

CEMPRA, INC.
6320 Quadrangle Drive, Suite 360
Chapel Hill, North Carolina 27517

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS
TO BE HELD MAY 20, 2014

TO THE SHAREHOLDERS OF
CEMPRA, INC.

The 2014 annual meeting of shareholders of Cemptra, Inc. will be held at our corporate headquarters, 6320 Quadrangle Drive, Suite 360, Chapel Hill, North Carolina 27517, on May 20, 2014, at 4:00 p.m. Eastern time, for the following purposes:

1. To elect 3 Class III directors for a three-year term expiring in 2017;
2. To ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2014; and
3. To act upon such other matters as may properly come before the meeting or any adjournment thereof.

These matters are more fully described in the proxy statement accompanying this notice.

The Board has fixed the close of business on March 31, 2014 as the record date for the determination of shareholders entitled to notice of and to vote at the meeting or any adjournment thereof. A list of shareholders eligible to vote at the meeting will be available for review during our regular business hours at our principal offices in Chapel Hill, North Carolina for the ten days prior to the meeting for review for any purposes related to the meeting.

Our shareholders are cordially invited to attend the meeting in person. However, to assure your representation at the meeting, you are urged to vote by proxy by following the instructions contained in the accompanying proxy statement. You may revoke your proxy in the manner described in the proxy statement at any time before it has been voted at the meeting. Any shareholder attending the meeting may vote in person even if he or she has returned a proxy. **Your vote is important. Whether or not you plan to attend the annual meeting, we hope that you will vote as soon as possible.**

Our proxy statement and proxy are enclosed, along with our 2013 Annual Report, which includes our Annual Report on Form 10-K for the fiscal year ended December 31, 2013, as filed with the Securities and Exchange Commission.

Chapel Hill, North Carolina
Dated: April 18, 2014

By Order of the Board of Directors



Shane Barton
Secretary

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE 2014 ANNUAL MEETING OF SHAREHOLDERS TO BE HELD ON MAY 20, 2014: This proxy statement and our 2013 Annual Report to Shareholders are available at: www.cemptra.com.

CEMPRA, INC.
6320 Quadrangle Drive, Suite 360
Chapel Hill, North Carolina 27517

PROXY STATEMENT
ANNUAL MEETING OF SHAREHOLDERS
MAY 20, 2014

This proxy statement has been prepared by the management of Cempra, Inc. “We,” “our” and the “Company” each refers to Cempra, Inc.

In addition to soliciting proxies by mail, we are furnishing proxy materials, including the notice, proxy statement, electronic proxy card for the meeting and 2013 Annual Report to shareholders, including financial statements, by providing access to them on the internet. These materials were first available on the internet on or about April 18, 2014. The proxy statement contains instructions for accessing and reviewing our proxy materials on the internet and for voting by proxy over the internet. We mailed copies of the proxy materials on or about April 18, 2014 to our shareholders of record and beneficial owners as of March 31, 2014, the record date for the meeting.

GENERAL INFORMATION ABOUT VOTING

Who Can Vote

You are entitled to attend the meeting and vote your common stock if you held shares as of the close of business on March 31, 2014. At the close of business on March 31, 2014, a total of 33,200,341 shares of common stock were outstanding and entitled to vote. Each share of common stock has one vote.

Voting by Proxies

If your common stock is held by a broker, bank or other nominee, they should send you instructions that you must follow in order to have your shares voted. If you hold shares in your own name, you may vote by proxy in any one of the following ways:

- via the internet by accessing the proxy materials on the secure website, www.investorvote.com, and following the voting instructions on that website;
- via telephone by calling toll free 1-800-652-8683 in the United States or 1-800-962-4284 outside the United States and following the recorded instructions; or
- by requesting printed copies of the proxy materials be mailed to you and completing, dating, signing and returning the proxy card that you receive in response to your request.

The internet and telephone voting procedures are designed to authenticate shareholders’ identities by use of a control number to allow shareholders to vote their shares and to confirm that shareholders’ instructions have been properly recorded. Voting via the internet or telephone must be completed by 11:59 p.m. local time on May 19, 2014. Of course, you can always come to the meeting and vote your shares in person. If you submit or return a proxy card without giving specific voting instructions, your shares will be voted as recommended by our Board.

We are not aware of any other matters to be presented at the meeting except for those described in this proxy statement. If any matters not described in this proxy statement are presented at the meeting, the proxies will use their own judgment to determine how to vote your shares. If the meeting is adjourned, the proxies may vote your shares on the new meeting date as well, unless you revoke your proxy instructions before then.

Revoking Your Proxy Instructions

If you are a shareholder of record, you can revoke your proxy before your shares are voted at the meeting by:

- Filing a written notice of revocation bearing a later date than the proxy with our Corporate Secretary at 6320 Quadrangle Drive, Suite 360, Chapel Hill, North Carolina 27517 at or before the taking of the vote at the meeting;
- Duly executing a later-dated proxy relating to the same shares and delivering it to our Corporate Secretary at 6320 Quadrangle Drive, Suite 360, Chapel Hill, North Carolina 27517 at or before the taking of the vote at the meeting; or
- Attending the meeting and voting in person (although attendance at the meeting will not in and of itself constitute a revocation of a proxy).

If you are a beneficial owner of shares held in street name, you may submit new voting instructions by contacting your bank, broker, nominee or trustee. You may also vote in person at the meeting if you obtain a legal proxy from them.

Counting Votes

Consistent with state law and our bylaws, the presence, in person or by proxy, of at least a majority of the shares entitled to vote at the meeting will constitute a quorum for purposes of voting on a particular matter at the meeting. Once a share is represented for any purpose at the meeting, it is deemed present for quorum purposes for the remainder of the meeting and any adjournment thereof unless a new record date is set for the adjournment. Shares held of record by shareholders or their nominees who do not vote by proxy or attend the meeting in person will not be considered present or represented and will not be counted in determining the presence of a quorum. Signed proxies that withhold authority or reflect abstentions or “broker non-votes” will be counted for purposes of determining whether a quorum is present. “Broker non-votes” are proxies received from brokerage firms or other nominees holding shares on behalf of their clients who have not been given specific voting instructions from their clients with respect to non-routine matters.

Assuming the presence of a quorum at the meeting:

- The election of directors will be determined by a plurality of the votes cast at the meeting. This means that the two nominees receiving the highest number of “FOR” votes will be elected as directors. Withheld votes and broker non-votes, if any, are not treated as votes cast, and therefore will have no effect on the proposal to elect directors.
- The approval of the ratification of the appointment of our independent registered public accounting firm requires the affirmative vote of a majority of the votes cast at the meeting. Abstentions and broker non-votes are not treated as votes cast, and therefore will have no effect on the proposal. Further, because your vote on the ratification of the appointment of our independent registered public accounting firm is advisory, it will not be binding on our Board or our company. However, the Board and the Audit Committee will consider the outcome of the vote when making future decisions regarding the selection of our independent registered public accounting firm.

With respect to “routine” matters, such as the ratification of the selection of our independent registered public accounting firm, a bank, brokerage firm, or other nominee has the authority (but is not required) under the rules governing self-regulatory organizations, or SRO rules, including NASDAQ, to vote its clients’ shares if the clients do not provide instructions. When a bank, brokerage firm, or other nominee votes its clients’ shares on routine matters without receiving voting instructions, these shares are counted both for establishing a quorum to conduct business at the meeting and in determining the number of shares voted FOR, AGAINST or ABSTAINING with respect to such routine matters.

With respect to “non-routine” matters, such as the election of directors, a bank, brokerage firm, or other nominee is not permitted under the SRO rules to vote its clients’ shares if the clients do not provide instructions. The bank, brokerage firm, or other nominee will so note on the voting instruction form, and this constitutes a “broker non-vote.” “Broker non-votes” will be counted for purposes of establishing a quorum to conduct business at the meeting, but not for determining the number of shares voted FOR, AGAINST, ABSTAINING or WITHHELD FROM with respect to such non-routine matters.

In summary, if you do not vote your proxy, your bank, brokerage firm, or other nominee may either:

- vote your shares on routine matters and cast a “broker non-vote” on non-routine matters; or
- leave your shares unvoted altogether.

We encourage you to provide instructions to your bank, brokerage firm, or other nominee by voting your proxy. This action ensures that your shares will be voted in accordance with your wishes at the meeting.

