executive Officer in March 2009. Dr. Frincke joined Harbor BioSciences from ProInx, Inc., where he served as Vice President, Therapeutics Research and Development from 1995 to 1997. During his 24 years in the biotechnology industry, Dr. Frincke has managed major development programs including drugs, biologicals, and cellular and gene therapy products aimed at the treatment of cancer, infectious diseases and organ transplantation. Since joining the biotechnology industry, Dr. Frincke has held vice president, research and development positions in top tier biotechnology companies including Hybritech/Eli Lilly and SyStemix, Inc. (acquired by Novartis). In various capacities, he has been responsible for all aspects of pharmaceutical development including early stage research programs, product evaluation, pharmacology, manufacturing, and the management of regulatory and clinical matters for lead product opportunities. Dr. Frincke has authored or co-authored more than 100 scientific articles, abstracts and regulatory filings. Dr. Frincke received his B.S. in Chemistry and his Ph.D. in Chemistry from the University of California, Davis. Dr. Frincke completed his postdoctoral work at the University of California, San Diego.

Mr. Frincke's experience in the drug research and development has given him extensive knowledge of the pharmaceutical and biotech industries. Mr. Frincke's experience has brought key insight into these critical components of the Company's business.

## **INDEPENDENCE OF THE BOARD OF DIRECTORS**

As required under the rules of the Nasdaq listing standards, a majority of the members of a listed company's board of directors must qualify as "independent," as affirmatively determined by our board of directors. After review of all relevant transactions and relationships between each director, or any of his or her family members, and us, our senior management and our independent registered public accounting firm, our board affirmatively has determined that Messrs. Sarni, Zizza and Hauer are independent directors within the meaning of the rules of the Nasdaq listing standards.

## **INFORMATION REGARDING OUR BOARD OF DIRECTORS AND ITS COMMITTEES**

During 2009, our board of directors held 6 meetings. Each board member attended at least 75% of the aggregate number of meetings of our board and of the committees on which he served, held during the period for which he was a director or committee member, respectively.

Our board of directors have documented our corporate governance practices by adopting a number of corporate governance policies and procedures, as well as a Nominating and Corporate Governance Committee Charter and a Business Code of Conduct and Ethics, to assure that our board will have the necessary authority and practices in place to make decisions that are independent of our management. These guidelines are also intended to align the interests of our directors and management with those of our stockholders. These guidelines set forth the practices our board will follow with respect to board composition and selection, board meetings and the involvement of our senior management and Chief Executive Officer, performance evaluation, and board committees and compensation. Mr. Zizza serves as Lead Independent Director of our board of directors. The Lead Independent Director's duties include, to the extent appropriate, leading executive sessions of our board's independent directors, assisting our Chief Executive Officer with communications with our stockholders, and facilitating communications between the other members of our board of directors

At such times as an independent director is serving as Chairman of the Board, the leadership of the Board is the responsibility of the Chairman. Mr. Zizza, who is an independent director, has served as Chairman of the Board since March 2009. In accordance with our Corporate Governance Guidelines, if a non-independent director, such as our Chief Executive Officer, is serving as Chairman of the Board, the leadership of the Board would be shared by the Chairman and a lead independent director who would be appointed by the independent directors from among themselves. We believe that this leadership structure provides the appropriate level of independent oversight necessary to ensure that the Board meets its fiduciary obligations to our stockholders, that the interests of management and our stockholders are properly aligned, and that we establish and follow sound business practices and strategies that are in the best interests of our stockholders.

### **Board's Role in Risk Management**

The Board provides oversight with respect to our management of risk, both as a whole and through its standing committees. The Board typically reviews and discusses with management at each of its regular meetings, information presented by management relating to our operational results and outlook, including information regarding risks related to our business and operations, as well as risks associated with the markets we serve. At least annually, the Board reviews and discusses an overall risk assessment conducted by management and the strategies and actions developed and implemented by management to monitor, control and mitigate such risks.

The Audit Committee of our Board also provides risk oversight, focusing in particular on financial and credit risk. The Audit Committee oversees the management of such risks, generally as part of its responsibilities related to the review of our financial results and our internal control over financial reporting, and specifically in connection with its consideration of particular actions being contemplated by us such as financing activities and repurchases of our common stock or convertible notes. The Compensation Committee has responsibility for overseeing the management of risk related to our compensation policies and practices. The Compensation Committee considers risks associated with our business in developing compensation policies and the components of our executive compensation program, and periodically reviews and discusses assessments conducted by management with respect to risk that may arise from our compensation policies and practices for all employees.

As required under the rules of the Nasdaq listing standards, our independent directors meet in regularly scheduled executive sessions at which only independent directors are present. Mr. Zizza, as the Lead Independent Director, presides over these executive sessions.

### **Nominating and Corporate Governance Committee**

Our board of directors has adopted a Nominating and Corporate Governance Committee Charter, which can be found on our corporate website at [www.harborbiosciences.com](http://www.harborbiosciences.com). The Nominating and Corporate Governance

Committee (Nominating Committee) is composed of two directors who are independent (as independence is currently defined in the rules of the Nasdaq listing standards): Messrs. Zizza and Hauer. The Nominating Committee is responsible for identifying, reviewing and evaluating candidates to serve as our directors (consistent with criteria approved by our board), reviewing and evaluating incumbent directors, recommending to our board candidates for election to our board, assessing the performance of our board, and making recommendations to our board regarding the membership of the committees of our board. During 2009, the Nominating Committee held one meeting.

Our board of directors believes that candidates for director should have certain minimum qualifications, including: personal integrity and ethics; no interests that would materially impair his or her ability to exercise independent judgment and otherwise discharge his or her fiduciary duties; ability to represent all stockholders equally; achievement in one or more fields of business, professional, governmental, scientific or educational endeavor; sound judgment based on management or policy-making experience; general understanding of the major issues facing public companies of a similar size and operational scope as us; and ability to devote adequate time to our board and its committees. However, the Nominating Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of our board, our operating requirements and the long-term interests of our stockholders. In conducting this assessment, the Nominating Committee considers such factors as it deems appropriate given our current needs and the current needs of our board, to maintain a balance of knowledge, experience and capability. In the case of incumbent directors whose terms of office are set to expire, the Nominating Committee reviews such directors' overall service during their term, including the number of meetings attended, level of participation, quality of performance, and any other relationships and transactions that might impair such directors' independence. In the case of new director candidates, the Nominating Committee will also determine whether the nominee must be independent for Nasdaq purposes, which determination is based upon applicable the rules of the Nasdaq listing standards and applicable Securities and Exchange Commission rules and regulations. The Nominating Committee will then compile a list of potential candidates, using its own network of contacts, as well as recommendations from other board members and management. The Nominating Committee may also engage, if appropriate under the circumstances, a professional search firm to assist in identifying qualified candidates. The Nominating Committee will conduct any appropriate or necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of our board. The Nominating Committee will meet to discuss and consider such candidates' qualifications and then select nominees for recommendation to our board by majority vote. The Nominating Committee has not developed a policy regarding diversity.

The Nominating Committee will consider director candidates recommended by our stockholders, provided such candidates are not disqualified from nomination pursuant to our bylaws. The Nominating Committee will accept for consideration only one recommendation from any stockholder or affiliated group of stockholders. The Nominating Committee will also take into account the size and duration of the recommending stockholder's ownership interest in the Company and the extent to which such stockholder intends to maintain its ownership interest in the Company. Our board of directors does not intend for the Nominating Committee to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether or not the candidate was recommended by a stockholder. Stockholders who wish to recommend individuals for consideration by the Nominating Committee to become nominees for election to our board may do so by delivering a written recommendation to the Nominating Committee at the following address: 4435 Eastgate Mall, Suite 400, San Diego, California 92121, not less than six months prior to any meeting at which directors are to be elected. Submissions must include the full name of the proposed nominee, a description of the proposed nominee's business experience for at least the previous five years, other director positions held by the nominee, complete biographical information, a description of the proposed nominee's qualifications as a director, and the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected. Any such submission must be accompanied by a representation that the nominating stockholder is a beneficial or record owner of our common stock, including the number of shares and when the shares were acquired, and the extent to which the nominating stockholder intends to maintain its ownership interest in the Company.

Notwithstanding the responsibilities of the Nominating Committee described above, the recommendations for director nominees made by the Nominating Committee will be subject to Delaware law and our bylaws.

## **Compensation Committee**

Our board of directors has adopted a Compensation Committee Charter, a copy of which can be found on our corporate website at [www.harborbiosciences.com](http://www.harborbiosciences.com). The Compensation Committee makes recommendations to our board of directors concerning executive salaries and incentive compensation, administers our 2005 Equity Incentive Plan and 2005 Non-Employee Directors' Equity Incentive Plan and otherwise determines compensation levels and policies and performs such other functions regarding compensation as our board may delegate. The Compensation Committee is currently composed of two non-employee directors who are independent (as independence is currently defined in the rules of the Nasdaq listing standards): Messrs. Sarni and Zizza. During 2009, the Compensation Committee held 1 meeting.

