SCHEDULE 14A INFORMATION

PROXY STATEMENT PURSUANT TO SECTION 14(a) OF THE SECURITIES EXCHANGE ACT OF 1934 (AMENDMENT NO. ____)

Filed by the Registrant [x]

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))
- [X] Definitive Proxy Statement
- [] Definitive Additional Materials
- [] Soliciting Material Pursuant to Rule 14a-12

DOR BioPharma, Inc. (Name of Registrant as Specified in Its Charter)

N/A (Name of Person(s) Filing Proxy Statement if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- [x] No fee required.
- [] Fee computed on table below per Exchange Act Rules 14a-6(i)(4) 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):

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[] 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:

DOR BIOPHARMA, INC. 29 Emmons Drive, Suite C-10 Princeton, New Jersey 08540

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

June 5, 2009

To the Stockholders:

The Annual Meeting of Stockholders of DOR BioPharma, Inc., will be held at the Wyndham Princeton Forrestal Hotel and Conference Center, Meting Room: Witherspoon C, 900 Scudders Mill Road, Plainsboro, New Jersey 08536 on June 5, 2009, at 10:00 A.M. Eastern Daylight Time, for the following purposes, each as more fully described herein:

1. To elect five directors to serve until the next Annual Meeting of Stockholders or until their respective successors have been duly elected and qualified;

2. To consider and approve an amendment to our Amended and Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of our common stock from 250,000,000 to 400,000,000;

3. To ratify the appointment Amper, Politziner & Mattia, LLP as our independent auditors for the year ending December 31, 2009; and

4. To transact such other business as may properly come before the Annual Meeting or any adjournment or postponement thereof.

Only stockholders of record at the close of business on April 14, 2009 are entitled to notice of and to vote at the Annual Meeting. A list of stockholders eligible to vote at the meeting will be available for inspection at the meeting and for a period of 10 days prior to the meeting, during regular business hours, at our corporate headquarters at the address set forth above.

Information concerning the matters to be acted upon at the Annual Meeting is included in the proxy statement. Whether or not you expect to attend the Annual Meeting, your vote is important. Please vote as soon as possible via either the Internet, telephone or mail.

By Order of the Board of Directors

/s/ Christopher J. Schaber Christopher J. Schaber, Ph.D. President and Chief Executive Officer Miami, Florida April 16, 2009 DOR BioPharma, Inc. 29 Emmons Drive, Suite C-10 Princeton, New Jersey 08540 Phone: (609) 452-0001

PROXY STATEMENT FOR ANNUAL MEETING OF STOCKHOLDERS

We are furnishing this proxy statement to stockholders of record as of the close of business on April 14, 2009 in connection with the solicitation of proxies by our Board of Directors for use at the Annual Meeting of Stockholders to be held on June 5, 2009. This proxy statement and the form of proxy are being made available to the stockholders on or about April 24, 2009. Our Annual Report on Form 10-K for the year ended December 31, 2008 (which does not form a part of the proxy solicitation materials) is being made available concurrently herewith to stockholders.

Voting Securities; Proxies; Required Vote

Voting Securities

At the Annual Meeting, each holder of record of common stock of the Company, par value \$0.001 per share ("Common Stock"), at the close of business on April 14, 2009 will be entitled to one vote for each share of Common Stock owned on that date as to each matter presented at the Annual Meeting. On April 14, 2009 167,070,944 shares of Common Stock were outstanding.

Proxies

You cannot vote your shares at the meeting unless you are present in person or represented by proxy. All properly executed and unrevoked proxies that are received in time for the meeting will be voted at the meeting or any adjournment or postponement thereof in accordance with instructions thereon, or if no instructions are given, will be voted as follows:

1. "FOR" the election of all of the named nominees as directors;

2. "FOR" the approval of the amendment to our Amended and Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of our common stock from 250,000,000 shares to 400,000,000 shares;

3. "FOR" the ratification of Amper, Politziner & Mattia, LLP as our independent auditors; and

4. in accordance with the judgment of the persons appointed as proxies with respect to other matters which properly come before the Annual Meeting.

You may revoke a proxy by written notice to us at any time prior to exercise of the proxy. In addition, although mere attendance at the Annual Meeting will not revoke a proxy, you may withdraw your proxy by voting in person.

Voting Your Proxy

Whether or not you plan to attend the Annual Meeting, you may vote your shares via Internet, telephone or mail as more fully described below:

- By Internet: Go to www.voteproxy.com and follow the instructions. Have your proxy card available when you call.
- By Telephone: Call 1-800-PROXIES (1-800-776-9437) and follow the voice prompts. Have your proxy card available when you call.
- By Mail: If you have received a proxy card, mark your vote, sign your name exactly as it appears on your proxy card, date your card and return it in the envelope provided.

Required Vote

1. The affirmative vote of the holders of a plurality of the shares of Common Stock represented at the Annual Meeting in person or by proxy is required for the election of directors.

2. The affirmative vote of the holders of a majority of the shares of Common Stock issued and outstanding is required to approve the amendment to our Amended and Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of our common stock from 250,000,000 shares to 400,000,000 shares

3. The affirmative vote of the holders of a majority of the shares of Common Stock represented in person or by proxy at the meeting is required for the ratification of the appointment of Amper, Politziner & Mattia, LLP as our independent auditors for the fiscal year ending December 31, 2009.

Stockholders are not allowed to cumulate their votes in the election of directors. In voting on the election of directors, abstentions and broker non-votes (which occur when a broker holding shares for a beneficial owner does not vote on a particular proposal because the broker does not have discretionary voting power with respect to that item and has not received voting instructions from the beneficial owner) will be disregarded and not treated as votes cast and, therefore, will not affect the outcome of the election. Abstentions and broker non-votes will have the same effect as votes against the proposal to amend our Amended and Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of our common stock from 250,000,000 shares to 400,000,000 shares. Abstentions will have the same effect as votes against the proposal to ratify the appointment of Amper, Politziner & Mattia, LLP, but broker non-votes will not be counted as votes against such proposal or as shares present or represented at the meeting.

Quorum

The required quorum for the transaction of business at the Annual Meeting will be a majority of the voting power of shares of Common Stock issued and outstanding on the record date. Shares represented in person or by proxy (including shares which abstain or do not vote with respect to one or more of the matters presented for stockholder approval) will be counted for purposes of determining whether a quorum exists at the meeting.

PROPOSAL 1 ELECTION OF DIRECTORS

The Board of Directors currently has five members, James S. Kuo, M.D., M.B.A., Christopher J. Schaber, Ph.D., Evan Myrianthopoulos, Cyrille F. Buhrman, and Gregg A. Lapointe, C.P.A., M.B.A., all of whom are nominees for re-election. Unless otherwise directed, the persons appointed in the form of proxy intend to vote at the Annual Meeting for the election of Messrs. Kuo, Schaber, Myrianthopoulos, Buhrman, and Lapointe as directors to serve until our next Annual Meeting of Stockholders or until their successors have been duly elected and qualified. If any nominee is unable to be a candidate when the election takes place, the shares represented by valid proxies will be voted in favor of such substitute nominee as the Board of Directors recommends or to allow the vacancy to remain open until filled by the Board of Directors, as determined by the Board of Directors. The Board of Directors does not currently anticipate that any nominee will be unable to be a candidate for election. Each director elected to the Board of Directors will serve until the next Annual Meeting of Stockholders or until his successor has been duly elected and qualified, unless he dies, resigns or is removed from office prior to that time.