Cost of this Proxy Solicitation

We will pay the cost of this proxy solicitation. You will need to obtain your own internet access if you choose to access the proxy materials and/or vote over the internet. In addition to soliciting proxies by mail, our employees might solicit proxies personally and by telephone. None of these employees will receive any additional compensation for this. We did not, but may in the future, retain a proxy solicitor to assist in the solicitation of proxies for a fee. We will, upon request, reimburse brokers, banks and other nominees for their expenses in sending proxy materials to their principals and obtaining their proxies.

Attending the Annual Meeting

If you are a holder of record and plan to attend the annual meeting, please bring your proxy or a photo identification to confirm your identity. If you are a beneficial owner of common stock held by a bank or broker, i.e., in “street name,” you will need proof of ownership to be admitted to the meeting. A recent brokerage statement or letter from a bank or broker are examples of proof of ownership. If you want to vote in person your common stock held in street name, you must get a proxy in your name from the registered holder.

PROPOSAL NO. 1—ELECTION OF DIRECTORS

Our bylaws currently provide that the number of directors constituting the Board shall be not less than five nor more than nine. The Board may establish the number of directors within this range. There are eight directors presently serving on our Board, and the number of directors to be elected at this annual meeting is three.

Our Board is divided into three classes, each class as nearly equal in number as practicable. Each year, one class is elected to serve for three years. At our annual meeting, three Class III directors will be elected for a term of three years, expiring in 2017, or until their successors are elected and qualified. The Class III directors standing for re-election in 2014 and their respective biographical summaries are listed below:

Vote Required

Directors are elected by a plurality of the votes cast at the annual meeting. This means that the three Class III nominees receiving the highest number of votes will be elected.

Voting by the Proxies

The proxies will vote your common stock in accordance with your instructions. If you are a shareholder of record, unless you mark your proxy card to withhold authority to vote, your common stock will be voted for the election of the nominees named in this proxy statement. Each nominee has agreed to serve and we expect that each of the nominees will be able to serve if elected. However, if any nominee is unavailable for election, the proxies may vote your common stock to elect a substitute nominee proposed by the Board.

If you are a beneficial owner of shares held in street name and you do not provide your broker with voting instructions, under the SRO rules governing brokers, your broker may not vote your shares on the election of directors.

Nominees

The Board proposes the three Class III nominees listed below for election to the Board for a three-year term. The Board has determined that Richard Kent, M.D., Garheng Kong, M.D., Ph.D., and P. Sherrill Neff are independent as defined in Rule 5605(a)(2) of the NASDAQ Marketplace Rules. In addition to the specific bars to independence set forth in that rule, we also consider whether a director or his or her affiliates have provided any services to, worked for or received any compensation from us or any of our subsidiaries in the past three years in particular. In addition, none of the nominees is related by blood, marriage or adoption to any other nominee or any of our executive officers.

Name	Age	Director Since	Position(s) with Cemptra
Class III Directors with Terms Expiring in 2014			
Richard Kent, M.D.	64	September 2010	Director
Garheng Kong, M.D., Ph.D.	38	September 2006	Chairman of the Board of Directors
P. Sherrill Neff	62	September 2011	Director

Class III Director Nominees

Richard Kent, M.D. – Dr. Kent has served on our Board since September 2010. Beginning in 2010, Dr. Kent became a full partner at Intersouth Partners, a venture capital firm. He was a venture partner at Intersouth Partners from 2008 to 2010. From 2002 to 2008, Dr. Kent was the President and Chief Executive Officer of Serenex, Inc., a drug development company, when it was acquired by Pfizer Inc. From 2001 until he joined Serenex, Dr. Kent was President and Chief Executive Officer of Ardent Pharmaceuticals, Inc. Before that, he held senior executive positions at GlaxoSmithKline plc., where he was Senior Vice President of Global Medical Affairs and Chief Medical Officer, at Glaxo Wellcome plc., where he was Vice President of U.S. Medical Affairs and Group Medical

Director, and at Burroughs Wellcome plc., where he was International Director of Medical Research. Dr. Kent currently serves as a director of Cytomedix, Inc., a publicly traded biopharmaceutical company, and served as a director of Inspire Pharmaceuticals, Inc. from 2004 to 2011. He also serves on the boards of several private companies. Dr. Kent holds a B.A. from the University of California, Berkley and an M.D. from the University of California, San Diego. Among other experience, qualifications, attributes and skills, Dr. Kent’s knowledge and experience in the securities and investments industry and leadership roles in the pharmaceutical industry led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.

Garheng Kong, M.D., Ph.D. – Dr. Kong has served on our Board since September 2006 and as Chairman of our Board since November 2008. Dr. Kong has been the Managing Partner of Sofinnova Healthquest, a healthcare investment firm, since July 2013. He was a general partner at Sofinnova Ventures, a venture firm focused on life sciences, from September 2010 to December 2013. From 2000 to September 2010, he was at Intersouth Partners, a venture capital firm, most recently as a general partner, where he was a founding investor or board member for various life sciences ventures, several of which were acquired by large pharmaceutical companies. Dr. Kong has also served on the board of directors of Alimera Sciences, Inc., a NASDAQ-listed biopharmaceutical company, since October 2012, and has served on the board of Laboratory Corporation of America Holdings, a NYSE-listed healthcare company, since December 2013. Dr. Kong holds a B.S. from Stanford University. He holds an M.D., Ph.D. and M.B.A. from Duke University. Among other experience, qualifications, attributes and skills, Dr. Kong’s knowledge and experience in the venture capital industry and his medical training led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.

P. Sherrill Neff – Mr. Neff has served on our Board since September 2011. Mr. Neff founded Quaker Partners Management, L.P. in 2002 and has since served as a partner at the investment firm. From 1994 to 2002, Mr. Neff was President and Chief Operating Officer of Neose Technologies, Inc., a biopharmaceutical company, and a director from 1994 to 2003. From 1993 to 1994, he was Senior Vice President, Corporate Development at U.S. Healthcare. Prior to that time, Mr. Neff was managing director at investment bank Alex.Brown & Sons for nine years. Mr. Neff holds a B.A. from Wesleyan University and a J.D. from the University of Michigan Law School. Mr. Neff serves on the board of directors of Resource Capital Corporation, (NYSE: RSO), a publicly traded real estate investment trust, and Regado Biosciences, Inc. (NASDAQ; RGDO), as well as several privately held organizations including Neuronetics, Inc., Intact Vascular, Inc. and RainDance Technologies, Inc. Mr. Neff also served on the board of directors of Amicus Therapeutics, Inc. from 1996 until 2011. Mr. Neff has served on the board of directors of the National Venture Capital Association since 2009. Among other experience, qualifications, attributes and skills, Mr. Neff’s experience in the venture capital industry led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.

Recommendation

The Board unanimously recommends that shareholders vote **FOR** the election of the three Class III nominees for election to the Board for a three-year term.

Other Directors Not Up for Re-election at this Meeting

<u>Name</u>	<u>Age</u>	<u>Director Since</u>	<u>Position(s) with Cemptra</u>
Class I Directors with Terms Expiring in 2015			
Michael R. Dougherty	56	May 2013	Director
Prabhavathi Fernandes, Ph.D.	65	November 2005	Director, President and Chief Executive Officer
David Gill	59	April 2012	Director
Class II Directors with Terms Expiring in 2016			
Dov Goldstein, M.D.	46	January 2008	Director
John H. Johnson	55	June 2009	Director

Michael R. Dougherty – Mr. Dougherty joined our Board in 2013. Mr. Dougherty was Chief Executive Officer, and Member of the Board of Directors, of Kalidex Pharmaceuticals, Inc. from May 2012 to October 2012. Mr. Dougherty was the President and Chief Executive Officer of Adolor Corp. and a member of the Board of Directors of Adolor from December 2006 until December 2011. Mr. Dougherty joined Adolor as Senior Vice President of Commercial Operations in November 2002, and until his appointment as President and Chief Executive Officer in December 2006, served in a number of capacities, including Chief Operating Officer and Chief Financial Officer. From November 2000 to November 2002, Mr. Dougherty was President and Chief Operating Officer of Genomics Collaborative, Inc., a privately held functional genomics company. Previously, Mr. Dougherty served in a variety of senior positions at Genaera Corporation, formerly Magainin Pharmaceuticals Inc., a publicly-traded biotechnology company, including as President and Chief Executive Officer, as well as a director, and at Centocor, Inc., a publicly-traded biotechnology company, including as Senior Vice President and Chief Financial Officer. Mr. Dougherty is currently on the board of directors of Biota Pharmaceuticals, Inc. (NASDAQ; BOTA), Trevena, Inc. (NASDAQ; TRVN) and Celator Pharmaceuticals, Inc. (NASDAQ; CPXX) and one private company. Mr. Dougherty was a member of the board of directors of Viropharma Incorporated (NASDAQ; VPHM) from January 2004 to January 2014 when it was acquired by Shire Plc. Mr. Dougherty received a B.S. from Villanova University. Among other experience, qualifications, attributes and skills, Mr. Dougherty's leadership roles in small and large pharmaceutical organizations led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.