## **Audit Committee**

We have a separately designated standing Audit Committee of the board of directors established in accordance with the requirements of Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended, or the Exchange Act. The Audit Committee oversees our corporate accounting and financial reporting process. For this purpose, the Audit Committee performs several functions. The Audit Committee evaluates the performance and assesses the qualifications of the independent registered public accounting firm; determines the engagement of the independent registered public accounting firm; determines whether to retain or terminate the existing independent registered public accounting firm or to appoint and engage a new independent registered public accounting firm; reviews and approves the retention of the independent registered public accounting firm to perform any proposed non-permissible audit services; and monitors the rotation of partners of the independent registered public accounting firm on our engagement team as required by law. The Audit Committee is also responsible for the review, approval and monitoring of transactions involving the company and "related persons" (directors and executive officers or their immediate family members, or stockholders owning five percent or greater of the company's outstanding stock) that meet the minimum threshold for disclosure in the proxy statement under the relevant Securities and Exchange Commission rules and regulations (generally, transactions involving amounts exceeding \$120,000 in which a related person has a direct or indirect material interest). The Audit Committee meets and reviews with management and the independent registered public accounting firm: the quarterly financial statements and disclosures prior to the filing of our Quarterly Reports on Form 10-Q; the financial statements and disclosures to be included in our Annual Report on Form 10-K; our policies with respect to risk assessment and risk management; our internal controls; and the results of the annual audit. The Audit Committee is composed of three directors and operates under a written charter adopted by our board of directors. Our board of directors reviews and assesses the adequacy of the Audit Committee's written charter on an annual basis in light of applicable Nasdaq and Securities and Exchange Commission rules and regulations. The current members of the Audit Committee are Messrs. Hauer, Sarni and Zizza. During 2009, the Audit Committee held 5 meetings.

Our board of directors also annually reviews the qualifications of all current Audit Committee members and any relationship they may have that might affect their independence from us or our management, and has determined the definition of independence under the rules of the Nasdaq listing standards and Securities and Exchange Commission rules and regulations for Audit Committee members and has determined that (i) all current Audit Committee members are "independent" as that concept is defined under Section 10A of the Exchange Act, (ii) all current Audit Committee members are "independent" as that concept is defined under the rules of the Nasdaq listing standards, (iii) all current Audit Committee members have the ability to read and understand financial statements, and (iv) Mr. Sarni and Mr. Zizza qualify as an "audit committee financial expert." The latter determination is based on a qualitative assessment of Mr. Sarni's and Mr. Zizza's level of knowledge and experience based on a number of factors, including their formal education and experience. Mr. Zizza is the "Audit Committee Financial Expert" designated by our board.

## **REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS**

Our board of directors maintains an Audit Committee composed of three directors who meet the independence and the financial literacy requirements of the applicable Securities and Exchange Commission rules and regulations. Our board has determined that Mr. Salvatore Zizza qualifies as an "Audit Committee Financial Expert" and is independent under the applicable Securities and Exchange Commission rules and regulations. Our board has also adopted a written charter of the Audit Committee, which can be found on our corporate website at [www.harborbiosciences.com](http://www.harborbiosciences.com).

Management is responsible for our systems of internal controls and the financial reporting process. The Audit Committee's responsibility is to monitor and oversee these processes on behalf of our board of directors.

In fulfilling its oversight responsibilities, the Audit Committee reviewed and discussed with management the audited financial statements of Harbor BioSciences for the fiscal year ended December 31, 2009, including a discussion of the quality, not just the acceptability, of the accounting principles, the reasonableness of significant estimates and judgments, critical accounting policies and the clarity of disclosures in the financial statements. During 2009, the Committee reviewed the Company's quarterly financial statements and its proposed public communications regarding its operating results and other financial matters, and reviewed the Company's quarterly reports on Form 10-Q and annual report on Form 10-K prior to filing.

Our independent registered public accounting firm discussed with the Audit Committee the matters required to be discussed under auditing standards generally accepted in the United States, including those matters set forth in Statement on Auditing Standards No. 114, The Auditor's Communication with Those Charged with Governance, as currently in effect (which statement on Auditing Standards superseded Statement on Auditing Standards No. 61, Communication with Audit Committees). Our independent registered public accounting firm also provided to the Audit Committee the written disclosures and the letter required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountants' communications concerning independence, and the Audit Committee discussed with the independent registered public accounting firm that firm's independence.

Based on the Audit Committee's discussion with management and the independent registered public accounting firm as well as the Audit Committee's review of the representation of management and the report of the independent registered public accounting firm to the Audit Committee, the Audit Committee recommended that our board of directors include the audited financial statements in our Annual Report on Form 10-K, for the fiscal year ended December 31, 2009, filed with the Securities and Exchange Commission.

The information contained in this report shall not be deemed to be "soliciting material" or to be "filed" with the Securities and Exchange Commission nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that we specifically incorporate it by reference in any such filing.

Respectfully submitted by:

AUDIT COMMITTEE  
Marc R. Sarni, Chairman  
Jerome M. Hauer  
Salvatore J. Zizza

#### **STOCKHOLDER COMMUNICATIONS WITH OUR BOARD OF DIRECTORS**

Our board of directors has adopted a formal process by which our stockholders may communicate with our board. Persons interested in communicating concerns or issues to our board may address correspondence to our board, in care of Harbor BioSciences, Inc., at 4435 Eastgate Mall, Suite 400, San Diego, California 92121. All such communications will be compiled by our secretary and submitted to our board on a periodic basis. All communications must be accompanied by the following information:

- A statement as to (i) the number of shares of our common stock that the person holds and (ii) the approximate date on which the person became a stockholder;
- Any special interest, meaning an interest not in the capacity as one of our stockholders, of the person in the subject matter of the communication; and
- The address, telephone number and e-mail address, if any, of the person submitting the communication.

The following types of communications are not appropriate for delivery to directors under these procedures:

- Communications regarding individual grievances or other interests that are personal to the party submitting the communication and would not reasonably be of concern to stockholders generally;
- Communications that advocate Harbor BioSciences engaging in illegal, unethical or otherwise improper activities;
- Communications that contain offensive, vulgar or abusive content; and
- Communications that have no rational relevance to our business or operations.

## **CODE OF BUSINESS CONDUCT AND ETHICS**

We have adopted the Harbor BioSciences Code of Business Conduct and Ethics, which applies to all officers, directors and employees. The Code of Business Conduct and Ethics is available on our website at [www.harborbiosciences.com](http://www.harborbiosciences.com). If we make any substantive amendments to the Code of Business Conduct and Ethics or grant any waiver from a provision of the Code to any executive officer or director, we will promptly disclose the nature of the amendment or waiver in a Form 8-K filed with the Securities and Exchange Commission.

## **PROPOSAL 2**

### **APPROVAL OF AMENDMENT TO THE COMPANY'S RESTATED CERTIFICATE OF INCORPORATION**

Our Restated Certificate of Incorporation, as amended, currently permits us to issue up to an aggregate of 60,000,000 shares of capital stock, consisting of 50,000,000 shares of common stock and 10,000,000 shares of preferred stock. Our board of directors has approved an amendment to our Restated Certificate of Incorporation, as amended to permit us to issue up to an aggregate of 110,000,000 shares of capital stock, consisting of 100,000,000 shares of common stock and 10,000,000 shares of preferred stock. The text of the proposed amendment is set forth below.

As of March 27, 2010, there were approximately 29,492,939 shares of common stock issued and outstanding, approximately 8,835,608 shares reserved for issuance upon exercise of options and rights granted under all of the Company's equity incentive plans, approximately 201,827 shares held under our 401(k) Plan and approximately 850,000 shares of common stock reserved for issuance upon exercise of warrants. Our board of directors believes that it is advisable and in the best interests of the Company and its stockholders to amend the Company's Restated Certificate of Incorporation, as amended, in order to have available additional authorized but unissued shares of common stock in an amount adequate to provide for the future needs of the Company.

#### *Purpose of the change in authorized shares*

The purpose of this proposed increase in authorized shares is to make available additional shares of common stock for issuance for general corporate purposes, including financing activities, without the requirement of further action by the stockholders of the Company. Our board of directors has considered potential uses of the additional authorized shares of common stock, which may include seeking additional equity financing through public or private offerings, establishing strategic relationships with other companies, expanding our business through partnerships with other businesses, establishing additional employee or director equity compensation plans or arrangements or for other general corporate purposes. Increasing the authorized number of shares of common stock will provide us with greater flexibility and allow the issuance of additional shares of common stock in most cases without the expense or delay of seeking further approval from the stockholders. We are at all times investigating additional sources of financing which our board of directors believes will be in our best interests and in the best interests of our stockholders. Other than the shares of common stock currently reserved for issuance under our existing equity incentive plans and outstanding warrants, we currently do not have any plans or arrangements to issue additional shares of common stock. However, we may need to raise additional capital in the future and will consider selling additional shares of our common stock (or securities convertible or exchangeable into shares of our common stock) in public or private transactions, subject to market conditions.

The proposed additional shares of common stock would be a part of the existing class of our common stock and, if and when issued, would have the same rights and privileges as the shares of common stock presently issued and outstanding. No additional action or authorization by the stockholders would be necessary prior to the issuance of the additional shares unless required by applicable law or regulation, our Restated Certificate of Incorporation, as amended, or the Nasdaq rules, if applicable.