Name	Age	Position	Director Since
James S. Kuo, M.D., M.B.A.	45	Chairman of the Board	2004
Christopher J. Schaber, Ph.D.	42	Director, President and Chief Executive Officer	2006
Evan Myrianthopoulos	44	Director, Senior Vice President and Chief Financial Officer	2002
Cyrille F. Buhrman	36	Director	2007
Gregg A. Lapointe, C.P.A., M.B.A.	50	Director	2009

The following table contains information regarding the current members of the Board of Directors.

James S. Kuo, M.D., M.B.A., has been a director since 2004 and currently serves as the non-executive Chairman of the Board. He has served as Chairman of the Board of Directors of Cordex Pharma, Inc. (formerly Duska Therapeutics, Inc.), a public biopharmaceutical company, since June 2007 and has been Chief Executive Officer since September 2007. From 2006 to September 2007, he served as Chairman and Chief Executive Officer of Cysteine Pharma, Inc. From 2003 to 2006, he served as founder, Chairman and Chief Executive Officer of BioMicro Systems, Inc., a private venture-backed, microfluidics company. Prior to that time, Dr. Kuo was co-founder, President and Chief Executive Officer of Discovery Laboratories, Inc., a public specialty pharmaceutical company developing respiratory therapies, where he raised over \$22 million in initial private funding and took the company public. He further has been a founder and a Board Director of Monarch Labs, LLC, a private medical device company. Dr. Kuo is the former Managing Director of Venture Analysis for HealthCare Ventures, LLC, which managed \$378 million in venture funds. He has also been a senior licensing and business development executive at Pfizer, Inc., where he was directly responsible for cardiovascular licensing and development. Dr. Kuo is also a director of Adeona Pharmaceuticals, Inc. (formerly Pipex Pharmaceuticals, Inc.), a public company. After studying molecular biology and

receiving his B.A. degree at Haverford College, Dr. Kuo simultaneously received his M.D. degree from The University of Pennsylvania School of Medicine and his M.B.A. degree from The Wharton School of Business at the University of Pennsylvania.

Christopher J. Schaber, Ph.D., has been our President and Chief Executive Officer and a director since August 2006. Dr. Schaber also currently serves on the boards of both the Alliance for BioSecurity and BioNJ, Inc. Prior to joining DOR, Dr. Schaber served from 1998 to 2006 as Executive Vice President and Chief Operating Officer of Discovery Laboratories, Inc., where he was responsible for overall pipeline development and key areas of commercial operations, including regulatory affairs, quality control and assurance, manufacturing and distribution, preclinical and clinical research, and medical affairs, as well as coordination of commercial launch preparation activities. During his tenure at Discovery Laboratories, Inc., Dr. Schaber played a significant role in raising in excess of \$150 million through both public offerings and private placements. From 1996 to 1998, Dr. Schaber was a co-founder of Acute Therapeutics, Inc., and served as its Vice President of Regulatory Compliance and Drug Development. From 1994 to 1996, Dr. Schaber was employed by Ohmeda PPD, Inc., as Worldwide Director of Regulatory Affairs and Operations. From 1989 to 1994, Dr. Schaber held a variety of regulatory, development and operations positions with The Liposome Company, Inc., and Elkins-Sinn Inc., a division of Wyeth-Ayerst Laboratories. Dr. Schaber received his B.A. degree from Western Maryland College, his M.S. degree in Pharmaceutics from Temple University School of Pharmacy and his Ph.D. degree in Pharmaceutical Sciences from The Union Graduate School.

Evan Myrianthopoulos has been a director since 2002 and is currently our Chief Financial Officer and Senior Vice President, after joining us in November of 2004 as President and Acting Chief Executive Officer. From November 2001 to November 2004, he was President and founder of CVL Advisors Group Inc., a financial consulting firm specializing in the biotechnology sector. Prior to founding CVL Advisors Group, Inc., Mr. Myrianthopoulos was a co-founder of Discovery Laboratories, Inc. During his tenure at Discovery Laboratories, Inc. from June 1996 to November 2001, Mr. Myrianthopoulos held the positions of Chief Financial Officer and Vice President of Finance, where he was responsible for raising approximately \$55 million in four private placements. He also helped negotiate and manage Discovery Laboratories, Inc., Mr. Myrianthopoulos was a Technology Associate at Paramount Capital Investments, L.L.C., a New York City based biotechnology venture capital and investment banking firm. Prior to joining Paramount Capital Investments, LLC, Mr. Myrianthopoulos was a managing partner at a hedge fund and also held senior positions in the treasury department at the National Australia Bank where he was employed as a spot and derivatives currency trader. Mr. Myrianthopoulos holds a B.S. degree in Economics and Psychology from Emory University.

Cyrille F. Buhrman has been a director since June 2007. Mr. Buhrman is Chairman and President of the Pacific Healthcare Group of Companies, a full-service marketing, sales, distribution and regulatory affairs company based in Thailand where he has served for approximately ten years. Mr. Buhrman is also a Director of International Pharmaceuticals Ltd., a company focused on marketing niche pharmaceuticals and other medical products in Thailand, Vision Care (Thailand) Co., Ltd., and Canyon Pharmaceuticals, Inc., a private biotechnology company focused on the commercialization of therapeutics to prevent and treat thrombosis and related conditions. Mr. Buhrman is owner of Markle Holdings Ltd., an investment fund specializing in biotech and pharmaceutical investments. Mr. Buhrman is also one of our largest shareholders.

Gregg Lapointe, C.P.A., M.B.A., has been a director since March 10, 2009. Mr. Lapointe also serves on the Board of Directors of the Pharmaceuticals Research and Manufacturers of America (PhRMA) and is a member of the Corporate Council of the National Organization for Rare Diseases (NORD). He has served in varying roles for Sigma-Tau Pharmaceuticals, Inc. ("Sigma-Tau"), a private biopharmaceutical company, since September 2001, including Chief Operating Officer from November 2003 to April 2008 and Chief Executive Officer since April 2008. From May, 1996 to August, 2001, he served as Vice President of Operations and Vice President, Controller of AstenJohnson, Inc. (formerly JWI Inc.). Prior to that Mr. Lapointe spent several years in the Canadian medical products industry in both distribution and manufacturing. Mr. Lapointe began his career at Price Waterhouse. From his extensive background,

Mr. Lapointe has significant experience in the areas of global strategic planning and implementation, business development, corporate finance, and acquisitions. Mr. Lapointe received his B.A. degree in Commerce from Concordia University in Montreal, Canada, a graduate diploma in Accountancy from McGill University and his M.B.A. degree from Duke University. He is a C.P.A. in the state of Illinois and a Chartered Accountant in Ontario, Canada.

Recommendation of the Board of Directors

The Board of Directors recommends that you vote "FOR" the election of all of the nominees listed above.

