
United States
Securities and Exchange Commission
Washington, D.C. 20549

SCHEDULE 14A INFORMATION

**PROXY STATEMENT PURSUANT TO SECTION 14(A) OF
THE SECURITIES EXCHANGE ACT OF 1934**

Filed by Registrant
Filed by a Party other than the Registrant

Check the appropriate box:

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

LANTERN PHARMA INC.
(Name of Registrant as Specified In Its Charter)

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

Payment of Filing Fee (Check the appropriate box):

- No fee required.
 Fee paid previously with preliminary materials
 Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11.
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April 29, 2024

Dear Stockholder:

You are cordially invited to attend the 2024 Annual Meeting of Stockholders (which we refer to as the “Annual Meeting”) of Lantern Pharma Inc., a Delaware corporation (which we refer to as “Lantern,” “we,” “us,” “our,” or the “Company”), to be held at 11:00 a.m. Eastern time, on Thursday, June 13, 2024.

This year’s Annual Meeting will be conducted via live audio webcast and online stockholder tools. Stockholders will be able to attend and listen to the Annual Meeting live, submit questions and vote their shares electronically at the Annual Meeting from virtually any location around the world.

At the Annual Meeting, you will be asked to consider and vote upon the following proposals to: (1) elect five (5) directors to serve for the ensuing year as members of the Board of Directors of the Company; (2) approve an amendment to the Second Amended and Restated 2018 Lantern Pharma Inc. Equity Incentive Plan, as amended, to increase the number of shares of the Company’s common stock available for issuance under the plan by an additional 125,000 shares; (3) ratify the appointment of EisnerAmper LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2024; and (4) approve an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the foregoing proposals. The accompanying Proxy Statement describes these matters in more detail. We urge you to read this information carefully.

The Board of Directors recommends a vote: FOR each of the five (5) nominees for director named in the Proxy Statement; FOR the approval of the amendment to the Second Amended and Restated Lantern Pharma Inc. 2018 Equity Incentive Plan, as amended; FOR the ratification of the appointment of EisnerAmper LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2024; and FOR an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the foregoing proposals.

Whether or not you plan to attend the Annual Meeting in person, and regardless of the number of shares of Lantern that you own, it is important that your shares be represented and voted at the Annual Meeting. Therefore, I urge you to vote your shares of common stock via the Internet or by promptly marking, dating, signing, and returning a proxy card via mail. Voting over the Internet, or by written proxy, will ensure that your shares are represented at the Annual Meeting.

On behalf of the Board of Directors of Lantern, we thank you for your participation.

Sincerely,

/s/ Donald J. Keyser

Donald J. Keyser,
Chairman of the Board of Directors

NOTICE OF 2024 ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON JUNE 13, 2024

The 2024 Annual Meeting of Stockholders (which we refer to as the “Annual Meeting”) of Lantern Pharma Inc., a Delaware corporation (which we refer to as “Lantern,” “we,” “us,” “our,” or the “Company”), will be held on Thursday, June 13, 2024 at 11:00 a.m. Eastern time. This year’s meeting is a virtual stockholder meeting conducted exclusively via a live audio webcast at www.virtualshareholdermeeting.com/LTRN2024. Stockholders will be able to attend and listen to the Annual Meeting live, submit questions and vote their shares electronically at the Annual Meeting from virtually any location around the world. In order to attend and vote at the Annual Meeting, please follow the instructions in the section titled “Voting at the Meeting” on page 3. We will consider and act on the following items of business at the Annual Meeting:

1. To elect five (5) directors to serve as members of the Board of Directors of the Company (which we refer to as our “Board”) until the next annual meeting of stockholders and until their successors are duly elected and qualified. The director nominees named in the Proxy Statement for election to our Board are: Donald Jeff Keyser, Panna Sharma, Vijay Chandru, Maria Maccacchini, and David S. Silberstein;
2. To approve an amendment to the Second Amended and Restated Lantern Pharma Inc. 2018 Equity Incentive Plan, as amended (the “Equity Incentive Plan”) to increase the number of shares of the Company’s common stock available for issuance under the Equity Incentive Plan by an additional 125,000 shares;
3. To ratify the appointment of EisnerAmper LLP as the Company’s independent registered public accounting firm for the year ending December 31, 2024; and
4. To approve an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the foregoing proposals.

We intend to commence mailing the Proxy Materials on or about May 7, 2024 to all stockholders entitled to vote at the Annual Meeting.

The accompanying Proxy Statement describes each of these items of business in detail. Only stockholders of record at the close of business on April 22, 2024 are entitled to receive notice of, attend and vote at the Annual Meeting or any continuation, postponement or adjournment thereof.