*Effect of Having Authorized but Unissued Shares*

The issuance of additional shares of common stock in the future may, among other things, dilute earnings per share, stockholders' equity, and voting rights. The issuance of additional shares, or the perception that additional shares may be issued, may also adversely effect the market price of our common stock. The availability for issuance of additional shares of common stock also have the effect of rendering more difficult or discouraging any attempts by other parties to obtain control of the Company. For example, the issuance of shares of common stock in a public or private sale, merger, or similar transaction would increase the number of outstanding shares, thereby diluting the interest of a party attempting to obtain control of the Company. We are not aware of any existing or planned effort on the part of any party to accumulate material amounts of voting stock, or to acquire the Company by means of a merger, tender offer, solicitation of proxies in opposition to management or otherwise, or to change the Company's management, nor are we aware of any person having made any offer to acquire the voting stock or assets of the Company.

Our board of directors has approved the amendment of our Restated Certificate of Incorporation, as amended, to increase the number of shares of authorized capital stock to 110,000,000, consisting of 100,000,000 shares of common stock and 10,000,000 shares of preferred stock. If the amendment is adopted, it will become effective upon filing of a Certificate of Amendment of the Company's Restated Certificate of Incorporation, as amended, with the Delaware Secretary of State.

If approved, Paragraph A of Article IV of the Restated Certificate of Incorporation, as amended, will be amended to read in its entirety as follows:

"IV(A). This corporation is authorized to issue two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stock." The total number of shares which the corporation is authorized to issue is one hundred ten million (110,000,000) shares. One hundred million (100,000,000) shares shall be Common Stock, each having a par value of one cent (\$.01). Ten million (10,000,000) shares shall be Preferred Stock, each having a par value of one cent (\$.01)."

The affirmative vote of the holders of a majority of the shares of common stock outstanding will be required to approve this amendment to the Company's Amended and Restated Certificate of Incorporation. As a result, abstentions and broker non-votes will have the same effect as negative votes.

**THE BOARD OF DIRECTORS RECOMMENDS  
A VOTE IN FAVOR OF PROPOSAL 2.**

**PROPOSAL 3**

**RATIFICATION OF SELECTION OF OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Audit Committee of our board of directors has selected BDO Seidman, LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2010, and has further directed that management submit the selection of our independent registered public accounting firm for ratification by our stockholders at the annual meeting. BDO Seidman, LLP has audited our financial statements since our inception. Representatives of BDO Seidman, LLP are expected to be present at the annual meeting, will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Stockholder ratification of the selection of BDO Seidman, LLP as our independent registered public accounting firm is not required by our bylaws or otherwise. However, our board is submitting the selection of BDO Seidman, LLP to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the Audit Committee and our board will reconsider whether or not to retain that firm. Even if the selection is ratified, the Audit Committee in its discretion may direct the appointment of a different independent

registered public accounting firm at any time during the year if they determine that such a change would be in the best interests of the Company and our stockholders.

The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote at the annual meeting will be required to ratify the selection of BDO Seidman, LLP. Abstentions will be counted toward the tabulation of votes cast on proposals presented to the stockholders and will have the same effect as negative votes. Broker non-votes are counted towards a quorum, but are not counted for any purpose in determining whether this matter has been approved.

#### **INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FEES**

The following table shows the fees incurred for services rendered by BDO Seidman, LLP, our independent registered public accounting firm in 2009 and 2008. All such services were pre-approved by the Audit Committee in accordance with the pre-approval policy described below.

|   | <b>2009</b> | <b>2008</b> |
|---|-------------|-------------|
| Audit Fees  |             |             |
| <ul style="list-style-type: none"> <li>• Annual financial statements and reviews of quarterly financial statements</li> </ul> | \$76,000    | \$78,000    |
| <ul style="list-style-type: none"> <li>• Review of other documents filed with the SEC</li> </ul>                              | \$5,000     | \$2,500     |
| <ul style="list-style-type: none"> <li>• Other Fees</li> </ul>  | \$5,687     | \$8,000     |
| Subtotal Audit Fees   | \$86,687    | \$88,500    |
| Audit Related Fees  | -0-         | -0-         |
| Tax Fees  | \$8,000     | \$8,000     |
| All Other Fees  | -0-         | -0-         |
| Total   | \$94,687    | \$96,500    |

#### **PRE-APPROVAL POLICIES**

The Audit Committee pre-approves all audit and permissible non-audit services provided by the independent registered public accounting firm. These services may include audit services, audit-related services, internal control services, tax services and other services. The Audit Committee has adopted a policy for the pre-approval of services provided by the independent registered public accounting firm, BDO Seidman, LLP. The policy generally pre-approves specified services in the defined categories of audit services, audit-related services and tax services up to specified amounts. Pre-approval may also be given as part of the Audit Committee's approval of the scope of the engagement of the independent registered public accounting firm or on an individual explicit case-by-case basis before the independent registered public accounting firm is engaged to provide each service.

During the year, circumstances may arise when it may become necessary to engage the independent registered public accounting firm for additional services not contemplated in the original pre-approval. In those instances, the Audit Committee requires specific pre-approval before engaging the independent registered public accounting firm. The Audit Committee has delegated pre-approval authority to the Chairman of the Audit Committee for those such instances. The Chairman must report on such approvals at the next scheduled Audit Committee meeting.

The Audit Committee has determined that the rendering of the non-audit services by BDO Seidman, LLP is compatible with maintaining the auditor's independence.

All fiscal year 2009 audit and non-audit services provided by the independent registered public accounting firm were pre-approved.

**THE BOARD OF DIRECTORS RECOMMENDS  
A VOTE IN FAVOR OF PROPOSAL 3.**

## EXECUTIVE OFFICERS AND SENIOR MANAGEMENT

The following table sets forth information regarding our Executive Officers and Senior Management.

| <u>Name</u>                   | <u>Age</u> | <u>Position</u>                    |
|-------------------------------|------------|------------------------------------|
| James M. Frincke, Ph.D.       | 59         | Chief Executive Officer            |
| Christopher L. Reading, Ph.D. | 62         | Chief Scientific Officer           |
| Dwight R. Stickney, M.D.      | 67         | Chief Medical Officer              |
| Robert W. Weber               | 59         | Chief Financial Officer, Secretary |

*James M. Frincke, Ph.D.* joined Harbor BioSciences as Vice President, Research and Development in 1997. Dr. Frincke was promoted to Executive Vice President in 1999, to Chief Scientific Officer in 2001, to Chief Operating Officer in February 2008, and to Chief Executive Officer in March 2009. Dr. Frincke joined Harbor BioSciences from ProInx, Inc., where he served as Vice President, Therapeutics Research and Development from 1995 to 1997. During his 29 years in the biotechnology industry, Dr. Frincke has managed major development programs including drugs, biologicals, and cellular and gene therapy products aimed at the treatment of cancer, infectious diseases and organ transplantation. Since joining the biotechnology industry, Dr. Frincke has held vice president, research and development positions in top tier biotechnology companies including Hybritech/Eli Lilly and SyStemix, Inc. (acquired by Novartis). In various capacities, he has been responsible for all aspects of pharmaceutical development including early stage research programs, product evaluation, pharmacology, manufacturing, and the management of regulatory and clinical matters for lead product opportunities. Dr. Frincke has authored or co-authored more than 100 scientific articles, abstracts and regulatory filings. Dr. Frincke received his B.S. in Chemistry and his Ph.D. in Chemistry from the University of California, Davis. Dr. Frincke completed his postdoctoral work at the University of California, San Diego.

*Christopher L. Reading, Ph.D.*, became Vice President of Scientific Development in 1999. Dr. Reading was promoted to Executive Vice President, Scientific Development in 2002 and to Chief Scientific Officer in February 2008. Prior to joining Harbor BioSciences, Dr. Reading was Vice President of Product and Process Development at Novartis, Inc.-owned SyStemix, Inc. During this time, he successfully filed three investigational new drug applications (INDs) in the areas of stem cell therapy technology and stem cell gene therapy for HIV/AIDS. Prior to joining SyStemix, Dr. Reading served on the faculty of the M.D. Anderson Cancer Center in Houston for nearly 13 years. His positions there included Associate and Assistant Professor of Medicine in the Departments of Hematology and Tumor Biology. During his career, Dr. Reading has given more than 25 national and international scientific presentations, published more than 100 peer-reviewed journal articles and 15 invited journal articles as well as written nearly 20 book chapters, and received numerous grants and contracts which supported his research activities. Dr. Reading has served on the National Science Foundation Advisory Committee for Small Business Innovative Research Grants (SBIR) as well as on the editorial boards of *Journal of Biological Response Modifiers* and *Molecular Biotherapy*. He holds a number of patents for his work with monoclonal antibodies and devices. Dr. Reading received his Ph.D. in Biochemistry from the University of California at Berkeley and completed postdoctoral study in tumor biology at The University of California at Irvine. He received his B.A. in biology from the University of California at San Diego.