Section 16(a) Beneficial Ownership Reporting Compliance

We are required to identify each person who was an officer, director or beneficial owner of more than 10% of our registered equity securities during our most recent fiscal year and who failed to file on a timely basis reports required by Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

To our knowledge, based solely on review of these filings and written representations from the certain reporting persons, we believe that during the fiscal year ended December 31, 2008, our officers, directors and significant stockholders have timely filed the appropriate form under Section 16(a) of the Exchange Act.

Corporate Governance

Pursuant to our Amended and Restated Certificate of Incorporation, as amended ("Amended and Restated Certificate of Incorporation"), and By-laws, our business and affairs are managed under the direction of the Board of Directors. Members of the Board of Directors are kept informed of our business through discussions with senior management, by reviewing materials provided to them and by participating in meetings of the Board of Directors and its committees.

The Board of Directors has determined that Dr. Kuo, Mr. Buhrman, and Mr. Lapointe are "independent" as such term is defined by the applicable listing standards of the American Stock Exchange. The Board of Directors based this determination primarily on a review of the responses of the directors to questions regarding their employment, affiliations and family and other relationships. In making this determination, the Board of Directors considered Dr. Kuo's relationship with Christopher Schaber, our President and Chief Executive Officer, and Evan Myrianthopoulos, our Chief Financial Officer, at Discovery Laboratories, Inc. The Board of Directors determined that this relationship did not impair Dr. Kuo's independence. The Board of Directors also reviewed the relationship of Mr. Lapointe's relationship as the Chief Executive Officer of Sigma-Tau. Sigma-Tau, is our largest shareholder and owns approximately 25% of the outstanding shares. The Board of Directors determined that Mr. Lapointe's position with Sigma-Tau would not impair his ability to exercise independent judgment. However, he will not vote on matters in which Sigma-Tau is involved.

The Board of Directors held eight meetings in 2008. In 2008, each director attended all of the meetings of the Board of Directors, except Mr. Buhrman who attended three of the eight meetings. In 2008, Mr. Buhrman did not attend one of the five Audit Committee meetings.

We typically schedule a meeting of the Board of Directors in conjunction with our Annual Meeting and expect that all directors will attend, absent a valid reason, such as a scheduled conflict. In 2006, all of the individuals then serving as directors attended the Annual Meeting in person.

The Board of Directors has the following three committees: (1) Compensation, (2) Audit and (3) Nominating. The Board of Directors has adopted a written charter for each of these committees. These charters were filed as annexes to the Company's proxy statement prepared in connection with the Company's 2005 Annual Meeting of Stockholders.

The Board of Directors has also adopted a Code of Business Conduct and Ethics that applies to all of our directors, officers (including the Chief Executive Officer and the Chief Financial Officer) and employees. Our Code of Business Conduct and Ethics is posted under the caption "Investors" on our website: http://www.dorbiopharma.com. If, in the future, the Board of Directors amends the Code of Business Conduct and Ethics or grants a waiver to our Chief Executive Officer, Chief Financial Officer or any future principal accounting officer with respect to our Code of

Business Conduct and Ethics, we will post the amendment or a description of the waiver on our website.

Compensation Committee

The Board of Directors has a Compensation Committee, which is currently comprised of Dr. Kuo and Mr. Buhrman. During 2008, the Compensation Committee was comprised of Dr. Kuo, Mr. Buhrman and Mr. Lapointe. The Compensation Committee is responsible for reviewing and approving the executive compensation program, assessing executive performance, making grants of salary and annual incentive compensation and approving certain employment agreements. The Board of Directors has determined that Dr. Kuo, Mr. Buhrman and Mr. Lapointe are "independent" directors, as such term is defined by the American Stock Exchange listing standards. The Compensation Committee met one time during the fiscal year ended December 31, 2008. All of the members of the Compensation Committee attended the meeting.

Nominating Committee

The Board of Directors has a Nominating Committee. Dr. Kuo and Mr. Buhrman have been members of the Nominating Committee since 2007. During 2008, the Nominating Committee was comprised of Dr. Kuo and Mr. Buhrman. The Nominating Committee makes recommendations to the Board of Directors regarding the size and composition of the Board of Directors, establishes procedures for the nomination process, recommends candidates for election to the Board of Directors and nominates officers for election by the Board of Directors. The Board of Directors has determined that both Dr. Kuo and Mr. Buhrman are "independent" directors, as such term is defined by the applicable American Stock Exchange listing standards. The Nominating Committee did not meet during the fiscal years ended December 31, 2008 or 2007.

In considering candidates for the Board of Directors, the Nominating Committee considers the entirety of each candidate's credentials and does not have any specific minimum qualifications that must be met by a nominee. However, the Nominating Committee does believe that all members of the Board of Directors should have the highest character and integrity, a reputation for working constructively with others, sufficient time to devote to Board matters, and no conflict of interest that would interfere with performance as a director. In the case of current Directors being considered for nomination, the Nominating Committee also takes into account the director's history of attendance at meetings of the Board of Directors or its committees, the Director's tenure as a member of the Board of Directors, and the Director's preparation for and participation in such meetings.

Stockholders who wish to suggest qualified candidates should write to the Office of the Secretary, DOR BioPharma, Inc., 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540, specifying the name of the candidates and stating in detail the qualifications of such persons for consideration by the Nominating Committee. A written statement from the candidate consenting to be named as a candidate and, if nominated and elected, to serve as a director should accompany any such recommendation. Stockholders who wish to nominate a director for election at an Annual Meeting of Stockholders must otherwise comply with our By-laws regarding stockholder proposals and nominations. See "Deadline for Stockholder Proposals" contained herein.

The Board of Directors has recommended that Gregg A. Lapointe be elected to the Board of Directors, as required by the Collaboration and Supply Agreement with Sigma-Tau.

Audit Committee

The Board of Directors has an Audit Committee, which is comprised of Dr. Kuo, Mr. Buhrman and Mr. Lapointe (he was appointed on March 27, 2009). During 2008, the Audit Committee was comprised of Dr. Kuo, and Mr. Buhrman. The Audit Committee assists the Board of Directors in monitoring the financial reporting process, the internal control structure and the independence and performance of the internal audit department and the independent public accountants. Its primary duties are to serve as an independent and objective party to monitor the financial process and

internal control system, to review and appraise the audit effort of the independent accountants and to provide an open avenue of communication among the independent accountants, financial and senior management, and the Board of Directors. During the year, the Board of Directors examined the composition of the Audit Committee in light of the applicable listing standards of the American Stock Exchange and the regulations under the Exchange Act applicable to audit committees. Based upon this examination, the Board of Directors has determined that Dr. Kuo, Mr. Buhrman, and Mr. Lapointe are "independent" directors within the meaning of such listing standards and the Exchange Act and the rules and regulations thereunder. The Board of Directors has determined that Dr. Kuo and Mr. Lapointe qualify as an "audit committee financial expert" as that term is defined in the applicable regulations of the Exchange Act. The Audit Committee met four times during the fiscal year ended December 31, 2007 and five times during the fiscal year ended December 31, 2008.

Report of the Audit Committee of the Board of Directors

The Audit Committee submits the following report for the year ended December 31, 2008:

The Audit Committee has reviewed and discussed with both management and the outside auditors the audited consolidated financial statements as of and for the year ended December 31, 2008. The Audit Committee's review included discussion with the outside auditors of matters required to be discussed by Statement on Auditing Standards No. 61, Communication with Audit Committees, as amended, by the Auditing Standards Board of the American Institute of Certified Public Accountants.