Prabhavathi Fernandes, Ph.D. - Dr. Fernandes, one of our founders, has been our President and Chief Executive Officer and a member of our Board since our founding in November 2005. Prior to that, she was President and Chief Executive Officer of several privately held companies, including DarPharma, Inc. from 2003 to 2005, Ricerca Biosciences from 2000 to 2003 and Small Molecule Therapeutics from 1998 to 2000. Dr. Fernandes was Vice President, Drug Discovery of Bristol-Myers Squibb Company from 1988 to 1998, Senior Director of Squibb Pharmaceutical Research Institute from 1987 to 1988, Senior Project Leader of Abbott Laboratories from 1983 to 1987 and Senior Microbiologist of the Squibb Institute for Medical Research, the research division of E.R. Squibb and Sons, from 1980 to 1983. She has served on the advisory board of Optimer Pharmaceuticals, Inc. since 2004 and the supervisory board of GPC Biotech AG from 2004 to 2008. Dr. Fernandes served on the product development working group for Biodefense for the National Institute of Allergy and Infectious Diseases from 2003 to 2004 and the U.S. Congressional Panel for Assessment of Impact of Antibiotic Resistant Bacteria and the American Society for Microbiology Advisory Panel for Antibiotic Resistance from 1991 to 1995. Dr. Fernandes holds a B.S. in botany, zoology and chemistry from the University of Bangalore (India), an M.S. in microbiology from the Christian Medical College (India) and a Ph.D. in microbiology from Thomas Jefferson University, Philadelphia, Pennsylvania. Among other experience, qualifications, attributes and skills, Dr. Fernandes' experience in senior leadership roles in small and large pharmaceutical organizations and her position as President and Chief Executive Officer of our company led to the conclusion of our Board that she should serve as a director of our company in light of our business and structure.

David Gill – Mr. Gill joined our Board in April 2012. He served as the Chief Financial Officer of INC Research, a clinical research organization, from February 2011 to August 2013, and served as a board member and audit committee chairman of INC Research from 2007 to 2010. From March 2009 to February 2011, Mr. Gill was the Chief Financial Officer of TransEnterix, a then private medical device company. From July 2005 to November 2006, Mr. Gill was Chief Financial Officer and Treasurer of NxStage Medical, Inc., a publicly traded dialysis equipment company. From 2006 to 2011, he served on several public and private company boards of directors, including those of LeMaitre Vascular (LMAT), a publicly traded medical device company, and IsoTis, Inc. (NASDAQ: ISOT), a publicly traded orthobiologics company that was acquired by Integra LifeSciences Holdings Corporation in October 2007. From January 2002 to May 2005, Mr. Gill served as Senior Vice President and Chief Financial Officer of CTI Molecular Imaging, Inc., a publicly traded medical imaging company, until its sale to Siemens AG. Mr. Gill has led initial public offerings for three companies and has raised more than \$500 million in equity and \$600 million in debt over his career. Mr. Gill holds a B.S. degree, cum laude, in Accountancy from Wake Forest University and an M.B.A. degree, with honors, from Emory University. Mr. Gill was formerly a certified public accountant. Among other experience, qualifications, attributes and skills, Mr. Gill's education and experience in accounting and finance, and his service as an officer and as a director of various publicly traded

companies led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.

Dov A. Goldstein, M.D. – Dr. Goldstein has served on our Board since January 2008. He has been a partner at Aisling Capital, a private investment firm, since 2008. From 2006 to 2008, he was a Principal at Aisling Capital. From 2000 to 2005, Dr. Goldstein was Chief Financial Officer of Vicuron Pharmaceuticals, Inc. (NASDAQ: MICU) (acquired by Pfizer Inc.). From 1998 to 2000, Dr. Goldstein was Director of Venture Analysis at HealthCare Ventures, a privately held investment fund. Dr. Goldstein serves on the board of directors of several publicly reporting pharmaceutical companies, namely ADMA Biologics, Inc. (OTCQB; ADMA) and Esperion Therapeutics, Inc. (NASDAQ: ESPR). Dr. Goldstein also is a director of Loxo Oncology, Inc., a privately held company. He holds a B.S. in biology from Stanford University, an M.D. from the Yale School of Medicine and an M.B.A. from the Columbia Business School. Among other experience, qualifications, attributes and skills, Dr. Goldstein’s knowledge and experience in the pharmaceutical industry and venture capital industry led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.

John H. Johnson – Mr. Johnson has served on our Board since June 2009. He has served as President and Chief Executive Officer of Dendreon Corp., a publicly traded biotechnology company (NASDAQ: DNDNJ), since February 2012, and became Chairman in July 2013. He served as the Chief Executive Officer and as a director of Savient Pharmaceuticals, Inc., a company that develops and commercializes specialty pharmaceuticals, from 2011 to January 2012. Mr. Johnson was Senior Vice President of Eli Lilly and Company and President of Lilly Oncology, Eli Lilly’s oncology business unit, from 2009 to 2011. From 2007 to 2009, Mr. Johnson was Chief Executive Officer of ImClone Systems Incorporated, a biopharmaceutical development company, and was also a member of ImClone’s board of directors until it became a wholly owned subsidiary of Eli Lilly in 2008. From 2001 to 2007, Mr. Johnson served as company group chairman of Johnson & Johnson’s Worldwide Biopharmaceuticals unit. Mr. Johnson also serves as Chairman of the Board of Tranzyme, Inc. (NASDAQ: TZYM), a publicly traded biopharmaceutical company. Mr. Johnson holds a B.S. in Education from East Stroudsburg University of Pennsylvania. Among other experience, qualifications, attributes and skills, Mr. Johnson’s leadership roles in large pharmaceutical organizations led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.

CORPORATE GOVERNANCE

Information About the Board of Directors and its Committees

Board Composition

Our Board currently consists of eight members. Our certificate of incorporation and bylaws provide for a classified board of directors, consisting of three classes as follows:

- Class I, which consists of Mr. Dougherty, Dr. Fernandes and Mr. Gill, and whose terms will expire at our 2015 annual meeting;
- Class II, which consists of Dr. Goldstein and Mr. Johnson, and whose terms will expire at our 2016 annual meeting; and
- Class III, which consists of Dr. Kent, Dr. Kong and Mr. Neff, and whose terms expire at the annual meeting.

Directors elected at this meeting and each subsequent annual meeting will be elected for three-year terms or until their successors are duly elected and qualified.

We have historically separated the position of Chairman, currently independent director Garheng Kong, M.D., Ph.D., and that of Chief Executive Officer, currently Prabhavathi Fernandes, Ph.D. While the Board believes that separation of these positions has served our company well, and intends to maintain this separation where appropriate and practicable, the Board does not believe that it is appropriate to prohibit one person from serving as both Chairman and Chief Executive Officer.

Selection of Nominees for our Board of Directors

To be considered as a director nominee, an individual must have, among other attributes: high personal and professional ethics, integrity and values; commitment to our company and its shareholders; an inquisitive and objective perspective and mature judgment; availability to perform all Board and committee responsibilities; and independence. In addition to these minimum requirements, the Nominating and Governance Committee will also evaluate whether the nominee's skills are complementary to the existing directors' skills and the Board's need for operational, management, financial, international, industry-specific or other expertise. We do not have a specific written policy with regard to the consideration of diversity in identifying director nominees. We focus on identifying nominees with experience, qualifications, attributes and skills to work with the other directors to serve the long-term interests of our shareholders. All those matters being equal, we do and will consider diversity a positive additional characteristic in potential nominees.

The Nominating and Governance Committee invites Board members to submit nominations for director. In addition to candidates submitted by Board members, director nominees recommended by shareholders will be considered. Shareholder recommendations must be made in accordance with the procedures described in the following paragraph and will receive the same consideration that other nominees receive. All nominees are evaluated by the Nominating and Governance Committee to determine whether they meet the minimum qualifications and whether they will satisfy the Board's needs for specific expertise at that time. The Committee recommends to the full Board nominees for election as directors at our annual meeting of shareholders.