*Dwight R. Stickney, M.D.*, was appointed Vice President, Medical Affairs in 2003 and was promoted to Chief Medical Officer in February 2008. He joined Harbor BioSciences as Medical Director, Oncology in 2000. Dr. Stickney joined Harbor BioSciences from the Radiation Oncology Division of Radiological Associates of Sacramento Medical Group, Inc., in Sacramento, California, where he served as an oncologist since 1993. While at Radiological Associates, he served as Chairman of the Radiation Oncology Division from 1997 to 1999 and was a member of the Radiation Study section of the National Institute of Health's Division of Research Grants from 1993

to 1997. He also served as the Director of Radiation Research for Scripps Clinic and Research Foundation in La Jolla, California. Dr. Stickney has taught in medical academia as Associate Professor of Radiation Medicine at Loma Linda University School of Medicine and has served as Director of the International Order of Forrester's Cancer Research Laboratory and on the board of directors of the California Division of the American Cancer Society. Earlier in his career, Dr. Stickney held positions with Burroughs Wellcome and the Centers for Disease Control, and academic teaching appointments at the University of California at Los Angeles and the University of California at Riverside. He has also served as a consultant for a number of biotechnology companies on the design and conduct of clinical trials. Dr. Stickney has authored or co-authored over 80 scientific articles, abstracts and book chapters. He is named inventor on numerous issued patents and patent applications. Dr. Stickney holds a Bachelor of Science in Microbiology, a Masters of Science in Immunology, and a M.D. from The Ohio State University. In addition, he is certified as a Diplomat of the American Board of Internal Medicine and Hematology and a Diplomat of the American Board of Radiology, Therapeutic Radiology.

*Robert W. Weber* was appointed Vice President and Controller of Harbor BioSciences in 1996, was promoted to Vice President and Chief Accounting Officer in 1999, Interim Chief Financial Officer in May 2007, Vice President, Operations in February 2008 and to Chief Financial Officer in May 2009. Mr. Weber has over twenty-five years of experience in financial management. Mr. Weber has been employed at executive levels by multiple start-up companies and contributed to the success of several turnaround situations. He previously served as Vice President of Finance at Prometheus Products, a subsidiary of Sierra Semiconductor (now PMC Sierra), from 1994 to 1996, and Vice President Finance and Chief Financial Officer for Amercom, a personal computer telecommunications software publishing company, from 1993 to 1994. From February 1988 to August 1993, Mr. Weber served as Vice President Finance and Chief Financial Officer of Instromedix, a company that develops and markets medical devices and software. Mr. Weber brings a broad and expert knowledge of many aspects of financial management. In various capacities, he has been responsible for all aspects of finance and accounting including cost accounting, cash management, filings with the Securities and Exchange Commission, investor relations, private and venture financing, corporate legal matters, acquisitions/divestitures as well as information services and computer automation. Mr. Weber received a B.S. from GMI Institute of Technology (now Kettering University) and an M.B.A. from the Stanford Graduate School of Business.

**SECURITY OWNERSHIP OF  
CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth certain information regarding the ownership of our common stock as of January 31, 2010 by: (i) each director and nominee for director; (ii) each of the executive officers named in the compensation table; (iii) all of our executive officers and directors as a group; and (iv) all those known to us to be beneficial owners of more than five percent of our common stock. Except as otherwise shown, the address of each stockholder listed is in care of Harbor BioSciences at 4435 Eastgate Mall, Suite 400, San Diego, California 92121.

| <u>Beneficial Owner</u>  | <u>Beneficial Ownership</u> <sup>(1)</sup> |                         |
|--|--|-------------------------|
|  | <u>Number of Shares</u>                    | <u>Percent of Total</u> |
| James M. Frincke <sup>(2)</sup>  | 891,348                                    | 2.9%                    |
| Christopher L. Reading <sup>(3)</sup>                                      | 375,171                                    | 1.3%                    |
| Salvatore J. Zizza <sup>(4)</sup>  | 343,612                                    | 1.2%                    |
| Dwight R. Stickney <sup>(5)</sup>  | 384,741                                    | 1.3%                    |
| Jerome M. Hauer <sup>(6)</sup>   | 97,083                                     | *                       |
| Marc R. Sarni <sup>(7)</sup>   | 102,083                                    | *                       |
| Robert W. Weber <sup>(8)</sup>   | 438,816                                    | 1.5                     |
| All executive officers and directors as a group (7 persons) <sup>(9)</sup> | 2,632,854                                  | 8.3%                    |

---

\* Less than one percent.

- (1) This table is based upon information supplied by officers, directors and principal stockholders and Schedules 13D and 13G filed with the Securities and Exchange Commission. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, we believe that each of the stockholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned. Applicable percentages are based on 29,169,655 shares outstanding on January 31, 2010, adjusted as required by rules promulgated by the Securities and Exchange Commission.
- (2) Includes 808,161 shares subject to options which are presently exercisable or will become exercisable within 60 days of January 31, 2010, and 24,614 shares held under our 401(k) plan in his name. Also includes 39,587 shares subject to options which are presently exercisable or will become exercisable within 60 days of January 31, 2010, and 11,111 shares held under our 401(k) plan in his spouse's name.
- (3) Includes 348,348 shares subject to options which are presently exercisable or will become exercisable within 60 days of January 31, 2010, and 24,010 shares held under our 401(k) plan.
- (4) Includes 213,612 shares subject to options which are presently exercisable or will become exercisable within 60 days of January 31, 2010. Also includes 1,500 shares held in trust in the name of his children, with respect to which Mr. Zizza disclaims beneficial ownership.
- (5) Includes 357,661 shares subject to options which are presently exercisable or will become exercisable within 60 days of January 31, 2010, and 22,330 shares held under our 401(k) plan.
- (6) Includes 97,083 shares subject to options which are presently exercisable or will become exercisable within 60 days of January 31, 2010.
- (7) Includes 97,083 shares subject to options which are presently exercisable or will become exercisable within 60 days of January 31, 2010.
- (8) Includes 391,011 shares subject to options which are presently exercisable or will become exercisable within 60 days of January 31, 2010, and 24,055 shares held under our 401(k) plan.
- (9) Includes 2,352,546 shares subject to options which are presently exercisable or will become exercisable within 60 days of January 31, 2010, and 106,120 shares held under our 401(k) plan.

#### **SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE**

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our directors and executive officers, and persons who own more than ten percent of a registered class of our equity securities, to file with the Securities and Exchange Commission initial reports of ownership and reports of changes in ownership of common stock and other of our equity securities. Officers, directors and greater than ten percent stockholders are required by Securities and Exchange Commission regulation to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required, during the fiscal year ended December 31, 2009, all Section 16(a) filing requirements applicable to our officers, directors and greater than ten percent beneficial owners were complied with.

#### **DIRECTOR COMPENSATION**

For 2009, each non-employee director received an annual retainer of \$15,000, a fee of \$2,500 per in-person board meeting attended, and a fee of \$1,000 per telephonic committee meeting attended if the duration of the committee meeting is expected to exceed one hour (including preparation time), with the applicable committee

members determining at each such meeting whether such compensation is payable. Also, directors who serve as committee chairmen for board committees received an additional annual retainer of \$2,500 per year. During 2009, the board formed a temporary special committee. Based on the individuals time spent working for the committee, they received additional compensation. We also grant discretionary stock options to non-employee members of our board of directors. No discretionary stock options were granted to non-employee directors in 2009.

The following table shows for the fiscal year ended December 31, 2009, certain information with respect to the compensation of all non-employee directors of the Company:

**DIRECTOR COMPENSATION FOR FISCAL 2009**

| Name                  | Fees Earned or Paid in Cash (\$) | Stock Awards (\$) | Option Awards (\$ (1)) | Non-Equity Incentive Plan Compensation (\$) | Change in Pension Value and Nonqualified Deferred Compensation Earnings | All Other Compensation (\$) | Total (\$) |
|-----------------------|----------------------------------|-------------------|------------------------|---|---|-----------------------------|------------|
| Jerome M. Hauer       | 54,000                           | -                 | -                      | -   | -   | -                           | 54,000     |
| Thomas C. Merigan (2) | 19,000                           | -                 | -                      | -   | -   | -                           | 19,000     |
| Marc R. Sarni         | 54,000                           | -                 | -                      | -   | -   | -                           | 54,000     |
| Salvatore J. Zizza    | 98,000                           | -                 | -                      | -   | -   | -                           | 98,000     |

(1) Amounts are calculated utilizing the provisions of ASC 718, "Share-based Payments". See Note 2, "Summary of Accounting Policies," of the financial statements in the Company's Annual Report on Form 10-K, for the year ended December 31, 2009, for a discussion of the assumptions underlying valuation of our equity awards.

(2) Dr. Merigan resigned from our board of directors effective March 29, 2009.

**EXECUTIVE COMPENSATION**

We currently qualify as a "smaller reporting company" as such term is defined in Rule 405 of the Securities Act of 1933, as amended, and Item 10 of Regulation S-K. Accordingly, and in accordance with relevant Securities and Exchange Commission rules and guidance, we have elected, with respect to the disclosures required by Item 402 (Executive Compensation) of Regulation S-K, to comply, in some cases, with the requirements applicable to larger companies and, in other cases, with the disclosure requirements applicable to smaller reporting companies. For example, the following overview of our executive compensation is not comparable to the "Compensation Discussion and Analysis" section that is required of SEC reporting companies that are not smaller reporting companies.

*Compensation philosophy for named executive officers and overview*

The Compensation Committee of our board of directors approves, administers and interprets our executive compensation and benefit policies, including our 2005 Equity Incentive Plan. The compensation of our named executive officers is designed to attract highly qualified executives with the ability, skills and potential necessary for Harbor BioSciences to achieve its corporate strategies; to encourage those individuals to continually pursue our strategic objectives while effectively managing the risks and challenges inherent to a development stage

pharmaceutical/biotechnology company; to reward those individuals adequately and fairly over time; and to retain those individuals who continue to perform at or above our expectations. Our named executive officers' compensation has three primary components — base salary, a yearly discretionary cash bonus, and long-term incentive compensation in the form of stock options and, in certain circumstances, restricted stock awards. In addition, our named executive officers are provided with benefits that are generally available to all of our salaried employees, including matching contributions in the form of our common stock into our named executive officers' 401(k) accounts.