The Audit Committee has received the written disclosures and the letter from the independent auditors required by Independence Standard No. 1, Independence Discussions with Audit Committees, as amended, by the Independence Standards Board, and has discussed with the independent auditors matters relating to the auditors' independence.

Based on the reviews and discussions referred to above, the Audit Committee recommended to the Board of Directors that the audited consolidated financial statements referred to above be included in the Company's Annual Report on Form 10-K for the fiscal years ended December 31, 2007 and 2008 for filing with the SEC.

Submitted by the Audit Committee,

James S. Kuo, M.D., M.B.A.

Cyrille F. Buhrman

Gregg A. Lapointe, C.P.A., M.B.A.

Communications with the Board of Directors

Stockholders or other interested parties may communicate with the Board of Directors by sending a letter to DOR BioPharma, Inc. Board of Directors, c/o The Office of the Secretary, DOR BioPharma, Inc, 29 Emmons Drive, Suite C-10, Princeton, NJ 08540. The Office of the Secretary will receive the correspondence and forward it to the director(s) to whom the communication is addressed.

Executive Compensation

The following table contains information concerning the compensation paid during our fiscal years ended December 31, 2008 and 2007 to the persons who served as our Chief Executive Officer, and each of the two other most highly compensated executive officers during 2008 (collectively, the "Named Executive Officers").

Name	Position	Year	Salary	Bonus	Option Awards	All Other Compensation	Total
Christopher J. Schaber (1)	C.E.O. & President	2008	\$300,000	\$100,000	\$185,721	\$24,844	\$610,565
		2007	\$300,000	\$100,000	\$155,409	\$47,798	\$603,207
Evan Myrianthopoulos (2)	C.F.O. & Senior V.P.	2008	5200,000	\$ 50,000	\$ 66,033	\$23,474	\$339,507
(2)		2007\$	\$200,000	\$ 50,000	\$146,938	\$44,786	\$441,724
Robert N. Brey (3)	C.M.O. & Senior V.P.	20085	5190,000	\$ 20,000	\$ 55,133	\$18,405	\$283,538
(3)	Schol V.F.	2007\$	5190,000	\$ 15,000	\$ 48,252	\$18,325	\$271,577

Summary Compensation

(1) Dr. Schaber deferred payment of his 2008 annual bonus of \$100,000 until February 28, 2009. Option Awards include the value of stock option awards of vested shares of common stock as required by FASB No. 123R. Other Compensation for 2008 includes \$24,844 for insurance costs. Other Compensation for 2007 includes \$19,000 for insurance costs, \$2,301 for transportation costs, \$7,263 for travel expenses and \$19,234 for lodging costs.

(2) Mr. Myrianthopoulos deferred payment of his 2008 annual bonus of \$50,000 until February 28, 2009. Option Awards include the value of stock option awards of vested shares of common stock as required by FASB No. 123R. Other Compensation for 2008 includes \$23,474 for insurance costs. Other Compensation for 2007 includes \$17,000 for insurance costs, \$2,895 for transportation costs, \$6,787 for travel expenses and \$18,104 for lodging costs.

(1) Dr. Brey deferred payment of his 2008 annual bonus of \$20,000 until January 31, 2009. Option Awards include the value of stock option awards of vested shares of common stock as required by FASB No. 123R. Other Compensation for 2008 includes \$18,405 for insurance costs. Other Compensation for 2007 includes \$18,325 for insurance costs.

Potential Issuance of Shares

On February 28, 2007, our Board of Directors approved the issuance of 2,700,000 shares of our common stock to certain employees and a consultant to be issued immediately prior to the completion of a transaction, or series or combination of related transactions, negotiated by our Board of Directors whereby, directly or indirectly, a majority of our capital stock or a majority of our assets are transferred from us and/or our stockholders to a third party (an "Acquisition Event"). Of the shares of common stock to be issued upon an Acquisition Event, 1,000,000 shares will be issued to Christopher J. Schaber, a director and our Chief Executive Officer and President; 750,000 shares will be

issued to Evan Myrianthopoulos, a director and our Chief Financial Officer; and 300,000 shares will be issued to James Clavijo, our Controller, Treasurer, and Corporate Secretary.

Employment and Severance Agreements

During August 2006, we entered into a three-year employment agreement with Christopher J. Schaber, Ph.D. Pursuant to this employment agreement we agreed to pay Dr. Schaber a base salary of \$300,000 per year and a minimum annual bonus of \$100,000. This employment agreement was renewed in December 27, 2007 for a term of three years. We agreed to issue him options to purchase 2,500,000 shares of our common stock, with one third immediately vesting and the remainder vesting over three years. Upon termination without "Just Cause" as defined by this agreement, we would pay Dr. Schaber nine months severance, as well as any accrued bonuses, accrued vacation, and we would provide health insurance and life insurance benefits for Dr. Schaber and his dependants. No unvested options shall vest beyond the termination date.

Dr. Schaber's monetary compensation (base salary of \$300,000 and bonus of \$100,000) remained unchanged from 2006. He will be paid nine months severance upon termination of employment. Upon a change in control of the Company due to merger or acquisition, all of Dr. Schaber's options shall become fully vested, and be exercisable for a period of five years after such change in control (unless they would have expired sooner pursuant to their terms). In the event of his death during term of the agreement, all of his unvested options shall immediately vest and remain exercisable for the remainder of their term and become the property of Dr. Schaber's immediate family.

In December 2004, we entered into a three-year employment agreement with Mr. Myrianthopoulos. Pursuant to this employment agreement we agreed to pay Mr. Myrianthopoulos a base salary of \$185,000 per year. After one year of service Mr. Myrianthopoulos would be entitled to a minimum annual bonus of \$50,000. This employment agreement was renewed in December 27, 2007 for a term of three years. We agreed to issue him options to purchase 500,000 shares of our common stock, with the options vesting over three years. This option grant is subject to shareholder approval. Upon termination without "Just Cause" as defined by this agreement, we would pay Mr. Myrianthopoulos six months severance subject to set off, as well as any unpaid bonuses and accrued vacation would become payable. No unvested options shall vest beyond the termination date. Mr. Myrianthopoulos also received 150,000 options, vested immediately when he was hired in November 2004, as President and Acting Chief Executive Officer.

Mr. Myrianthopoulos' monetary compensation (base salary of \$200,000 and bonus of \$50,000) remained unchanged from 2006. He will be paid six months severance upon termination of employment. Upon a change in control of the Company due to merger or acquisition, all of Mr. Myrianthopoulos' options shall become fully vested, and be exercisable for a period of three years after such change in control (unless they would have expired sooner pursuant to their terms). In the event of his death during term of contract, all of his unvested options shall immediately vest and remain exercisable for the remainder of their term and become property of Mr. Myrianthopoulos' immediate family.

On March 27, 2009, the Compensation Committee approved the increase in salaries for: Dr. Schaber from \$300,000 to \$350,000; Mr. Myrianthopoulos from \$200,000 to \$230,000; and Dr. Brey from \$190,000 to \$200,000. Dr. Brey does not have an employment agreement.