Our bylaws permit any shareholder of record to nominate directors. You must give written notice of your intent to make nominations by personal delivery or by certified mail, postage prepaid, to our Secretary. Any such timely notice will be forwarded to the Nominating and Governance Committee. If the election is to be held at the annual meeting of shareholders, you must give your notice not more than 90 days nor less than 60 days before the meeting. If the election is to be held at a special meeting of shareholders called to elect directors, you must give your notice by the tenth business day following the date on which notice of the special meeting is first given to shareholders. Your notice must include the following: (1) your name and address, as they appear on the our books, and the name and residence address of the persons to be nominated; (2) the class and number of shares which you beneficially own; (3) whether and the extent to which you have engaged in any hedging or other transaction or series of transactions, or any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares) has been made, the effect or intent of which is to mitigate loss to or manage risk or benefit of share price changes for you, or to increase or decrease your voting power with respect to any share of our stock; (4) a representation that you are a shareholder of record of our company entitled to vote at the meeting and intend to appear in person or by proxy to nominate the persons specified in your notice; (5) a description of all arrangements or understandings between you and each nominee and any other persons, by name, as to how you will make the nominations; (6) all other information regarding each nominee you propose which is required to be disclosed in a solicitation of proxies for election of directors or is required under Regulation 14A of the Securities Exchange Act of 1934, including any information required to be included in a proxy statement if the nominee had been nominated by the Board; and (7) the written consent of each nominee to be named in a proxy statement to serve as a director, if elected.

No shareholder has nominated anyone for election as a director at this annual meeting.

Board Committees

Our Board has established an Audit Committee, Compensation Committee and Nominating and Governance Committee. Our Audit Committee consists of Mr. Gill (Chair), Mr. Dougherty and Dr. Kong. Our Compensation Committee consists of Dr. Kong (Chair), Dr. Kent and Mr. Neff. Our Nominating and Governance Committee consists of Dr. Goldstein (Chair), Mr. Dougherty and Mr. Johnson.

Our Board has undertaken a review of the independence of our directors and has determined that all directors except Dr. Fernandes are independent within the meaning of Section 5605(a)(2) of the NASDAQ Marketplace Rules and that Mr. Dougherty, Dr. Kong and Mr. Gill meet the additional test for independence for audit committee members imposed by Securities and Exchange Commission, or SEC, regulation and Section 5605(c)(2)(A) of the

NASDAQ Marketplace Rules. The members of our Compensation Committee are all independent within the meaning of Section 5606(a)(2) of the NASDAQ Marketplace Rules.

Each of the above-referenced committees operates pursuant to a formal written charter. The charters for each committee, which have been adopted by our Board, contain a detailed description of the respective committee's duties and responsibilities and are available on our website at www.cempra.com under the "Investor Relations—Corporate Governance" tab.

Audit Committee

The primary purpose of our Audit Committee is to assist the Board in the oversight of the integrity of our accounting and financial reporting process, the audits of our consolidated financial statements, and our compliance with legal and regulatory requirements. The Audit Committee is responsible for hiring the independent registered public accounting firm, reviewing and approving the planned scope of the annual audit and pre-approving all audit services and permissible non-audit services provided by our independent registered public accounting firm. Its role also includes meeting with management and our independent registered public accounting firm to review our annual audited financial statements and quarterly financial statements. The Audit Committee monitors the integrity of our financial statements, the performance of our internal audit function and our compliance with regulatory and legal requirements.

Compensation Committee

The primary purpose of our Compensation Committee is to assist our Board in exercising its responsibilities relating to compensation of our executive officers and employees and to administer our equity compensation and other benefit plans. In carrying out these responsibilities, this committee reviews all components of executive officer and employee compensation for consistency with its compensation philosophy, as in effect from time to time. Our Compensation Committee is responsible for reviewing and recommending to our Board the compensation paid to directors, as well as designing and implementing compensation policies for our key personnel, including executive officers and employees. Finally, the Compensation Committee has the authority to obtain, at our expense, the advice and assistance of internal or external advisers, experts and others to assist the Committee.

Nominating and Governance Committee

The primary purpose of our Nominating and Governance Committee is to assist our Board in promoting the best interest of our company and our shareholders through the implementation of sound corporate governance principles and practices. The Nominating and Governance Committee is also responsible for identifying and evaluating candidates to serve on our Board, developing and recommending an annual self-evaluation process for our Board and overseeing the self-evaluation process.

Information Regarding Meetings of the Board and Committees

The business of our company is under the general oversight of our Board as provided by the laws of Delaware and our bylaws. During the fiscal year ended December 31, 2013, the Board held 12 meetings and also conducted business by written consent, the Audit Committee held six meetings, the Compensation Committee held three meetings and the Nominating and Governance Committee held two meetings. Each person who was a director during 2013 attended at least 75% of the Board meetings and the meetings of the committee on which he or she served.

We do not have a formal written policy with respect to Board members' attendance at our annual meetings of shareholders. To save on reimbursable travel expenses, only Dr. Fernandes attended our 2013 Annual Meeting of Shareholders.

Risk Oversight

Our Board is responsible for our company's risk oversight and has delegated that role to the Audit Committee. In fulfilling that role, the Audit Committee focuses on our general risk-management strategy, the most significant risks facing our company, and ensures that risk-mitigation strategies are implemented by management. The Compensation Committee oversees risks related to our compensation and benefit plans and policies to ensure sound pay practices that do not cause risks to arise that are reasonably likely to have a material adverse effect on our company. The Nominating and Governance Committee seeks to minimize risks related to governance structure by implementing sound corporate governance principles and practices. Each of the committees regularly reports to the full Board as appropriate on its efforts at risk oversight, and will report any matter that rises to the level of a material or enterprise-level risk.

**PROPOSAL NO. 2—RATIFICATION OF APPOINTMENT OF INDEPENDENT
REGISTERED PUBLIC ACCOUNTING FIRM**

Pursuant to its charter, the Audit Committee of our Board has appointed the firm PricewaterhouseCoopers LLP, Raleigh, North Carolina, to serve as our independent registered public accounting firm for the fiscal year ending December 31, 2014. While the Audit Committee is solely responsible for the appointment, compensation, retention and oversight of the independent registered public accounting firm, the Committee and the Board are requesting that the shareholders ratify this appointment. If the shareholders ratify this appointment, the Audit Committee, in its discretion, may appoint a different independent registered public accounting firm at any time during the year if it believes that doing so would be in the best interests of our shareholders. If the shareholders do not ratify this appointment, the Audit Committee may reconsider, but might not change, its appointment.

PricewaterhouseCoopers LLP, or PwC, has audited our financial statements annually since our formation in November 2005. Representatives of PwC are expected to be present at the annual meeting of shareholders with the opportunity to make a statement if they desire to do so and are expected to be available to respond to appropriate questions.

Vote Required

Ratification of the appointment of PwC as our independent registered public accounting firm requires the affirmative vote of a majority of the votes cast at the meeting.

Voting by the Proxies

The proxies will vote your common stock in accordance with your instructions. Unless you give specific instructions to the contrary, your common stock will be voted for the ratification of the appointment of PwC as our independent registered public accounting firm for the fiscal year ending December 31, 2014.

Recommendation

The Board unanimously recommends that shareholders vote **FOR** the ratification of the appointment of PwC as our independent registered public accounting firm for the fiscal year ending December 31, 2014.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Principal Shareholders

The following table shows the number of shares of our common stock beneficially owned as of March 31, 2014 by:

- each person known by us to own beneficially more than 5% of the outstanding shares of our common stock;
- each director and nominee for director;
- each of our executive officers named in the Summary Compensation Table below (the “Named Executive Officers”); and
- all of our current directors and executive officers as a group.

This table is based upon the information supplied by our Named Executive Officers, directors and principal shareholders and from Schedules 13D and 13G filed with the SEC. Except as indicated in footnotes to this table, the persons named in this table have sole voting and investment power with respect to all shares of common stock shown, and their address is c/o Cemptra, Inc., 6320 Quadrangle Drive, Suite 360, Chapel Hill, North Carolina 27517. As of March 31, 2014, we had 33,200,341 shares of common stock outstanding. Share ownership in each case also includes shares issuable upon exercise of outstanding options that can be exercised within 60 days after March 31, 2014 for purposes of computing the percentage of common stock owned by the person named. Options owned by a person are not included for purposes of computing the percentage owned by any other person.