Our Compensation Committee views all three components of our compensation for our named executive officers as related but distinct. Although our Compensation Committee reviews total compensation, we do not believe that significant compensation derived from one component of compensation should negate or reduce compensation from other components. Our Compensation Committee has not adopted any formal or informal policies or guidelines for allocating compensation between long-term and currently paid-out compensation, between cash and non-cash compensation, or among different forms of compensation. This is due in part to the relatively small size of our executive team and the need to tailor each named executive officer's compensation to attract and retain that named executive officer. Our Compensation Committee determines the appropriate level for each compensation component based in part, but not exclusively, on its view of internal equity and consistency, individual performance, current market conditions, consultation with legal counsel and compensation consultants, a review of corporate accomplishments and setbacks during the prior year, consideration of active projects and future projects, review of expiring equity compensation and the dilutive effect of new equity grants, and other information the Compensation Committee deems relevant, such as the compensation survey data referred to below.

#### *Primary components of executive compensation*

The aggregate compensation paid to our named executive officers is composed of three primary components: base salary, a yearly discretionary cash bonus, and long-term incentive compensation in the form of stock options and, in certain circumstances, restricted stock awards. Each component is described below in more detail.

*Base salary.* Our Compensation Committee fixes the base salary of each of our named executive officers at a level it believes enables us to hire and retain these individuals and to reward our named executive officers for satisfactory individual performance and a satisfactory level of contribution to our overall business goals. In determining the base salaries of our named executive officers, the Compensation Committee also takes into account the base salaries paid to executives in other companies with which we believe we compete for talent, including companies of similar size and stage of development operating in the biotechnology industry, as well as other private and public companies located in our geographical location. For newly-hired named executive officers, the base salary is initially established through negotiation at the time the named executive officer is hired, taking into account such named executive officer's qualifications, experience, prior salary and competitive salary information and any unique personal circumstance that motivated the executive to leave his or her prior position and join Harbor BioSciences.

Year-to-year adjustments to each named executive officer's base salary, if any, are based upon individual performance for that year, changes in the general level of base salaries of persons in comparable positions within our industry and geographical location, and the average merit salary increase for such year for all of our employees, as well as other factors the Compensation Committee judges to be pertinent during that assessment period. Our Compensation Committee subscribes to certain executive compensation surveys and other databases such as, most recently, the 2008 Radford Biotechnology Survey and the Radford Biotechnology Edition of the Quarterly Summary of Industry Trends Survey Report for the third quarter and fourth quarter 2008, and reviews them periodically when making executive hiring decisions and when reviewing executive compensation. Our Compensation Committee realizes that benchmarking the Company's compensation against the compensation earned at comparable companies may not always be appropriate, but believes that engaging in a comparative analysis of the Company's compensation practices is useful at this point in the life cycle of the Company.

For each named executive officer position, the Compensation Committee generally sets its target base compensation between the 50th and 75th percentile of base compensation paid to executive officers holding equivalent positions in the companies contained in the Radford Biotechnology Survey, a national survey of approximately 1,300 positions in 550 biotechnology organizations. For both 2007 and 2008, this represented a projected increase of approximately 4.0% in base salary over the prior year for the Company's employees as a whole. This approach applies to our named executive officers and generally to all positions company-wide, except

that individual base compensation may range below or above those percentiles depending upon job function, scope of responsibility, individual performance and experience, skills, contribution, and market factors when, in the judgment of our Compensation Committee, the value of the individual's experience, performance and specific skill set justifies variation. The Compensation Committee has also historically taken into account information from other sources, including input from other independent members of our board of directors and publicly available data relating to the compensation practices and policies of other companies within and outside of our industry. Generally, the salaries for our named executive officers are adjusted effective January 1 of each year. For 2009, the Compensation Committee froze the base salaries for all of the Company's named executive officers such that the base salaries for the named executive officers will remain at 2008 levels during 2009.

*Annual discretionary cash bonuses.* The annual cash bonus payments to our named executive officers are entirely discretionary. In January 2009, our board of directors approved and authorized our management to cancel all cash bonuses related to 2009 and 2008 performance that might otherwise be granted to the Company's named executive officers. In February 2009, management implemented this action and all cash bonuses related to 2009 and 2008 performance that might have otherwise been granted to the Company's named executive officers were cancelled.

We utilize annual incentive bonuses to compensate our named executive officers for achieving Company financial and operational goals. These objectives relate generally to Company-wide goals and performance objectives, as well as other strategic factors such as establishment and maintenance of key strategic relationships, development of our drug candidates, identification and advancement of additional drug candidates, advancement of scientific research and to financial factors such as raising capital, improving our results of operations and increasing the price per share of our common stock. Our Compensation Committee believes that it is most appropriate and meaningful at this point in the life cycle of the Company to determine discretionary cash bonus amounts, if any, to our named executive officers based upon our management team's performance and achievement of Company-wide goals as a whole rather than solely upon an individual named executive officer's achievement of individual performance objectives and departmental or functional area goals.

*Long-term equity incentive awards.* We use stock options and, in certain circumstances, restricted stock awards to reward long-term performance. These options and restricted stock awards are intended to produce the potential for significant value for each named executive officer if our performance is positive and if the named executive officer has an extended tenure with the Company. To conserve our cash resources, we place special emphasis on equity-based incentives to attract, retain and motivate named executive officers as well as other employees.

The Compensation Committee provides our named executive officers with long-term incentive compensation through grants of stock options and restricted stock awards, generally under the 2005 Equity Incentive Plan. We believe that stock options provide our named executive officers with the opportunity to purchase and maintain an equity interest in Harbor BioSciences and to share in the potential appreciation of the value of our common stock. We believe that stock options align our named executive officers' incentives with that of our stockholders because options have value only if our stock price increases over time. The stock options also utilize vesting periods that encourage named executive officers to continue in their employment with us. However, because of the evolution of regulatory, tax and accounting treatment of equity incentive programs and because it is important to us to retain our named executive officers and key employees, we realize that it is important in some circumstances that we utilize other forms of equity awards as and when we may deem necessary. For example, in 2006, we granted restricted stock awards to our named executive officers, as we believed that this was an additional way to reward them for and motivate them toward superior performance.

The Compensation Committee considers the grant of each option or restricted stock award subjectively, considering factors such as the individual performance of the named executive officer and the anticipated contribution of the named executive officer to the attainment of our long-term strategic performance goals. Long-term incentives granted in prior years are also taken into consideration. Grants are made to all employees when hired based on salary level and position. All employees, including named executive officers, are eligible for subsequent, discretionary grants, which are generally based on either individual or corporate performance, as well as the position held within the Company.

No option grants were made to our named executive officers in 2009. We do not have any program, plan or obligation that requires us to grant equity compensation to any named executive officers on specified dates. The authority to make equity grants to named executive officers rests with our Compensation Committee.

#### **EMPLOYMENT, SEVERANCE AND CHANGE OF CONTROL AGREEMENTS**

We have entered into an employment agreement with Mr. Weber, our Chief Financial Officer, which provides that if Mr. Weber's employment is terminated without cause, Mr. Weber shall be entitled to the following: (i) base salary through date of termination, (ii) one year of severance pay at Mr. Weber's highest salary, (iii) an amount equal to the prior calendar year's bonus awarded to Mr. Weber, (iv) immediate vesting of all unvested stock options held by Mr. Weber, and the continuation of the exercise period of all stock options held by Mr. Weber until the final expiration of the original term of such stock options, and (v) continued receipt for one year of all employee benefit plans and programs in which Mr. Weber and his family were entitled to participate immediately prior to the date of termination. Under Mr. Weber's employment agreement, voluntary termination due to a "change in duties" or a "change of control of the company" will be considered the same as termination for any reason other than cause and shall entitle Mr. Weber to receive the benefits described in (i) through (v) above.

#### **SEVERANCE AND CHANGE IN CONTROL BENEFITS**

Mr. Weber, our Chief Financial Officer, has a provision in his employment agreement providing for certain severance benefits in the event of termination without cause, as well as a provision in his employment agreement providing for the acceleration of his then unvested options in the event of termination without cause following a change in control of the Company. These severance and acceleration provisions are described in the "Employment, Severance and Change of Control Agreements" section above, and certain estimates of these change of control benefits are provided in "Potential Payments Upon Termination or Change of Control" section below.

#### **OTHER BENEFITS**

Our named executive officers are eligible to participate in all of our employee benefit plans, such as medical, dental, vision, group life and disability insurance and our 401(k) plan, in each case on the same basis as our other employees. There were no special benefits or significant prerequisites provided to any named executive officer in 2009.