In February 2007, our Board of Directors authorized the issuance of the following number of shares to each of Dr. Schaber, Mr. Myrianthopoulos and Dr. Brey immediately prior to the completion of a transaction, or series or a combination of related transactions negotiated by our Board of Directors whereby, directly or indirectly, a majority of our capital stock or a majority of our assets are transferred from the Company and/or our stockholders to a third party: 1,000,000 common shares to Dr. Schaber; 750,000 common shares to Mr. Myrianthopoulos; and 200,000 common shares to Dr. Brey. The amended agreements include our obligation to issue such shares to the executives if such event occurs.

Outstanding Equity Awards at Fiscal Year-End

The following table contains information concerning unexercised options, stock that has not vested, and equity incentive plan awards for the Named Executive Officers outstanding at December 31, 2008. We have never issued Stock Appreciation Rights.

	Number of Securities Underlying Unexercised Options (#)		Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Option		Option
Name	Exercisable	Unexercisable	Unearned Options (#)	Exercise Price (\$)	Expiration Date
Inallie	Exercisable	Ullexercisable	Options (#)	Flice (\$)	Date
Christopher J. Schaber	2,083,343	416,657	416,657	\$0.27	8/28/2016
1	506,250	393,750	393,750		8/29/2017
	700,000	2,100,000	2,100,000	\$0.06	12/17/2018
Evan Myrianthopoulos	150,000	-	-	\$0.35	11/14/2012
	50,000	-	-	\$0.90	9/15/2013
	50,000	-	-	\$0.58	6/11/2014
	150,000	-	-	\$0.47	11/10/2014
	500,000	-	-	\$0.49	12/13/2014
	375,000	25,000	25,000		5/10/2016
	309,375	240,625	240,625		8/29/2017
	300,000	900,000	900,000	\$0.06	12/17/2018
Robert N. Brey	10,000	-	-	\$2.00	2/23/2009
	9,000	-	-	\$3.94	2/08/2010
	562,500	37,500	37,500	\$0.33	5/10/2016
	125,000	75,000	75,000		8/29/2017
	200,000	600,000	600,000	\$0.06	12/17/2018

Outstanding Equity Awards at Fiscal Year-End

Compensation of Directors

The following table contains information concerning the compensation of the non-employee directors during the fiscal year ended December 31, 2008.

Director Compensation

Name	Fees Earned Paid in Cash (\$) (1)	Option Awards (\$) (2)	Total (\$)
James S. Kuo	\$16,000	\$-	\$16,000
Cyrille F. Buhrman	\$9,000	\$-	\$9,000

- (1) Directors who are compensated as full-time employees receive no additional compensation for service on our Board of Directors. Each independent director who is not a full-time employee is paid \$2,000 for each board or committee meeting attended (\$1,000 if such meeting was attended telephonically).
 - (2) We maintain a stock option grant program pursuant to the nonqualified stock option plan, whereby members of our Board of Directors or its committees who are not full-time employees receive an initial grant of fully vested options to purchase 300,000 shares of common stock, and subsequent prorated annual grants of fully vested options to purchase 150,000 shares of common stock after re-election to our Board of Directors. During 2008, we did not hold an annual meeting. As a result there were no stock options granted to the Board of Directors in 2008. Option Awards include the value of stock option awards of vested shares of Common Stock as required by FASB No. 123R.

Consideration and Determination of Executive and Director Compensation

The Compensation Committee of the Board of Directors is comprised of independent directors. The Compensation Committee provides overall guidance on compensation and benefits policy. In addition, the Compensation Committee approves and monitors:

- executive compensation and benefits programs;
 - executive employment agreements;
- 1995 Amended and Restated Omnibus Incentive Plan; and
 - Amended 2005 Equity Incentive Plan.

The primary objectives of the Compensation Committee are to ensure that the executive compensation and benefits programs:

- are competitive with other growing companies of similar size and business;
- are effective in driving performance to achieve financial goals and create stockholder value;
 - are cost-efficient and fair to employees, management and stockholders; and
- are designed to attract, motivate, reward, and retain the competent and talented executives needed.

To achieve these objectives, the Compensation Committee meets at least once and usually several times during each fiscal year to review the existing compensation and benefits programs and to consider modifications that seek to provide a direct relationship between executive compensation and sustained corporate performance.

The Compensation Committee makes executive compensation decisions on the basis of total remuneration and seeks to create an integrated total remuneration program structured to balance short and long-term financial goals. A significant amount of total compensation is comprised of bonus provisions which are specified in their contracts and which are intended to align executive interest with stockholder interest.

The Compensation Committee recommends to the Board of Directors a salary within a designated band for the respective executives, which is based on merit, performance and length of service. Bonus provisions for all executives are based on increase (if any) of net incremental profit over prior year highest net profit, subject to guaranteed minimum bonuses.

Non-executive employees were granted stock options under the Amended 2005 Equity Incentive Plan, approved by the stockholders, also in order to motivate, reward, and retain them while meeting goals and allowing them to share in the growth.

Stock Performance Graph

The following graph compares the changes over the last five years in the value of \$100 invested at December 31, 2003 in (i) our Common Stock, (ii) the Standard & Poor's 500 Stock Index ("S&P 500 Index") and (iii) the American Stock Exchange Biotech Stocks indices. The year-end values of each investment are based on share price appreciation and the reinvestment of all dividends.

Historical stock price performance shown on the performance graph is not necessarily indicative of future stock price performance.

Year	DOR BioPharma, Inc.	S&P 500 Index	Peer Group Index: BTK Index – BioTech on Amex
2003	100.00	100.00	100.00
2004	82.05	108.99	111.05
2005	34.62	112.26	138.93
2006	31.41	127.52	153.44
2007	21.79	132.02	160.48
2008	7.69	81.23	132.01

SECURITY OWNERSHIP OF PRINCIPAL STOCKHOLDERS AND MANAGEMENT

The table below provides information regarding the beneficial ownership of the common stock as of April 14, 2009 of (1) each person or entity who owns beneficially 5% or more of the shares of our outstanding common stock, (2) each of our directors, (3) each of the Named Executive Officers, and (4) our directors and officers as a group. Except as otherwise indicated, and subject to applicable community property laws, we believe the persons named in the table have sole voting and investment power with respect to all shares of common stock held by them.

Name of Beneficial Owner	Shares of Common Stock Beneficially Owned	Percent of Class
Sigma-Tau Pharmaceuticals, Inc. (1)	41,666,667	25.0%
Biotex Pharma Investments, LLC (2)	40,000,000	21.4%
Cyrille F. Buhrman (3)	5,125,020	3.0%
Christopher J. Schaber (4)	4,247,639	2.5%
Evan Myrianthopoulos (5)	2,277,905	1.4%
Robert N. Brey(6)	1,009,000	*
James Clavijo (7)	950,691	*
James S. Kuo (8)	630,000	*
Gregg A. Lapointe (9)	300,000	*
Brian L. Hamilton (10)	312,500	*
All directors and executive officers as a group (8 persons)	14,852,755	8.9%

* Indicates less than 1%.