Name and Address of Beneficial Owner	Number of shares beneficially owned	Percentage of shares beneficially owned
5% or greater shareholders:		
Intersouth Partners VI, L.P. and its affiliates ⁽¹⁾ 406 Blackwell Street, Suite 200 Durham, NC 27701	3,355,762	10.10%
Aisling Capital II, LP ⁽²⁾ 888 Seventh Avenue, 30th Floor New York, NY 10106	3,332,278	10.03%
Quaker BioVentures II, L.P. ⁽³⁾ Cira Centre 2929 Arch Street, Suite 325 Philadelphia, PA 19104	3,565,601	10.73%
Wasatch Advisors, Inc. ⁽⁴⁾ 505 Wakara Way Salt Lake City, UT 84108	3,037,774	9.15%
I. Wistar Morris, III and his affiliates ⁽⁵⁾ 234 Broughton Lane Villanova, PA 19085	1,768,238	5.32%
FMR LLC ⁽⁶⁾ 245 Summer Street Boston, MA 02210	1,920,932	5.79%

<u>Name and Address of Beneficial Owner</u>	<u>Number of shares beneficially owned</u>	<u>Percentage of shares beneficially owned</u>
Directors and Named Executive Officers:		
Richard Kent, M.D. ⁽⁷⁾	3,390,762	10.20%
Dov Goldstein, M.D. ⁽⁸⁾	3,367,278	10.13%
P. Sherrill Neff ⁽⁹⁾	3,600,601	10.83%
Prabhavathi Fernandes, Ph.D. ⁽¹⁰⁾	739,902	2.23%
Mark W. Hahn ⁽¹¹⁾	143,534	*
John H. Johnson ⁽¹²⁾	63,784	*
Garheng Kong, M.D., Ph.D. ⁽¹³⁾	68,985	*
David Gill ⁽¹⁴⁾	45,000	*
Michael R. Dougherty ⁽¹⁵⁾	30,000	*
All current executive officers and directors as a group (9 persons) ⁽¹⁶⁾	11,449,846	34.37%

* Less than 1%.

- (1) Includes (i) 1,970,728 shares of held by Intersouth Partners VI, L.P. and 1,345,558 shares held by Intersouth Partners VII, L.P. and (ii) 15,790 shares and 23,686 shares issuable upon the exercise of warrants held by Intersouth Partners VI, L.P. and Intersouth Partners VII, L.P., respectively. The shares directly held by Intersouth Partners VI, L.P. (“Intersouth VI”) are indirectly held by Intersouth Associates VI, LLC (“ISA VI”), as general partner of Intersouth VI, and each of the individual managing members of ISA VI. The individual managing members (collectively, the “ISA VI Member Managers”) of ISA VI are Mitch Mumma and Dennis Dougherty. ISA VI Member Managers may share voting and dispositive power over the shares directly held by Intersouth VI. The shares held directly by Intersouth Partners VII, L.P. (“Intersouth VII”) are indirectly held by Intersouth Associates VII, LLC (“ISA VII”), as general partner of Intersouth VII, and each of the individual managing members of ISA VII. The individual managing members (collectively, the “ISA VII Member Managers”) of ISA VII are Mitch Mumma and Dennis Dougherty.
- (2) Includes (i) 3,293,060 shares and (ii) 39,218 shares issuable upon the exercise of warrants. The shares directly held by Aisling Capital II, LP (“Aisling”) are indirectly held by Aisling Capital Partners, LP (“Aisling GP”), as general partner of Aisling, Aisling Capital Partners, LLC (“Aisling Partners”), as general partner of Aisling GP, and each of the individual managing members of Aisling Partners. The individual managing members (collectively, the “Aisling Managers”) of Aisling Partners are Dennis Purcell, Dr. Andrew Schiff and Steve Elms. Each of Aisling, Aisling GP and Aisling Partners may be deemed to have sole power to direct the voting and disposition of the shares directly held by Aisling. The Aisling Managers may share voting and dispositive power over the shares directly held by Aisling.
- (3) Includes (i) 3,262,154 shares and (ii) 38,447 shares issuable upon the exercise of warrants. The shares directly held by Quaker BioVentures II, L.P. (“Quaker BioVentures”) are indirectly held by Quaker BioVentures Capital II, L.P. (“Quaker Capital LP”), as general partner of Quaker BioVentures and Quaker BioVentures Capital II, LLC (“Quaker Capital LLC”), as general partner of Quaker Capital LP.
- (4) Based on information provided in a Schedule 13G/A filed by Wasatch Advisors, Inc. on February 13, 2014.

- (5) Includes (i) 744,533 shares held by I. Wistar Morris, III, 517,566 shares held by Martha Morris and 474,616 shares held by Cotswold Foundation, and (ii) 13,635 shares, 9,345 shares and 8,543 shares issuable upon the exercise of warrants held by Mr. Morris, Mrs. Morris and Cotswold Foundation, respectively. Mr. Morris is the spouse of Martha Morris and a trustee of Cotswold Foundation. Mr. Morris shares voting power with respect to the securities owned by Mrs. Morris and Cotswold Foundation. Mr. Morris disclaims beneficial ownership of the shares held by Mrs. Morris and Cotswold Foundation, except to the extent of any pecuniary interest therein.
- (6) Based on information provided in a Schedule 13G filed by FMR LLC on February 14, 2014. Edward C. Johnson 3d, the Chairman of FMR LLC, and his family members, directly or through trust, are parties to a shareholders' agreement and may be deemed, under the Investment Company Act of 1940, as amended, to form a controlling group with respect to FMR LLC.
- (7) Consists of (i) 35,000 shares that Dr. Kent has the right to acquire from us within 60 days of March 31, 2014 pursuant to the exercise of stock options, (ii) 1,970,728 shares held by Intersouth Partners VI, L.P., 1,345,558 shares held by Intersouth Partners VII, L.P. and (iii) 15,790 shares and 23,686 shares issuable upon the exercise of warrants held by Intersouth Partners VI, L.P. and Intersouth Partners VII, L.P., respectively. Dr. Kent, a member of our Board of Directors, is a partner of Intersouth Partners, the general partner of Intersouth Partners VI, L.P. and Intersouth Partners VII, L.P. Dr. Kent disclaims beneficial ownership of these shares held by Intersouth Partners VI, L.P. and Intersouth Partners VII, L.P., except to the extent of any pecuniary interest therein.
- (8) Consists of (i) 35,000 shares that Dr. Goldstein has the right to acquire from us within 60 days of March 31, 2014 pursuant to the exercise of stock options, (ii) 3,293,060 shares held by Aisling Capital II, LP and (iii) 39,218 shares issuable upon the exercise of warrants held by Aisling Capital II, LP. Dr. Goldstein, a member of our Board, is a member of the investment committee of Aisling Capital II, LP. Dr. Goldstein disclaims beneficial ownership of these shares held by Aisling Capital II, LP, except to the extent of any pecuniary interest therein.
- (9) Consists of (i) 35,000 shares that Mr. Neff has the right to acquire from us within 60 days of March 31, 2014 pursuant to the exercise of stock options, (ii) 3,262,154 shares held by Quaker BioVentures II, L.P. and (iii) 38,447 shares issuable upon the exercise of warrants held by Quaker BioVentures II, L.P. Mr. Neff, a member of our Board, is a managing member of Quaker BioVentures Capital II, LLC, the general partner of Quaker BioVentures Capital II, L.P., the general partner of Quaker BioVentures II, L.P. Pursuant to powers of attorney granted by Quaker BioVentures Capital II, LLC and Quaker BioVentures Capital II, L.P., Mr. Neff shares voting power with respect to the securities owned by the entities for which these entities serve as general partners. Mr. Neff disclaims beneficial ownership of the shares held by Quaker BioVentures II, L.P., except to the extent of any pecuniary interest therein. He also disclaims beneficial ownership of the shares issuable under the stock options, which he holds beneficially for Quaker Partners Management, LP, except to the extent of any pecuniary interest therein.
- (10) Includes (i) 203,684 shares held by Dr. Fernandes, and (ii) 536,218 shares that Dr. Fernandes has the right to acquire from us within 60 days of March 31, 2014 pursuant to the exercise of stock options.
- (11) Consists of 143,534 shares that Mr. Hahn has the right to acquire from us within 60 days of March 31, 2014 pursuant to the exercise of stock options.
- (12) Consists of 63,784 shares that Mr. Johnson has the right to acquire from us within 60 days of March 31, 2014 pursuant to the exercise of stock options.
- (13) Consists of 68,985 shares that Dr. Kong has the right to acquire from us within 60 days of March 31, 2014 pursuant to the exercise of stock options.
- (14) Consists of 45,000 shares that Mr. Gill has the right to acquire from us within 60 days of March 31, 2014 pursuant to the exercise of stock options.
- (15) Consisting of 30,000 shares that Mr. Dougherty has the right to acquire from us within 60 days of March 31, 2014 pursuant to the exercise of options.
- (16) Includes 117,141 shares issuable upon the exercise of warrants and 992,521 shares subject to options that will be exercisable within 60 days of March 31, 2014 pursuant to the exercise of stock options.