#### **MATERIAL TAX AND ACCOUNTING IMPLICATIONS OF EXECUTIVE COMPENSATION POLICIES**

We account for the equity compensation expense for our employees under the rules of ASC 718, which requires us to estimate and record an expense for each award of equity compensation over the service period of the award. Accounting rules also require us to record cash compensation as an expense at the time the obligation is accrued. Unless and until we achieve sustained profitability, the availability to us of a tax deduction for compensation expense is not material to our financial position. We structure discretionary cash bonus compensation so that it is taxable to our employees at the time it becomes available to them. Federal income tax law prohibits publicly held companies from deducting certain compensation paid to a named executive officer that exceeds \$1 million during the tax year. To the extent that compensation is based upon the attainment of performance goals set by the Compensation Committee pursuant to plans approved by our stockholders, such compensation is not included in the computation of this limit. Although the Compensation Committee intends, to the extent feasible and where it believes it is in the best interests of the Company and our stockholders, to attempt to qualify executive compensation as tax deductible, it does not intend to permit this tax provision to dictate the Compensation Committee's development and execution of effective compensation plans.

#### **SUMMARY COMPENSATION TABLE**

The following table shows for the fiscal years ended December 31, 2007, 2008 and 2009, compensation awarded to or paid to, or earned by, our Chief Executive Officer, our Chief Financial Officer and our two other most highly compensated executive officers in 2009, and two other people, one that served as our Chief Executive Officer

and one that served as our Senior Vice President, Business Development and Marketing for part of 2009 (the "Named Executive Officers").

| Name and Principal Position  | Year | Salary (\$) | Bonus (\$) | Stock Awards (\$ (1)) | Option Awards (\$ (1)) | All Other Compensation (\$ (2)) | Total (\$)  |
|--|------|-------------|------------|-----------------------|------------------------|---------------------------------|-------------|
| Richard B. Hollis<br>Former Chairman of the Board<br>and Chief Executive Officer (3) | 2007 | \$532,480   | \$266,240  | \$38,310              | \$1,532,000            | \$19,685 (4)                    | \$2,388,715 |
|  | 2008 | \$553,779   | -          | \$10,440              | \$810,000              | \$43,595 (5)                    | \$1,417,814 |
|  | 2009 | \$121,760   | -          | \$1,860               | -                      | \$44,386(6)                     | \$168,006   |
| Dr. James M. Frincke<br>Chief Executive Officer                                      | 2007 | \$298,480   | \$59,696   | \$14,366              | \$332,000              | \$7,707                         | \$712,249   |
|  | 2008 | \$325,000   | -          | \$3,915               | \$199,260              | \$23,554 (7)                    | \$551,729   |
|  | 2009 | \$325,000   | -          | \$1,238               | -                      | \$20,060(8)                     | \$346,298   |
| Dr. Christopher L. Reading<br>Chief Scientific Officer                               | 2007 | \$260,104   | \$52,021   | \$5,984               | \$166,000              | \$7,584                         | \$491,693   |
|  | 2008 | \$270,508   | -          | \$1,630               | \$40,500               | \$7,801                         | \$320,439   |
|  | 2009 | \$270,508   | -          | \$516                 | -                      | \$21,307                        | \$279,275   |
| Dwight R. Stickney, M.D.<br>Chief Medical Officer                                    | 2007 | \$357,110   | \$71,422   | \$5,984               | \$166,000              | \$5,921                         | \$606,437   |
|  | 2008 | \$371,394   | -          | \$1,630               | \$40,500               | \$5,461                         | \$418,985   |
|  | 2009 | \$371,394   | -          | \$516                 | -                      | \$37,365                        | \$379,611   |
| Robert L. Marsella<br>Senior Vice President, Business<br>Development and Marketing   | 2007 | \$230,256   | \$46,051   | \$5,984               | \$149,200              | \$5,269                         | \$486,760   |
|  | 2008 | \$248,000   | -          | \$1,630               | \$81,000               | \$14,988 (9)                    | \$345,618   |
|  | 2009 | \$205,374   | -          | \$516                 | -                      | \$17,368                        | \$209,280   |
| Robert W. Weber<br>Chief Financial Officer   | 2007 | \$213,200   | \$42,640   | \$5,984               | \$166,000              | \$15,631 (10)                   | \$443,275   |
|  | 2008 | \$235,000   | -          | \$1,630               | \$154,148              | \$16,719 (11)                   | \$407,497   |
|  | 2009 | \$235,000   | -          | \$516                 | -                      | \$39,008(12)                    | \$259,464   |

(1) Amounts are calculated utilizing the provisions of ASC (718), "Share-based Payments". See Note 2 "Summary of Accounting Policies" of the financial statements in the Company's Annual Report on Form 10-K, for the year ended December 31, 2009 for a discussion of the assumptions underlying valuation of our equity awards.

(2) Amounts shown in this column include company match for each Named Executive Officer's contributions to the Company's 401(k) plan as well as life insurance premiums paid on behalf of each Named Executive Officer.

(3) Mr. Hollis' employment with the Company terminated effective March 18, 2009.

(4) The amount shown includes a pay out of \$18,688 in accrued paid time off to Mr. Hollis.

(5) The amount shown includes a pay out of \$42,598 in accrued paid time off to Mr. Hollis.

(6) The amount shown includes a pay out of \$39,457 in accrued paid time off to Mr. Hollis.

(7) The amount shown included a pay out of \$12,500 in accrued paid time off to Dr. Frincke as well as a company match of \$3,156 for Dr. Frincke's spouse.

(8) The amount shown included a company match of \$2,487 for Dr. Frincke's spouse

(9) The amount shown includes a pay out of \$9,538 in accrued time off to Mr. Marsella.

(10) The amount shown includes a pay out of \$8,200 in accrued paid time off to Mr. Weber.

(11) The amount shown includes a pay out of \$9,038 in accrued paid time off to Mr. Weber.

(12) The amount shown includes a pay out of \$15,817 in accrued paid time off to Mr. Weber.

#### GRANTS OF PLAN-BASED AWARDS

The following table shows for the fiscal year ended December 31, 2009, certain information regarding grants of plan-based awards to the Named Executive Officers:

#### GRANTS OF PLAN-BASED AWARDS IN FISCAL 2009

| Name                   | Grant Date | All Other Option Awards: Number of Securities Underlying Options (#) | Exercise or Base Price of Option Awards (\$/Sh) | Grant Date Fair Value of Stock and Option Awards (\$) (1) |
|------------------------|------------|--|---|---|
| Richard B. Hollis (2)  | N/A        |  |   |   |
| James M. Frincke       | N/A        |  |   |   |
| Christopher L. Reading | N/A        |  |   |   |
| Dwight R. Stickney     | N/A        |  |   |   |
| Robert L. Marsella     | N/A        |  |   |   |
| Robert W. Weber        | N/A        |  |   |   |
|                        |            |  |   |   |

(1) Amounts are calculated utilizing the provisions of ACS (718), "Share-based Payments". See Note 2 "Summary of Accounting Policies" of the financial statements in the Company's Annual Report on Form 10-K, for the year ended December 31, 2009, for a discussion of the assumptions underlying valuation of our equity awards.

(2) Mr. Hollis' employment with the Company terminated effective March 18, 2009.

**OUTSTANDING EQUITY AWARDS AT FISCAL YEAR –END.**

The following table shows for the fiscal year ended December 31, 2009, certain information regarding outstanding equity awards at fiscal year end for the Named Executive Officers.

**OUTSTANDING EQUITY AWARDS AT DECEMBER 31, 2009**

| Name                   | Option Awards   |   |                            |                        | Stock Awards  |   |
|------------------------|---|---|----------------------------|------------------------|---|---|
|                        | Number of Securities Underlying Unexercised Options (#) Exercisable | Number of Securities Underlying Unexercised Options (#) Unexercisable | Option Exercise Price (\$) | Option Expiration Date | Number of Shares or Units of Stock That Have Not Vested (#) | Market Value of Shares or Units of Stock That Have Not Vested (\$)(6) |
| Richard B. Hollis (7)  | N/A   |   |                            |                        |   |   |
| James M. Frincke       | 65,000  |   | 6.50                       | 12/09/2010 (3)         | 1,125 (5)   | 596   |
|                        | 45,000  |   | 6.50                       | 12/09/2010 (2)         |   |   |
|                        | 60,000  |   | 9.91                       | 01/08/2012 (3)         |   |   |
|                        | 60,000  |   | 5.29                       | 02/25/2013 (3)         |   |   |
|                        | 10,000  |   | 12.25                      | 06/24/2013 (4)         |   |   |
|                        | 64,000  |   | 14.97                      | 01/15/2014 (3)         |   |   |
|                        | 46,800  |   | 10.75                      | 02/10/2015 (3)         |   |   |
|                        | 25,875  | 1,125   | 6.20                       | 02/12/2016 (3)         |   |   |
|                        | 45,000  | 15,000  | 5.43                       | 12/10/2016 (3)         |   |   |
|                        | 155,556   | 44,444  | 1.66                       | 07/31/2017 (2)         |   |   |
|                        | 60,000  |   | 1.62                       | 01/16/2018 (8)         |   |   |
|                        | 28,750  | 31,250  | 1.62                       | 01/16/2018 (3)         |   |   |
|                        | 3,000   |   | 1.62                       | 01/16/2018 (1)         |   |   |
| Christopher L. Reading | 15,417  |   | 10.56                      | 11/14/2009 (2)         | 469 (5)   | 249   |
|                        | 21,354  |   | 6.50                       | 12/09/2010 (3)         |   |   |
|                        | 40,000  |   | 9.91                       | 01/08/2012 (3)         |   |   |
|                        | 13,333  |   | 9.91                       | 01/08/2012 (1)         |   |   |
|                        | 25,000  |   | 5.29                       | 02/25/2013 (3)         |   |   |
|                        | 10,000  |   | 12.25                      | 06/24/2013 (4)         |   |   |
|                        | 31,000  |   | 14.97                      | 01/15/2014 (3)         |   |   |
|                        | 19,500  |   | 10.75                      | 02/10/2015 (3)         |   |   |
|                        | 10,781  | 469   | 6.20                       | 02/12/2016 (3)         |   |   |
|                        | 18,750  | 6,250   | 5.43                       | 12/10/2016 (3)         |   |   |
|                        | 77,778  | 22,222  | 1.66                       | 07/31/2017 (2)         |   |   |
|                        | 11,979  | 13,021  | 1.62                       | 01/16/2018 (3)         |   |   |
| Robert L. Marsella     | 25,000  |   | 6.50                       | 05/31/2012 (3)         |   |   |
|                        | 30,000  |   | 6.50                       | 05/31/2012 (3)         |   |   |
|                        | 25,000  |   | 9.91                       | 05/31/2012 (3)         |   |   |
|                        | 25,000  |   | 5.29                       | 05/31/2012 (3)         |   |   |
|                        | 25,000  |   | 14.97                      | 05/31/2012 (3)         |   |   |
|                        | 19,500  |   | 10.75                      | 05/31/2012 (3)         |   |   |
|                        | 10,078  |   | 6.20                       | 05/31/2012 (3)         |   |   |