** Beneficial ownership is determined in accordance with the rules of the SEC. Shares of common stock subject to options or warrants currently exercisable or exercisable within 60 days of April 14, 2009 are deemed outstanding for computing the percentage ownership of the stockholder holding the options or warrants, but are not deemed outstanding for computing the percentage ownership of any other stockholder. Percentage of ownership is based on 167,070,944 shares of common stock outstanding as of April 14, 2009.

(1) Includes 41,666,667 shares of common stock. The amount does not include 1,546,870 shares of common stock held by Paolo Cavazza, one of the principal owners of Sigma-Tau. The address of Sigma-Tau Pharmaceuticals, Inc. is c/o Sigma-Tau Pharmaceuticals, Inc., 800 South Frederick Avenue, Suite 300, Gaithersburg, Maryland 20877.

(2) Includes 20,000,000 shares of common stock and warrants to purchase 20,000,000 shares of common stock within 60 days of April 14, 2009. The address of Biotex Pharma Investments, LLC is c/o Biotex Pharma Investments, LLC, 220 West 42nd Street 6th Floor New York, NY 10036.

(3) Includes 4,900,020 shares of common stock and options to purchase 225,000 shares of common stock within 60 days of April 14, 2009. The address of Mr. Buhrman is c/o DOR BioPharma, 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540.

(4) Includes 392,766 shares of common stock owned by Dr. Schaber and options to purchase 3,854,893 shares of common stock within 60 days of April 14, 2009. The address of Dr. Schaber is c/o DOR BioPharma, 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540.

(5) Includes 224,780 shares of common stock owned by Mr. Myrianthopoulos and his wife, options to purchase 2,053,125 shares of common stock within 60 days of April 14, 2009. The address of Mr. Myrianthopoulos is c/o DOR BioPharma, 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540.

(6) Includes options to purchase 1,009,000 shares of common stock within 60 days of April 14, 2009. The address of Dr. Brey is c/o DOR BioPharma, 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540.

(7) Includes 88,191 shares of common stock owned by Mr. Clavijo and options to purchase 862,500 shares of common stock within 60 days of April 14, 2009. The address of Mr. Clavijo is c/o DOR BioPharma, 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540.

(8) Includes options to purchase 625,000 shares of common stock and warrants to purchase 5,000 shares of common stock within 60 days of April 14, 2009. The address of Dr. Kuo is c/o DOR BioPharma, 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540.

(9) Includes options to purchase 300,000 shares of common stock within 60 days of April 14, 2009. The address of Mr. Lapointe is c/o DOR BioPharma, 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540.

(10) Includes options to purchase 312,500 shares of common stock within 60 days of April 14, 2009. The address of Dr. Hamilton is c/o DOR BioPharma, 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540.

EQUITY COMPENSATION PLAN INFORMATION

In December 2005, our Board of Directors approved the 2005 Equity Incentive Plan, which was approved by stockholders on December 29, 2005. In September 2007, our stockholders approved an amendment to the 2005 Equity Incentive Plan to increase the maximum number of shares of our common stock available for issuance under the plan by 10,000,000 shares, bringing the total shares reserved for issuance under the plan to 20,000,000 shares. The following table provides information, as of December 31, 2008, with respect to options outstanding under our 1995 Amended and Restated Omnibus Incentive Plan and our 2005 Equity Incentive Plan.

Plan Category	Number of Securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-Average Exercise Price Outstanding options, warrants and rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in the first column)
Equity compensation plans approved by security holders (1)		\$ 0.27	3,547,331
Equity compensation plans not approved by security holders	-		-
TOTAL	16,370,039	\$0.27	3,547,331

(1) Includes our 1995 Amended and Restated Omnibus Incentive Plan and our 2005 Equity Incentive Plan. Our 1995 Plan expired in 2005 and thus no securities remain available for future issuance under that plan. Under the amended 2005 equity incentive plan, we have issued 1,482,669 shares to individuals as payment for services in the amount of \$380,342 as allowed in the plan.

[The remainder of the page is intentionally left blank.]

PROPOSAL 2 AMENDMENT TO OUR AMENDED AND RESTATED CERTIFICATE OF INCORPORATION TO INCREASE THE NUMBER OF AUTHORIZED SHARES

General

Our Amended and Restated Certificate of Incorporation currently provides for 250,000,000 shares of authorized Common Stock. Our Board of Directors has adopted a resolution to amend our Amended and Restated Certificate of Incorporation to increase the authorized number of shares of Common Stock to 400,000,000, subject to stockholder approval of the amendment. No changes will be made to the number of authorized shares of our preferred stock.

The proposed amendment to our Amended and Restated Certificate of Incorporation will be effected by amending the introductory paragraphs of Article IV thereof to read in full as follows:

"The total number of shares of capital stock of all classes which the Corporation shall have authority to issue is four hundred five million (405,000,000) shares, of which four hundred million (400,000,000) shares, of par value of \$.001 per share, shall be of a class designated "Common Stock," four million six hundred thousand (4,600,000) shares, of a par value of \$.001 per share, shall be of a class designated "Preferred Stock," two hundred thousand (200,000) shares, of a par value of \$.05 per share, shall be of a class designated "Series B Convertible Preferred Stock," and two hundred thousand (200,000) shares, of a par value of \$.05 per share, of a par value of \$.05 per share. Shall be of a class designated "Series B Convertible Preferred Stock," and two hundred thousand (200,000) shares, of a par value of \$.05 per share. Shall be of a class designated "Series B Convertible Preferred Stock," and two hundred thousand (200,000) shares, of a par value of \$.05 per share. Shall be of a class designated "Series B Convertible Preferred Stock," and two hundred thousand (200,000) shares, of a par value of \$.05 per share. Shall be of a class designated "Series C Convertible Preferred Stock."

The designations, powers, preferences, privileges, and relative, participating, option, or other special rights and qualifications, limitations, or restrictions of the above classes of capital stock shall be as follows:"

A copy of the proposed amendment to our Amended and Restated Certificate of Incorporation is set forth in Annex A attached hereto.

Purpose of Charter Amendment

As of April 14, 2009, we had 167,070,944 shares of Common Stock outstanding. In addition, as of such date, 41,383,755 shares were reserved for issuance upon exercise of outstanding warrants and 17,860,039 shares were reserved for issuance upon exercise of presently outstanding options under the 1995 Amended and Restated Omnibus Incentive Plan and options granted under the Amended 2005 Equity Incentive Plan. Based upon the foregoing number of outstanding and reserved shares of Common Stock, we have 23,685,262 shares remaining available for other purposes. We also have 2,047,331 shares available for future option grants under the Amended 2005 Equity Incentive Plan and zero shares available for future option grants under the 1995 Amended and Restated Omnibus Incentive Plan.

The proposed increase in the number of shares available for issuance under our Amended and Restated Certificate of Incorporation is intended to provide the Board of Directors with authority, without further action of the stockholders, to issue the additional shares of Common Stock, from time to time in such amounts as the Board of Directors deems necessary. Without limitation of the foregoing, the additional shares may be issued in connection with (1) capital raising transactions through the sale of Common Stock and/or securities convertible into or exercisable for Common Stock in the private and/or public equity markets to support a higher level of growth, respond to competitive pressures, develop new products and services and support new strategic partnership expenditures, and (2) strategic partnering or acquisition transactions involving the issuance of our securities as well as to meet long-term corporate objectives.