DIRECTOR COMPENSATION

Director Compensation in Fiscal 2013

The following table shows the compensation earned by each non-employee director of our company for the year ended December 31, 2013.

Name	Fees Earned or Paid in Cash (\$)	Option Awards (\$) ⁽¹⁾⁽²⁾	All Other Compensation (\$)	Total (\$)
Dov Goldstein, M.D.	\$ 43,000	\$ 59,753	\$ —	\$ 102,753
John H. Johnson	42,083	59,753	—	101,836
Richard Kent, M.D.	40,000	59,753	—	99,753
Garheng Kong, M.D., Ph.D.	85,000	71,703	—	156,703
P. Sherrill Neff	40,000	59,753	—	99,753
David Gill	50,000	59,753	—	109,753
Michael R. Dougherty ⁽³⁾	23,333	149,870	—	173,203

(1) The reported amounts represent the aggregate grant date fair value of the awards computed in accordance with FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 2 of the financial statements included in our annual report on Form 10-K for the year ended December 31, 2013 filed with the SEC on February 28, 2014.

(2) At December 31, 2012, the following directors held options to purchase common shares in the following amounts: Dr. Goldstein, 15,000 shares; Mr. Johnson, 43,784 shares; Dr. Kent, 15,000 shares; Dr. Kong, 46,784 shares; Mr. Neff, 15,000; and Mr. Gill, 18,750.

(3) Mr. Dougherty became a director on June 1, 2013.

Directors Compensation Plan

Prior to our initial public offering in February 2012, we did not pay our non-employee directors any cash compensation other than John Johnson (as described above) and one other former director, and only provided equity compensation, in the form of options, to Mr. Johnson (as described above), Dr. Garheng Kong and one other former director. Subsequent to our initial public offering, our Board, with the assistance of Pay Governance, LLC, an independent compensation consultant, determined that compensation for directors should be a mix of cash and equity-based compensation. Beginning March 20, 2012, all members of the Board receive an annual cash retainer of \$35,000. The Chairman of the Board, if not a Named Executive Officer, receives an additional annual cash retainer of \$35,000. The chairman of our Audit Committee receives an additional annual cash retainer of \$15,000. The chairman of our Compensation Committee receives an additional cash retainer of \$15,000 in 2012, reduced to \$10,000 for each year thereafter. The chairman of the Nominating and Governance Committee receives an additional annual cash retainer of \$8,000. Other members of our Audit Committee, Compensation Committee and Nominating and Governance Committee receive additional annual cash retainers of \$5,000. Beginning in 2012, each director receives an initial grant of 25,000 option shares when first appointed to the Board and thereafter annual grants of 15,000 option shares. The Chairman of the Board, if not a Named Executive Officer, receives an additional annual grant of 3,000 option shares.

EXECUTIVE COMPENSATION

Compensation Objectives and Components

Our Chief Executive Officer and Chief Financial Officer are our only executive officers, who we refer to as our Named Executive Officers. Our Board has delegated responsibility for creating and reviewing the compensation of our entire senior management team, including our Named Executive Officers, to the Compensation Committee of our Board.

The primary objectives of the Compensation Committee with respect to executive compensation are to attract, retain and motivate executive officers who will make important contributions to the achievement of our business goals and success. The Compensation Committee believes that the most effective executive compensation program will reward the achievement of annual, long-term and strategic goals of our company. Our executive compensation program has been designed to link short- and long-term cash and equity incentives to the achievement of measurable corporate and individual performance objectives, and to align executives' incentives with shareholder value creation. To achieve these objectives, the Compensation Committee has recommended that we maintain, and expects to continue to recommend further implementation of, compensation plans that tie a substantial portion of our Named Executive Officers' overall compensation to our research, development, and operational performance.

Prior to our initial public offering in February 2012, we had not retained compensation consultants to review our policies and procedures relating to executive compensation. The Compensation Committee, with the input of management, developed our compensation plans by utilizing publicly available compensation data for national and regional companies in the pharmaceutical industry. The Compensation Committee also considered competitive market practices based on the experience of the members of the Compensation Committee. While disparities in market capitalization, size, product pipeline and other factors may exist, we believe that the practices of national, regional and other companies in the pharmaceutical industry provide us with appropriate comparative compensation guidance, because these companies operate in our same industry, tend to have similar organizational structures and tend to compete with us for executives and other employees. We selected companies against which to measure our compensation practices in an informal manner and did not establish a definitive group of peer companies against which we measured ourselves. The companies we selected depended on the data that was available to us, publicly or otherwise, at the time we reviewed our compensation practices. Subsequent to our initial public offering, we engaged Pay Governance, LLC, an independent compensation consultant, to review our executive compensation practices, which undertook a review in 2012 and 2013. The Compensation Committee, with the assistance of Pay Governance, has developed a group of 17 public companies as our peers, which peer group was used by Pay Governance to conduct an executive compensation benchmarking study in March 2013. Based on the results of this benchmarking study, as well as other factors considered by the Compensation Committee, the Compensation Committee increased the salaries of our named executive officers in 2013 to be more competitive. In the future, the Compensation Committee intends to use information provided from that review, as well as information gathered by the Committee as it has done in the past, to guide our policies and procedures relating to executive compensation.

Based on these overall objectives and philosophy, the Compensation Committee has designed an executive compensation program that generally seeks to bring base salaries and total executive compensation in line with the companies at a similar stage of clinical development represented in the compensation data we review. Our program allows the Compensation Committee to determine each component of an executive's compensation based on a number of factors, including (a) the executive's overall experience and skills (with an emphasis on particular industry experience), (b) the executive's position and responsibilities in comparison to other executives at the company and (c) the demand within our market for the executive's skills relative to other executives in our industry.

The principal components of our executive compensation program are base salary, annual bonus, and long-term incentives. Our Compensation Committee believes that each component of executive compensation must be evaluated and determined with reference to competitive market data, individual and corporate performance, our recruiting and retention goals, internal equity and consistency, and other information we deem relevant. We believe that in the pharmaceutical industry stock option awards are a primary motivator in attracting and retaining executives, in addition to salary and cash incentive bonuses. The Board, generally based on a recommendation of the Compensation Committee, approves all salary increases, as well as bonuses and stock option awards, if any, for

Named Executive Officers. Annual base salary increases and annual bonuses, to the extent granted, are generally implemented during the first calendar quarter of the year.

We provide base salaries for our Named Executive Officers to compensate them for their services rendered during the fiscal year. Base salaries for our Named Executive Officers have been established based on their position and scope of responsibilities, their prior experience and training, and competitive market compensation data we review for similar positions in our industry. Base salaries are reviewed periodically and may be increased for merit reasons based on the executive's performance, for retention reasons or if the base salary is not competitive to salaries paid by comparative companies for similar positions. Additionally, we may adjust base salaries throughout the year for promotions or other changes in the scope or breadth of an executive's role or responsibilities.

We have also implemented an annual cash incentive performance program, under which annual corporate goals are proposed by management and approved by the Compensation Committee at the start of each calendar year. These corporate goals include the achievement of qualitative operational goals and predefined research and development milestones. Each goal is weighted as to importance by the Compensation Committee. The individual performance of our Named Executive Officers is based on the level of achievement of a combination of corporate goals and goals related to their respective areas of responsibility. Annual cash bonuses granted to our Named Executive Officers are tied to the achievement of these corporate goals.

Our equity-based long-term incentive program is designed to align our Named Executive Officers' long-term incentives with shareholder value creation. We believe that long-term participation by our executive officers in equity-based awards is a critical factor in the achievement of long-term company goals and business objectives. Our 2006 Plan allowed and our 2011 Plan allows the grant to executive officers of stock options, as well as other forms of equity incentives, as part of our overall compensation program. We typically make an initial award of stock options to new executives in connection with the commencement of their employment. These grants have an exercise price equal to the fair market value of our common stock on the grant date and a vesting schedule determined by the Compensation Committee. The initial stock option awards are intended to provide the executive with incentive to build value in our company over an extended period of time and to maintain competitive levels of total compensation. The size of the initial stock option award is determined based on numerous factors, including the executive's skills and experience, the executive's responsibilities with us and an analysis of the practices of national, regional and other companies in the pharmaceutical industry similar in size to us. Thereafter, our practice is to make annual stock option awards as part of our overall performance management program. Typically, these grants are made to ensure the executive's average equity and option amounts are in line with similar positions at comparable companies. As with base salary and initial equity award determinations, a review of all components of the executive's compensation is conducted when determining annual equity awards to ensure that an executive's total compensation conforms to our overall philosophy and objectives.