|                    |        |        |       |                |         |     |
|--------------------|--------|--------|-------|----------------|---------|-----|
|                    | 17,188 |        | 5.43  | 05/31/2012 (3) |         |     |
|                    | 83,333 |        | 1.66  | 05/31/2012 (2) |         |     |
|                    | 25,000 |        | 1.62  | 05/31/2012 (8) |         |     |
|                    | 9,896  |        | 1.62  | 05/31/2012 (3) |         |     |
| Robert W. Weber    | 25,000 |        | 6.50  | 12/09/2010 (3) | 469 (5) | 249 |
|                    | 25,000 |        | 6.50  | 12/09/2010 (3) |         |     |
|                    | 25,000 |        | 9.91  | 01/08/2012 (3) |         |     |
|                    | 25,000 |        | 5.29  | 02/25/2013 (3) |         |     |
|                    | 25,000 |        | 14.97 | 01/15/2014 (3) |         |     |
|                    | 19,500 |        | 10.75 | 02/10/2015 (3) |         |     |
|                    | 10,781 | 469    | 6.20  | 02/12/2016 (3) |         |     |
|                    | 18,750 | 6,250  | 5.43  | 12/10/2016 (3) |         |     |
|                    | 77,778 | 22,222 | 1.66  | 07/31/2017 (2) |         |     |
|                    | 25,000 |        | 1.62  | 01/16/2018 (8) |         |     |
|                    | 11,979 | 13,201 | 1.62  | 01/16/2018 (3) |         |     |
|                    | 3,000  |        | 1.62  | 01/16/2018 (1) |         |     |
|                    | 30,350 |        | 2.25  | 02/26/2013 (1) |         |     |
| Dwight R. Stickney | 50,000 |        | 11.81 | 06/22/2010 (3) | 469 (5) | 249 |
|                    | 36,000 |        | 6.90  | 05/28/2011 (3) |         |     |
|                    | 12,500 |        | 9.91  | 01/08/2012 (3) |         |     |
|                    | 12,500 |        | 5.29  | 02/25/2013 (3) |         |     |
|                    | 10,000 |        | 12.25 | 06/24/2013 (3) |         |     |
|                    | 1,000  |        | 12.20 | 06/25/2013 (1) |         |     |
|                    | 28,000 |        | 14.97 | 01/15/2014 (3) |         |     |
|                    | 6,000  |        | 10.69 | 12/02/2014 (1) |         |     |
|                    | 19,500 |        | 10.75 | 02/10/2015 (3) |         |     |
|                    | 10,781 | 469    | 6.20  | 02/12/2016 (3) |         |     |
|                    | 18,750 | 6,250  | 5.43  | 12/10/2016 (3) |         |     |
|                    | 77,778 | 22,222 | 1.66  | 07/31/2017 (2) |         |     |
|                    | 11,979 | 13,021 | 1.62  | 01/16/2018 (3) |         |     |

(1) These grants vested immediately upon date of grant.

(2) These grants vest for 1/3rd of the total number of shares on the first year anniversary of the date of grant; 1/36th of the total shares vest each month thereafter.

(3) These grants vest for 1/4th of the total number of shares on the first year anniversary of the date of grant; 1/48th of the total shares vest each month thereafter.

(4) These grants vest for 1/4th of the total number of shares immediately upon the date of grant; 1/36th of the total shares vest each month thereafter.

(5) These restricted stock awards vest over 4 years with 25% of the total shares vesting on the first anniversary of the date of grant and 12.5% of the remaining shares vesting each six-month period thereafter.

(6) The amounts reflected in this column represents the closing price of a share of our common stock on December 31, 2008, (\$0.68) multiplied by the number of shares that have not vested.

(7) Mr. Hollis' employment with the Company terminated effective March 18, 2009.

(8) These grants vest and become exercisable in 12 equal monthly installments.

## OPTION EXERCISES AND STOCK VESTED

The following table provides information regarding the number of shares of common stock acquired and the value realized pursuant to the exercise of stock options, and all stock awards vested and the value realized pursuant to the vesting of stock awards, during 2009 by each of our Named Executive Officers.

| <u>Named Executive Officer</u> | <b>Option Awards</b>   |  | <b>Stock Awards</b>   |   |
|--------------------------------|--|--|---|---|
|                                | <b>Number of Shares<br/>Acquired on<br/>Exercise<br/>(#)</b> | <b>Value Realized on<br/>Exercise (1)<br/>(\$)</b> | <b>Number of<br/>Shares<br/>Acquired<br/>on Vesting<br/>(#)</b> | <b>Value Realized<br/>on Vesting (2)<br/>(\$)</b> |
| Richard B. Hollis (3)          | -  | -  | 3,000   | 1,860   |
| James M. Frincke               | -  | -  | 2,250   | 1,238   |
| Christopher L. Reading         | -  | -  | 938   | 516   |
| Dwight R. Stickney             | -  | -  | 938   | 516   |
| Robert L. Marsella             | -  | -  | 938   | 516   |
| Robert W. Weber                | -  | -  | 938   | 516   |

(1) The value realized on exercise is equal to the difference between the option exercise price and the closing price of our common stock on the date of exercise, multiplied by the number of shares subject to the option, without taking into account any taxes that may be payable in connection with the transactions.

(2) The value realized on vesting is equal to the closing price of our common stock on the date of vesting, multiplied by the number of shares that vested.

(3) Mr. Hollis' employment with the Company was terminated effective March 18, 2009.

## PENSION BENEFITS

None of our Named Executive Officers participates in or has account balances in qualified or non-qualified defined benefit plans sponsored by us. The Compensation Committee may elect to adopt qualified or non-qualified defined benefit plans in the future if the Compensation Committee determines that doing so is in our best interests.

## NONQUALIFIED DEFERRED COMPENSATION

None of our Named Executive Officers participate in or have account balances in non-qualified defined contribution plans or other deferred compensation plans maintained by us. The Compensation Committee may elect to provide our officers and other employees with non-qualified defined contribution or other nonqualified deferred compensation benefits in the future if the Compensation Committee determines that doing so is in our best interests.

## POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE-IN-CONTROL

The summary below sets forth potential payments payable to certain of our current Named Executive Officers upon termination of employment or a change in control of the Company. The Compensation Committee may in its discretion, and with the approval of the applicable Named Executive Officer, revise, amend or add to these benefits in the future if it deems doing so advisable and in our best interests. Robert W. Weber, our Chief Financial Officer, is the only Named Executive Officer who has any severance and/or change of control arrangements.

Under Mr. Weber's employment agreement, if Mr. Weber's employment is terminated without cause, Mr. Weber shall be entitled to the following: (i) base salary through date of termination, (ii) one year of severance pay at Mr. Weber's highest salary, (iii) an amount equal to the prior calendar year's bonus awarded to Mr. Weber, (iv) immediate vesting of all unvested stock options held by Mr. Weber, and the continuation of the exercise period of all

stock options held by Mr. Weber until the final expiration of the original term of such stock options, and (v) continued receipt for one year of all employee benefit plans and programs in which Mr. Weber and his family were entitled to participate immediately prior to the date of termination. Currently, Mr. Weber's annual base salary is \$235,000. Assuming that Mr. Weber was terminated effective December 31, 2009, he would be entitled to receive an amount equal to his base salary of \$235,000, an amount equal to his 2009 discretionary cash bonus of \$0, the acceleration of the vesting of 41,962 shares of common stock subject to outstanding unvested stock options as of December 31, 2009 with an aggregate value equal to \$0 (based on the spread between the closing price of our common stock on December 31, 2009 of \$0.53 and the exercise price of the stock options) and continued employee benefits for he and his family for one year following such termination at an estimated aggregate cost of \$14,300. Under Mr. Weber's employment agreement, voluntary termination due to "change in duties" or "change of control of the company" will be considered the same as termination for any reason other than cause and shall entitle Mr. Weber to receive the same benefits described above.