The need to increase the authorized is primarily driven by our desire to have sufficient shares available for possible merger and acquisition activities, rights offerings, and other corporate development objectives that may occur over the

coming years. However, we have no present plans to engage in such activities.

In the absence of a proportionate increase in our earnings and book value, an increase in the aggregate number of outstanding shares of Common Stock caused by the issuance of the additional shares would dilute the earnings per share (including projected future earnings per share) and book value per share of all outstanding shares of our Common Stock. If such factors were reflected in the price per share of the Common Stock, the potential realizable value of a stockholder's investment could be adversely affected. An issuance of additional shares of Common Stock could therefore have an adverse effect on the potential realizable value of a stockholder's investment. The holders of outstanding shares of Common Stock have no preemptive rights to purchase additional shares.

The proposed increase in the authorized number of shares of Common Stock could have other effects on our stockholders. The increase could deter takeovers, in that additional shares could be issued (within the limits imposed by applicable law) in one or more transactions that could make a change in control or takeover of us more difficult. For example, additional shares could be issued by us so as to dilute the stock ownership or voting rights of persons seeking to obtain control. Similarly, the issuance of additional shares to certain persons allied with our management could have the effect of making it more difficult to remove our current management by diluting the stock ownership or voting rights of persons seeking to cause such removal.

Recommendation of the Board of Directors

The Board of Directors recommends that you vote "FOR" the approval of the amendment to our Amended and Restated Certificate of Incorporation.

[The remainder of the page is intentionally left blank.]

PROPOSAL 3 RATIFICATION OF INDEPENDENT AUDITORS

The Audit Committee of the Board of Directors appointed Amper, Politziner & Mattia, LLP, independent certified public accountants, as auditors of our financial statements for the year ending December 31, 2009, subject to the ratification of such appointment by stockholders at the Annual Meeting.

A representative of Amper, Politziner & Mattia, LLP is expected to be available at the annual meeting, will have the opportunity to make a statement if he or she desires to do so, and will be available to respond to appropriate questions.

Recommendation of the Board of Directors

The Board of Directors recommends that you vote "FOR" ratification of Amper, Politziner & Mattia, LLP as our independent auditors for the year ending December 31, 2008.

December 31,

Fees for the years ended December 31, 2007 and 2008

	2008	2007
	2000	2007
Audit fees	\$107,302	\$82,311
Audit related fees	6,254	4,000
Tax fees	9,229	10,202
Total	\$122,785	\$96,513

Audit Fees

The preceding table highlights the aggregate fees billed during the years ended December 31, 2008 and 2007 by Sweeney, Matz & Co., LLC, our principal accountants in 2008 and 2007 for services performed during the audit for each of those years and reviews of our financial statements included in our Quarterly Reports on Form 10-Q during those fiscal years. Although Amper was engaged for the December 31, 2008 audit, our fees related to them will be incurred in 2009.

Audit Related Fees

The aggregate fees billed for audit related fees such as registration statements and related services during the years ended December 31, 2008 and 2007 were \$6,254 and \$4,000, respectively.

Tax Fees

Sweeney, Matz & Co., LLC billed us \$9,229 and \$10,202 for tax compliance for the year ended December 31, 2008 and 2007, respectively. We have engaged Gentile, Pismeny & Brengel, LLP as our new tax advisors. Our fees associated with our 2008 tax returns will be incurred in 2009.

Other Fees

Our principal accountant did not bill us for any services or products other than as reported above during our fiscal years ended December 31, 2008 and 2007.

Pre Approval Policies and Procedures

The audit committee has adopted a policy that requires advance approval of all audit services and permitted non-audit services to be provided by the independent auditor as required by the Exchange Act. The audit committee must approve the permitted service before the independent auditor is engaged to perform it.

The audit committee approved all of the services described above in accordance with its pre-approval policies and procedures.

OTHER MATTERS

Deadline for Stockholder Proposals

Under SEC Rule 14a-8, stockholder proposals for the Annual Meeting of Stockholders to be held in 2009 will not be included in the proxy statement for that meeting unless the proposal is proper for inclusion in the proxy statement and for consideration at the next Annual Meeting of Stockholders, and is received by our Secretary at our executive offices, no later than December 25, 2009. Stockholders must also follow the other procedures prescribed in SEC Rule 14a-8 under the Exchange Act, as well as our By-Laws, which contain requirements that are separate and apart from the SEC requirements of Rule 14a-8. Our By-Laws provide that stockholders desiring to bring business before the 2009 Annual Meeting, including nomination of a person for election to our Board of Directors, must provide written notice to our Secretary at our executive offices no earlier than 75 days, and no later than 45 days, before the one year anniversary of the mailing of this proxy statement. The written notice must include the information required by Section 2.4 of the By-Laws: (a) as to each person whom the stockholder proposes to nominate for election or reelection as a director, all information relating to such person as would be required to be disclosed in solicitations of proxies for the election of such nominee as a director pursuant to Regulation 14A under the Exchange Act, and such person's written consent to serve as a director if elected; (b) as to any other business that the stockholder proposes to bring before the meeting, a brief description of such business, the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made; and (c) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (i) the name and address of such stockholder, as they appear on our books, and of such beneficial owner, (ii) the class and number of shares of the Company that are owned beneficially and of record by such stockholder and such beneficial owner, and (iii) whether either such stockholder or such beneficial owner intends to deliver a proxy statement and form of proxy to holders of, in the case of a proposal, at least the percentage of our voting shares required under applicable law to carry the proposal or, in the case of a nomination or nominations, a sufficient number of holders of our voting shares to elect such nominee or nominees.

Householding of Annual Meeting Materials

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of our proxy statement or annual report may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you if you notify our Secretary at our executive offices. If you wish to receive separate copies of the annual report and proxy statement in the future, or if you are receiving multiple copies and would like to receive only one copy for your household, you should contact your bank, broker, or other nominee record holder, or you may contact us at our executive offices.

Financial Statements and Exhibits to Form 10-K

Our financial statements are contained in our Annual Report on Form 10-K for our fiscal year ended December 31, 2008 that was filed with the Securities and Exchange Commission on March 30, 2009, a copy of which is made available with this proxy statement. Such report and the financial statements contained therein are not to be considered as a part of this soliciting material.

The Form 10-K made available with this proxy statement does not include copies of the exhibits to that filing. We will furnish any such exhibit upon payment of a reasonable fee by request sent to us, c/o Corporate Secretary, DOR BioPharma, Inc., 29 Emmons Drive, Suite C-10, Princeton, New Jersey 08540.

Other Matters

Management knows of no matters that are to be presented for action at the meeting other than those set forth above. If any other matters properly come before the meeting, the persons named in the form of proxy will vote the shares represented by proxies in accordance with their judgment on such matters.

The cost of this proxy solicitation will be borne by us. In addition to the solicitation of proxies by mail, our directors, officers and employees may also solicit proxies by telephone, facsimile, e-mail or other forms of communication, without special compensation for such activities. We will also request banks, brokers, fiduciaries, custodians, nominees and certain other record holders to send proxies, proxy statements and other materials to their principals at our expense. We will reimburse such banks, brokers, fiduciaries, custodians, nominees and other record holders for their reasonable out-of-pocket expenses of solicitation.