Other Compensation

We maintain broad-based benefits and perquisites that are provided to all eligible employees, including health insurance, life and disability insurance, dental insurance and paid vacation.

Employment and Severance Agreements

On August 9, 2013, we entered into an employment agreement with Dr. Fernandes. Prior to this agreement, we had no agreement with her. Pursuant to the agreement, we pay Dr. Fernandes an annual base salary of \$447,200.00. She also is eligible for an annual target bonus opportunity of not less than 50% of her base salary pursuant to our target bonus program for executive officers. Dr. Fernandes is entitled to four weeks paid vacation per year.

The employment agreement has an initial term of five years and may be extended for additional one-year periods upon the mutual written agreement of Dr. Fernandes and our Board of Directors. The employment agreement prohibits Dr. Fernandes, during the term of her employment with us and for 18 months thereafter, from competing with us in North America or soliciting any of our employees, consultants or independent contractors to terminate their employment or contracting relationship with us. During the term of the employment agreement, we must use our best efforts to cause Dr. Fernandes to be elected as a member of our Board of Directors.

The employment agreement is terminable upon Dr. Fernandes's death or disability or upon its non-renewal, in which event we will pay her base salary through the date of termination, plus a pro rata share of her target bonus based upon the average percentage achievement of target objectives for the prior three years. If we terminate the employment agreement without "cause" (as defined in the employment agreement) or Dr. Fernandes terminates it with "good reason" (as defined in the employment agreement), then we will pay her base salary through the date of termination, plus a pro rata share of her target bonus based upon the average percentage achievement of target objectives for the prior three years. In addition, if (i) termination of her employment results in Dr. Fernandes incurring a "separation from service" as defined under Treasury Regulation 1.409A-1(h), (ii) she has not breached the employment agreement, and (iii) she executes and does not revoke within 60 days a general release of claims against us, we will pay Dr. Fernandes (a) an amount equal to her then-current base salary for a period of 18 months, (b) one and one-half times her target bonus based upon the average percentage of achievement of target objectives for the prior three years, payable in 18 equal monthly payments, plus (c) reimbursement of her COBRA premiums for the lesser of 18 months or until she becomes eligible for insurance benefits from another employer. If Dr. Fernandes dies prior to receiving any or all payments or benefits due her under the employment agreement, then we will pay them to her estate. Upon termination of Dr. Fernandes's employment under the agreement for any reason, she shall be deemed to have resigned as a director of our company, effective as of the date of termination.

We also entered into a change in control severance agreement with Dr. Fernandes on August 9, 2013. Pursuant to the severance agreement, if Dr. Fernandes's employment is terminated without "cause" (as defined in the severance agreement) or she resigns for "good reason" (as defined in the severance agreement) within 12 months of a "change in control" of our company (as defined in the severance agreement), then, provided (i) such termination results in Dr. Fernandes incurring a "separation from service" as defined under Treasury Regulation 1.409A-1(h), (ii) Dr. Fernandes has not breached the severance agreement, the previously executed confidentiality and assignment of inventions agreement or any of the non-compete or non-solicitation provisions of the employment agreement, and (iii) conditioned upon her execution of an effective release, (and without duplication of any severance payments or benefits under her employment agreement), we will pay Dr. Fernandes (a) an amount equal to her then-current base salary for a period of 24 months, (b) two times her target bonus based upon the average percentage of achievement of target objectives for the prior three years, payable in 24 equal monthly payments, plus (c) reimbursement of COBRA premiums for the lesser of 24 months or until she becomes eligible for insurance benefits from another employer. In addition, all of Dr. Fernandes's outstanding and unvested stock options and other equity in our company would become immediately and fully exercisable. If her employment is terminated due to her death, "disability" (as defined in the severance agreement, for "cause", she resigns without "good reason" or the term of the severance agreement expires without renewal, Dr. Fernandes will not be entitled to any additional compensation under the severance agreement beyond that which had accrued as of the date of termination. The employment agreement provides that no compensation or benefit that qualifies as a nonqualified deferred compensation plan under Section 409A of the Internal Revenue Code of 1986, as amended, or the Code, will be paid or provided to Dr. Fernandes before the day that is six months plus one day after the termination date. In addition, if an excess parachute payment would be made to Dr. Fernandes in the event of a change in control, we may, at our election, reduce the amounts to be paid to Dr. Fernandes to the extent necessary to avoid its treatment as an excess parachute payment under the Code.

We do not have employment arrangements with Mr. Hahn or any other employee. As such, neither he nor any employee other than Dr. Fernandes is entitled to severance or change in control benefits. However, Mr. Hahn is entitled to receive any amounts earned during the term of his employment, including salary and unused vacation pay regardless of the manner in which his employment terminates.

Tax and Accounting Considerations

U.S. federal income tax generally limits the tax deductibility of compensation we pay to our Named Executive Officers to \$1.0 million in the year the compensation becomes taxable to the executive officers. There is an exception to the limit on deductibility for performance-based compensation that meets certain requirements. Although deductibility of compensation is preferred, tax deductibility is not a primary objective of our compensation programs. Rather, we seek to maintain flexibility in how we compensate our executive officers so as to meet a broader set of corporate and strategic goals and the needs of shareholders, and as such, we may be limited in our ability to deduct amounts of compensation from time to time. Accounting rules require us to expense the cost of our stock option grants. Because of option expensing and the impact of dilution on our shareholders, we pay close

attention to, among other factors, the type of equity awards we grant and the number and value of the shares underlying such awards.

Summary Compensation Table

The following table sets forth information concerning the compensation paid or accrued to our Named Executive Officers in 2012 and 2013.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock awards (\$)	Option awards ⁽¹⁾ (\$)	Non-equity incentive plan compensation ⁽²⁾	All other compensation ⁽³⁾	Total (\$)
						(\$)	(\$)	
Prabhavathi Fernandes, Ph.D. Director, President and Chief Executive Officer	2013	447,200	-	-	780,125	211,526	49,716	1,488,567
	2012	391,356	-	-	474,250	136,779	45,855	1,048,240
Mark W. Hahn Executive Vice President and Chief Financial Officer	2013	292,600	-	-	195,015	82,221	34,895	604,731
	2012	250,027	-	-	118,563	51,568	24,278	444,436

(1) The reported amounts represent the aggregate grant date fair value of the awards computed in accordance with FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 2 of the financial statements included in our annual report on Form 10-K for the year ended December 31, 2013 filed with the SEC on February 28, 2014.

(2) Non-equity incentive plan compensation represents amounts earned in 2012 and 2013 as annual performance awards, which were paid in 2013 and 2014, respectively.

(3) These amounts represent the following in 2012 and 2013, respectively: for Dr. Fernandes, \$10,000 and \$10,000 in 401(k) matching contributions, \$2,778 and \$3,596 in life, disability, and accidental death and dismemberment insurance premiums paid by us on her behalf, and \$33,077 and \$36,120 in unused paid time off; and for Mr. Hahn, \$10,000 and \$10,000 in 401(k) matching contributions, \$2,528 and \$3,260 in life, disability, and accidental death and dismemberment insurance premiums paid by us on his behalf, and \$11,750 and \$21,635 in unused paid time off.

Outstanding Equity Awards at Fiscal Year-End 2013

The following table contains certain information concerning unexercised options for the Named Executive Officers as of December 31, 2013.

Name	Grant date	Option Awards		Option exercise price (\$)	Option expiration date
		Number of securities underlying unexercised options exercisable(#)	Number of securities underlying unexercised options unexercisable(#)		
Prabhavathi Fernandes, Ph.D. ⁽¹⁾	03/07/13	50,000	-	6.64	03/06/23
	01/18/13	150,000	-	6.63	01/17/23
	03/20/12	100,000	-	7.62	03/19/22
	12/08/10	30,524	10,174	2.09	12/07/20
	07/28/10	31,289	2,844	2.09	07/28/20

Name	Grant date	Option Awards		Option exercise price (\$)	Option expiration date
		Number of securities underlying unexercised options exercisable(#)	Number of securities underlying unexercised options unexercisable(#)		
	08/10/09	82,194	-	2.09	08/09/19
	06/03/08	54,273	-	2.47	06/03/18
	08/08/06	12,105	-	1.43	08/07/16
Mark W. Hahn ⁽¹⁾	01/18/13	50,000	-	6.63	01/17/23
	03/20/12	25,000	-	7.62	03/19/22
	12/08/10	6,806	2,268	2.09	12/07/20
	07/28/10	7,006	637	2.09	07/28/20
	02/02/10	46,890	-	2.09	02/01/20

- (1) In respect of the awards granted on March 7, 2013, 1/4th of the shares vest at the end of each quarter, beginning on January 1, 2013. In respect of the awards granted on January 18, 2013, 1/4th of the shares vest at the end of each quarter, beginning on January 1, 2013. In respect of the awards granted on March 20, 2012, all will vest on the first anniversary of the grant date. In respect of the awards granted on July 28 and December 8, 2010, 1/48th of the options vest at the end of each month over 48 months, beginning on April 26, 2010 for the July options and 30 days after the grant date for the December options. In respect of the awards granted on June 3, 2008 and August 10, 2009, 1/4th of the options vest on the first anniversary of the grant date, and 1/48th of the options vest at the end of each month after the first anniversary over 36 months. In respect of the awards granted on February 2, 2010, 1/48th of the options vest at the end of each month over 48 months, beginning on September 25, 2009.