### Equity Compensation Plan Information

The following table provides information as of December 31, 2009, with respect to all of our compensation plans under which we are authorized to issue our equity securities.

| Plan Category   | (a) Number of securities to be issued upon exercise of outstanding options, warrants and rights | (b) Weighted-average exercise price of outstanding options, warrants and rights | (c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) |
|---|---|---|---|
| Stock option equity compensation plans approved by security holders     | 3,319,188   | \$5.60  | 5,557,014   |
| Stock option equity compensation plans not approved by security holders | --  | --  | --  |
| Warrant equity compensation plans not approved by security holders      | 50,000  | \$5.52  | --  |

Our equity compensation plans and arrangements adopted without the approval of securities holders that were in effect as of December 31, 2009, and the material features of such plans and arrangements, are described in Note 9 ("Stock Options – Non-Plan Options") and Note 10 ("Common Stock Purchase Warrants") in the Notes to Financial Statements included in our Annual Report on Form 10-K, for the year ended December 31, 2009.

### POLICIES AND PROCEDURES WITH RESPECT TO RELATED PARTY TRANSACTIONS

In December 2007, we adopted a written Related-Person Transactions Policy that sets forth our policies and procedures regarding the identification, review, consideration and approval or ratification of "related-persons transactions." For purposes of our policy only, a "related-person transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which Harbor BioSciences and

any “related person” are participants involving an amount that exceeds \$120,000. Transactions involving compensation for services provided to us as an employee or director by a related person are not covered by this policy. A related person is any executive officer, director, or more than 5% stockholder of Harbor BioSciences, including any of their immediate family members, and any entity owned or controlled by such persons.

Under the policy, where a transaction has been identified as a related-person transaction, management must present information regarding the proposed related-person transaction to the Audit Committee (or, where Audit Committee approval would be inappropriate, to another independent body of the board) for consideration and approval or ratification and provide all information available to it which is material to the review and consideration of such transaction. In considering related-person transactions, the Audit Committee takes into account the relevant available facts and circumstances including, but not limited to (a) the risks, costs and benefits to Harbor BioSciences, (b) the impact on a director’s independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated, (c) the terms of the transaction, (d) the availability of other sources for comparable services or products and (e) the terms available to or from, as the case may be, unrelated third parties or to or from employees generally. In the event a director has an interest in the proposed transaction, the director must recuse himself or herself from the deliberations and approval. The policy requires that, in determining whether to approve or ratify a related-person transaction, the Audit Committee look at, in light of known circumstances, whether the transaction is, or is not inconsistent with, the best interests of Harbor BioSciences and its stockholders, as the Audit Committee determines in the good faith exercise of its discretion.

#### **CERTAIN TRANSACTIONS**

Dr. James Frincke’s wife serves as our director of accounting. She earned \$109,828 in base salary during fiscal year 2009 and received no stock option grants in 2009.

In September 2007, Dr. Merigan, one of our former directors, was granted an additional stock option to purchase up to 75,000 shares of our common stock, at an exercise price of \$2.14 per share, under the 2005 Directors’ Plan. One-third of the total shares subject to this stock option award vest and become exercisable on the first anniversary of the date of grant; thereafter 1/24th of the total remaining shares shall vest in equal monthly installments over the next two years subject to Dr. Merigan’s continued service to the Company. In addition, in September 2007, the board of directors approved an extension of the expiration date of the exercise period for an existing fully vested and exercisable stock option granted to Dr. Merigan, from February 25, 2008, to February 25, 2013, resulting in the deemed cancellation of the original stock option and the grant of a replacement stock option under the 2005 Equity Plan. Dr. Merigan was originally granted this option grant to purchase a total of 125,000 shares of our common stock with an exercise price of \$2.25 per share in March 1996, for consulting services. In February 2003, this stock option grant expired and we issued a new stock option grant to Dr. Merigan to purchase a total of 125,000 shares of our common stock with an exercise price below market of \$2.25. An accounting charge was booked by the Company at the time of the grant of this option grant. Dr. Merigan resigned from our board of directors effective March 29, 2009.

In February 2003, Mr. Weber, our Chief Financial Officer was granted a fully vested and exercisable stock option to purchase a total of 40,000 shares of our common stock with an exercise price of \$2.25 per share with a five year exercise period expiring February 25, 2008. In January 2008, the compensation committee of our board of directors approved the extension of the expiration date of the exercise period for the remaining 30,350 shares underlying this stock option from February 25, 2008, to February 25, 2013, resulting in the deemed cancellation of the original stock option and the grant of a replacement stock option.

#### **HOUSEHOLDING OF PROXY MATERIALS**

The Securities and Exchange Commission has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for proxy statements and annual reports with respect to two or more stockholders sharing the same address by delivering a single proxy statement addressed to those stockholders. This process, which is commonly referred to as “householding,” potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are our stockholders will be “householding” our proxy materials. A single proxy statement will be delivered to multiple stockholders sharing an address unless contrary

instructions have been received from one or more the affected stockholders. Once you have received notice from your broker that they will be “householding” communications to your address, “householding” will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in “householding” and would prefer to receive a separate proxy statement and annual report, please notify your broker.

Stockholders who currently receive multiple copies of the proxy statement at their address and would like to request “householding” of their communications should contact their broker.

#### **OTHER MATTERS**

As of the time of preparation of this proxy statement, neither our board of directors nor management intends to bring before the meeting any other matters or business other than the matters referred to in the Notice of Annual Meeting and this proxy statement. If any other matters or business are properly brought before the meeting, or any adjournment thereof, it is the intention of the persons named in the accompanying proxy to vote on such matters in accordance with their best judgment.

By Order of the Board of Directors

SALVATORE J. ZIZZA  
Chairman of the Board

April 21, 2010

**A COPY OF OUR ANNUAL REPORT TO THE SECURITIES AND EXCHANGE COMMISSION ON FORM 10-K, FOR THE FISCAL YEAR ENDED DECEMBER 31, 2009 IS AVAILABLE WITHOUT CHARGE UPON WRITTEN REQUEST TO: CORPORATE SECRETARY, HARBOR BIOSCIENCES, INC., 4435 EASTGATE MALL, SUITE 400, SAN DIEGO, CALIFORNIA 92121.**

HARBOR BIOSCIENCES, INC.

PROXY SOLICITED BY THE BOARD OF DIRECTORS  
FOR THE ANNUAL MEETING OF STOCKHOLDERS TO BE HELD ON MAY 27, 2010

The undersigned hereby appoints James M. Frincke and Robert W. Weber, and each of them, as attorneys and proxies of the undersigned, with full power of substitution, to vote all of the shares of stock of Harbor BioSciences, Inc. (the "Company"), which the undersigned may be entitled to vote at the Annual Meeting of Stockholders of the Company to be held at the Stradling Yocca Carlson & Rauth, 4365 Executive Drive, Suite 1500, San Diego, California 92121, on Thursday, May 27, 2010, at 10:00 a.m., local time, and at any and all continuations, adjournments or postponements thereof, with all powers that the undersigned would possess if personally present, upon and in respect of the following matters and in accordance with the following instructions, with discretionary authority as to any and all other matters that may properly come before the meeting.

**UNLESS A CONTRARY DIRECTION IS INDICATED, THIS PROXY WILL BE VOTED FOR ALL NOMINEES LISTED IN PROPOSAL 1 AND FOR PROPOSALS 2 AND 3, AS MORE SPECIFICALLY DESCRIBED IN THE PROXY STATEMENT. IF SPECIFIC INSTRUCTIONS ARE INDICATED, THIS PROXY WILL BE VOTED IN ACCORDANCE THEREWITH.**

*(Continued on other side)*

---

**Please Detach and Mail in the Envelope Provided**

Please mark your votes as in this example.

**MANAGEMENT RECOMMENDS A VOTE FOR THE NOMINEES FOR  
DIRECTOR LISTED BELOW AND FOR PROPOSAL 2.**

Proposal 1. To elect two Class I directors to hold office until the 2013 Annual Meeting of Stockholders and until their successors are elected.

FOR the nominees listed at right (except as marked to the contrary below)  Nominees: Jerome M. Hauer  
Marc R. Sarni

WITHHOLD AUTHORITY to vote for the nominee listed at right

To withhold authority to vote for any nominee(s), write such nominee(s)' name(s) below

Proposal 2. To approve the amendment to the Company's Restated Certificate of Incorporation, as amended, to increase the Company's authorized number of shares of Common Stock.

FOR                      AGAINST                      ABSTAIN  
                                                                           

Proposal 3. To ratify the selection of BDO Seidman LLP as the independent registered public accounting firm of the Company for its fiscal year ending December 31, 2010.

FOR                      AGAINST                      ABSTAIN  
                                                                           

**Please vote, date and promptly return this proxy in the enclosed envelope which is postage prepaid if mailed in the United States.**

Signature(s) \_\_\_\_\_ DATED \_\_\_\_\_  
Name of stockholder (if other than individual)

NOTE: Please sign exactly as your name appears hereon. If stock is registered in the names of two or more persons, each should sign. Executors, administrators, trustees, guardians and attorneys-in-fact should add their titles. If signer is a corporation, please give full corporate name and have a duly authorized officer sign, stating title. If signer is a partnership, please sign in partnership name by authorized person.