By order of the Board of Directors,

/s/ James Clavijo James Clavijo Secretary

ANNEX A

CERTIFICATE OF AMENDMENT

ТО

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

DOR BIOPHARMA, INC.

THE UNDERSIGNED, being a duly appointed officer of DOR BioPharma, Inc. (the "Corporation"), a corporation organized and existing under and by virtue of the Delaware General Corporation Law of the State of Delaware (the "DGCL"), for the purpose of amending the Corporation's Amended and Restated Certificate of Incorporation, as amended to the date hereof (the "Certificate of Incorporation"), hereby certifies, pursuant to Sections 242 and 103 of the DGCL, as follows:

FIRST: The name of the corporation is DOR BioPharma, Inc.

SECOND: The Amended and Restated Certificate of Incorporation, as amended, of the Corporation is hereby amended by striking out the first introductory paragraphs of Article IV thereof, and by substituting in lieu thereof, the following new introductory paragraphs:

"The total number of shares of capital stock of all classes which the Corporation shall have authority to issue is four hundred five million (405,000,000) shares, of which four hundred million (400,000,000) shares, of par value of \$.001 per share, shall be of a class designated "Common Stock," four million six hundred thousand (4,600,000) shares, of a par value of \$.001 per share, shall be of a class designated "Preferred Stock," two hundred thousand (200,000) shares, of a par value of \$.05 per share, shall be of a class designated "Series B Convertible Preferred Stock," and two hundred thousand (200,000) shares, of a par value of \$.05 per share, shall be of a class designated "Series C Convertible Preferred Stock."

The designations, powers, preferences, privileges, and relative, participating, option, or other special rights and qualifications, limitations or restrictions of the above classes of capital stock shall be as follows:"

THIRD: The Amendment of the Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of Sections 228 and 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the undersigned has made and signed this Certificate of Amendment this [] day of [], 2009 and affirms the statements contained herein as true under penalty of perjury.

Name: Christopher J. Schaber, Ph.D.

Title: President and Chief Executive Officer

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS OF DOR BIOPHARMA, INC. 29 Emmons Drive, Suite C-10, Princeton, NJ 08540

ANNUAL MEETING OF STOCKHOLDERS - JUNE 5, 2009

The undersigned hereby appoints Christopher J. Schaber, Ph.D., the Chief Executive Officer and President of DOR BioPharma, Inc., and Evan Myrianthopoulos, the Chief Financial Officer of DOR BioPharma, Inc., or either of them, each with the power of substitution, and hereby authorizes each of them to represent and to vote as designated on the reverse side of this proxy card, all of the shares of Common Stock of DOR BioPharma, Inc. that the undersigned is entitled to vote at the Annual Meeting of Stockholders to be held at Wyndham Princeton Forrestal Hotel and Conference Center, Meeting Room: Witherspoon C, 900 Scudders Mill Road, Plainsboro, New Jersey 08536, on June 5, 2009 at 10:00 a.m.Eastern Daylight Time, or any adjournment or postponement thereof.

THIS PROXY WHEN PROPERLY EXECUTED WILL BE VOTED AS DIRECTED BY THE UNDERSIGNED STOCKHOLDER AND IN THE DISCRETION OF THE PROXIES ON SUCH MATTERS AS MAY PROPERLY COME BEFORE THE ANNUAL MEETING OR ANY ADJOURNMENTS OR POSTPONEMENTS THEREOF. IF NO SUCH DIRECTIONS ARE MADE, THIS PROXY WILL BE VOTED FOR THE ELECTION OF THE NOMINEES LISTED ON THE REVERSE SIDE OF THIS PROXY CARD FOR THE BOARD OF DIRECTORS AND FOR EACH OF THE OTHER PROPOSALS SET FORTH ON THE REVERSE SIDE.

The Board of Directors recommends you vote (1) "FOR" the election of all of the named nominees as directors; (2) "FOR" the amendment to our Company's Amended and Restated Certificate of Incorporation, as amended, to increase the authorized shares from 250,000,000 to 400,000,000 shares; and (3) "FOR" the ratification of Amper, Politziner & Mattia, LLP as our independent auditors for the fiscal year ending December 31, 2009.

CONTINUED AND TO BE SIGNED ON REVERSE

B-1

ANNUAL MEETING OF STOCKHOLDERS OF

DOR BIOPHARMA, INC.

June 5, 2009

Proxy Voting Instructions

MAIL—If you have received a proxy card, date, sign and mail your proxy card in the envelope provided as soon as possible.

-or-

TELEPHONE—Call toll-free 1-800-PROXIES (1-800-776-9437) from any touch-tone telephone and follow the instructions. Have your proxy card available when you call.

-or-

INTERNET—Access www.voteproxy.com and follow the on-screen instructions. Have your proxy card available when you access the web page.

You may enter your voting instructions at 1-800-PROXIES or www.voteproxy.com up until 11:59 P.M. Eastern Daylight Time the day before the cut-off or meeting date.

Company Number:

Account Number:

/Please detach along perforated line and mail in the envelope provided IF you are not voting via telephone or the Internet/

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE ELECTION OF DIRECTORS AND "FOR" PROPOSALS 2, AND 3. PLEASE SIGN, DATE AND RETURN PROMPTLY. PLEASE MARK YOUR VOTE IN BLUE OR BLACK INK AS SHOWN HERE /X/

1. To elect five directors to serve until the next Annual Meeting of Stockholders or until their respective successors have been duly elected and qualified:

FOR ALL NOMINEES

WITHHOLD AUTHORITY FOR ALL NOMINEES

FOR ALL EXCEPT (See instructions below

James S. Kuo, M.D., M.B.A.

Christopher J. Schaber, Ph.D. Evan Myrianthopoulos Cyrille F. Buhrman Gregg A. Lapointe, C.P.A., M.B.A.

*(INSTRUCTION: To withhold authority to vote for any individual nominee(s), mark "FOR ALL EXCEPT" and fill in the circle next to each nominee you wish to withhold, as shown here: /x/

2. To approve the amendment to the Company's Amended and Restated Certificate of Incorporation, as amended, in order to increase the authorized number of shares from 250,000,000 to 400,000,000 shares:

FOR AGAINST ABSTAIN

3. To ratify the appointment of Amper, Politziner & Mattia, LLP as the independent auditors for fiscal year ending December 31, 2009:

FOR AGAINST ABSTAIN

This proxy when properly signed will be voted in the manner directed herein by the undersigned stockholder and in the discretion of the proxies on such matters as may properly come before the Annual Meeting or any adjournments or postponements thereof. IF NO DIRECTION IS PROVIDED, THIS PROXY WILL BE VOTED AS RECOMMENDED BY THE BOARD OF DIRECTORS.

IMPORTANT - PLEASE SIGN AND RETURN PROMPTLY

To change the address on your account, please check the box at right and indicate your new address in the address space above. Please note that changes to the registered name(s) on the account may not be submitted via this method.

Signature:

Date:

Signature:

Date:

Note: Please sign exactly as name appears on this Proxy. When shares are held jointly, each holder should sign. When signing as executor, administrator, attorney, trustee or guardian, please give full title as such. If the signer is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.