Potential Payments on Change of Control

If the severance payments called for in the change in control severance agreement for Dr. Fernandes had been triggered on December 31, 2013, we would have been obligated to make the following payments:

Name	Cash Payment Per Month (# of months paid)	Benefits (\$ per month) and (# of months paid)	Number of Options that Would Vest (Market Value)(1)
Prabhavathi Fernandes	\$37,270(24 mos)	\$1,254 (24 mos)	13,018 (\$134,085)

- (1) The market value equals the difference the fair market value of the shares that could be acquired based on the closing sale price per share of our common stock on the NASDAQ Global Market on December 31, 2013, which was \$12.39, and the exercise prices for the underlying stock options.

SHAREHOLDER COMMUNICATIONS

Shareholders may send any communications regarding Company business to the Board in care of the Secretary of the Company at our principal executive offices located at 6320 Quadrangle Drive, Suite 360, Chapel Hill, North Carolina 27517. The Secretary will forward all such communications to the addressee.

AUDITOR AND AUDIT COMMITTEE MATTERS

Report of the Audit Committee

The Audit Committee has reviewed and discussed with management our audited financial statements for the fiscal year ended December 31, 2013. The Committee has discussed with PricewaterhouseCoopers LLP, or PwC, our company's independent registered public accounting firm, the matters required to be discussed by Auditing Standard No. 16, issued by the Public Company Accounting Oversight Board, or PCAOB. The Committee has received the written disclosures and letter from the independent registered public accounting firm required by applicable requirements of the PCAOB regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence, and has discussed with the independent registered public accounting firm the independent registered public accounting firm's independence. The Committee has also considered whether the provision of services other than the audit of our financial statements were compatible with maintaining PwC's independence.

Based on the review and discussions referred to in the foregoing paragraph, the Committee recommended to the Board of Directors that the audited financial statements be included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 for filing with the SEC.

All members of our Audit Committee are independent under SEC regulation and Section 5605(c)(2)(A) of the NASDAQ Marketplace Rules. The financial literacy requirements of the SEC require that each member of our Audit Committee be able to read and understand fundamental financial statements. In addition, at least one member of our Audit Committee must qualify as an audit committee financial expert, as defined in Item 407(d)(5) of Regulation S-K promulgated by the SEC, and have financial sophistication in accordance with the NASDAQ Marketplace Rules. Our Board has determined that each of Mr. Gill and Mr. Dougherty qualifies as an audit committee financial expert.

The Audit Committee pre-approves the engagement of our independent auditor to render any audit services to our company. The Audit Committee also pre-approves any other engagement of our independent auditor, which is limited to specified permitted non-audit services on a case-by-case basis. The Committee generally limits its pre-approval of non-audit services to a specified period of time and, for some services, to a maximum dollar amount.

Submitted on March 31, 2014 by:

THE AUDIT COMMITTEE
David Gill, Chairman
Michael R. Dougherty
Garheng Kong, M.D., Ph.D.

Fees Paid to the Independent Registered Public Accounting Firm

For the years ended December 31, 2012 and December 31, 2013, PwC performed professional services for us. The professional services provided by PwC and the fees billed for those services are set forth below.

Audit Fees

The aggregate fees billed by PwC for the audit of our annual financial statements for the fiscal years ended December 31, 2012 and 2013 were \$333,659 and \$346,450, respectively.

Audit-Related Fees

No fees were billed by PwC for assurance and related services that were reasonably related to the audit or review of our financial statements for the fiscal years ended December 31, 2012 and 2013, and that are not included in the amounts disclosed above under the caption “Audit Fees.”

Tax Fees

The aggregate fees billed by PwC for tax services for the fiscal years ended December 31, 2012 and 2013 were \$48,500 and \$23,655, respectively.

All Other Fees

No fees were billed by PwC for services other than those reported above under the captions “Audit Fees” and “Tax Fees” for each of the fiscal years ended December 31, 2012 and 2013.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

With respect to reviewing and approving related-party transactions, the Audit Committee reviews related-party transactions for potential conflicts of interests or other improprieties. Under SEC rules, related-party transactions are those transactions to which we are or may be a party in which the amount involved exceeds \$120,000 annually, and in which any of our directors or executive officers or any other related person had or will have a direct or indirect material interest, excluding, among other things, compensation arrangements with respect to employment and board membership. Our Audit Committee may approve a related-party transaction if it determines that the transaction is in our best interests. Our directors are required to disclose to this Committee or the full Board any potential conflict of interest, or personal interest in a transaction that our Board is considering. Our executive officers are required to disclose any related-party transaction to the Audit Committee. We also poll our directors on an annual basis with respect to related-party transactions and their service as an officer or director of other entities. Any director involved in a related-party transaction that is being reviewed or approved must recuse himself or herself from participation in any related deliberation or decision. Whenever possible, we strive to ensure that the transaction is approved in advance and, if not approved in advance, it must be submitted for ratification as promptly as practical.

In 2013, we did not engage in any related-party transaction and, based on the procedures outlined above, as of the date of this proxy statement we are not aware of any existing or potential related-party transaction.

DEADLINE FOR SHAREHOLDER PROPOSALS FOR 2014 ANNUAL MEETING

Shareholder proposals to be included in the proxy statement for our next annual meeting of shareholders must be received by us not later than December 19, 2014. Under our bylaws, shareholder proposals to be considered at our next annual meeting must be received by us not later than 60 days prior to that meeting. All submissions must comply with all of the requirements of our bylaws and Rule 14a-8 of the Securities Exchange Act. Proposals should be mailed to Shane Barton, Secretary, Cempra, Inc., 6320 Quadrangle Drive, Suite 360, Chapel Hill, North Carolina 27517.

Management’s proxy holders for the next annual meeting of shareholders will have discretion to vote proxies given to them on any shareholder proposal of which we do not have notice prior to March 4, 2015.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities Exchange Act requires our officers and directors and persons who own more than 10% of our outstanding common stock to file reports of ownership and changes in ownership with the Securities and Exchange Commission. These officers, directors and shareholders are required by regulations under the Securities Exchange Act to furnish us with copies of all forms they file under Section 16(a).

Based solely on our review of the copies of forms we have received, we believe that all such required reports have been timely filed except for the following reports that were filed late by the following individuals in 2013: (i) a Form 4 to report the grant of options to purchase 15,000 shares was filed on Sherrill Neff’s behalf on February 7,

2013, when such report was due on February 6, 2013; (ii) a Form 4 to report the purchase in our underwritten public offering of 265,000 shares by Quaker BioVentures II, L.P., of which Mr. Neff is a partner, was filed on P. Sherrill Neff's behalf on August 1, 2013, when such report was due on June 21, 2013; and (iii) a Form 4 to report the purchase in our underwritten public offering of 265,000 shares was filed on Quaker BioVentures II, L.P.'s behalf on August 1, 2013, when such report was due on June 21, 2013.

**DIRECTIONS TO ANNUAL MEETING AT THE COMPANY'S HEADQUARTERS AT
6320 QUADRANGLE DRIVE, SUITE 360, CHAPEL HILL, NORTH CAROLINA**

Driving directions (from I-40):

From the East (including RDU Airport): On Route 40 take Exit 273B for NC-54 E towards Durham. Turn right onto NC-54. At the light, turn right onto Quadrangle Drive. Follow Quadrangle to the first building on the right, which is Building Two Quadrangle. Cempra is located on the third floor of the Cempra Building.

From the West: On Route 40 take Exit 273 for NC-54 for Chapel Hill/Durham. Turn left at NC-54. At the light, turn right onto Quadrangle Drive. Follow Quadrangle to the first building on the right, which is Building Two Quadrangle. Cempra is located on the third floor of the Cempra Building.