All stockholders are cordially invited to attend the Annual Meeting via the Internet at www.virtualshareholdermeeting.com/LTRN2024. To ensure your representation at the Annual Meeting, you are urged to vote your shares of common stock via the Internet or by promptly marking, dating, signing, and returning the proxy card via mail. Voting instructions are provided on the proxy card and included in the accompanying Proxy Statement. Any stockholder attending the Annual Meeting may vote at the meeting even if he or she previously submitted a proxy. If your shares of common stock are held by a bank, broker or other agent, please follow the instructions from your bank, broker or other agent to have your shares voted.

/s/ Donald J. Keyser

Donald J. Keyser,
Chairman of the Board of Directors

Dallas, Texas
April 29, 2024

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Exhibits:

[EXHIBIT A: AMENDMENT TO SECOND AMENDED AND RESTATED LANTERN PHARMA INC. 2018 EQUITY INCENTIVE PLAN, AS AMENDED](#)

INFORMATION ABOUT THE ANNUAL MEETING

General

Your proxy is solicited on behalf of the Board of Directors (which we refer to as our “Board”) of Lantern Pharma Inc., a Delaware corporation (which we refer to as “Lantern,” “we,” “us,” “our,” or the “Company”), for use at our 2024 Annual Meeting of Stockholders (which we refer to as the “Annual Meeting”). This year’s meeting is a virtual stockholder meeting conducted exclusively via a live audio webcast at www.virtualshareholdermeeting.com/LTRN2024. The Annual Meeting will be held on Thursday, June 13, 2024, at 11:00 a.m. Eastern time, or at any continuation, postponement or adjournment thereof, for the purposes discussed in this Proxy Statement. Proxies are solicited to give all stockholders of record an opportunity to vote on matters properly presented at the Annual Meeting.

Important Notice Regarding the Availability of Proxy Materials for the Stockholders’ Meeting to Be Held Via the Internet at www.virtualshareholdermeeting.com/LTRN2024

on Thursday, June 13, 2024 at 11:00 a.m. Eastern time

The Annual Report, Notice of Meeting, Proxy Statement and Proxy Card are available at www.proxyvote.com

We intend to commence mailing this Proxy Statement, the proxy card and the Notice of Annual Meeting on or about May 7, 2024 to all stockholders entitled to vote at the Annual Meeting. If you would like a hard copy of the proxy materials for this Annual Meeting, or any future stockholder meetings, mailed or emailed to you, please contact us at the above address or at our webpage <http://ir.lanternpharma.com/>, or telephone us at 628-777-3153 or email us at ir@lanternpharma.com.

How to Attend

You are entitled to attend and participate in the Annual Meeting if you were a stockholder as of the close of business on April 22, 2024, the record date, or hold a valid proxy for the meeting. To attend the Annual Meeting, you must access the meeting website at www.virtualshareholdermeeting.com/LTRN2024 and enter the control number set forth on your proxy card or, if you hold your shares in street name, the control number set forth in the voting instruction form delivered to you by your broker. In order to participate in the virtual meeting, including to vote, ask questions and to view the list of registered stockholders as of the record date during the meeting, you must access the meeting website at www.virtualshareholdermeeting.com/LTRN2024 and enter the control number that may be found on your proxy card. The meeting webcast will begin promptly at 11:00 a.m. Eastern Time. Online check-in will begin approximately 15 minutes before then and we encourage you to allow ample time for check-in procedures.

Who Can Vote, Outstanding Shares

Record holders of our common stock as of the close of business on April 22, 2024, the record date for the Annual Meeting, are entitled to vote at the Annual Meeting on all matters to be voted upon. As of the record date, there were 10,758,805 shares of our common stock outstanding, each entitled to one vote.

Voting of Shares

You may vote by attending the Annual Meeting and voting at the meeting or you may vote prior to the Annual Meeting through the Internet or by submitting a proxy. The method of voting by proxy differs for shares held as a record holder and shares held in “street name.” If you hold your shares of common stock as a record holder, you may vote your shares over the Internet or by completing, dating and signing the proxy card and promptly returning the proxy card via mail. If you hold your shares of common stock in street name, which means that your shares are held of record by a broker, bank or other nominee, you will receive a notice from your broker, bank or other nominee that includes instructions on how to vote your shares.

You may vote your shares as follows:

- To vote in person, attend the Annual Meeting and follow the procedures set forth in “Voting at the Meeting”, below.
- To vote through the Internet prior to the Annual Meeting, go to www.proxyvote.com and complete an electronic proxy card. You will be asked to provide the control number from the proxy card or, if you hold your shares in street name, the voting instruction form delivered to you by your broker. Your Internet vote must be received by 11:59 p.m., Eastern Time on June 12, 2024 to be counted.
- To vote prior to the Annual Meeting using the proxy card delivered to you, simply complete, sign, and date the proxy card and return it promptly in the envelope provided. If you return your signed proxy card to us before the Annual Meeting, we will vote your shares as you direct.
- To vote prior to the Annual Meeting using any touch-tone telephone, dial 1-800-690-6903. Have your proxy card or voting instruction form in hand and follow the instructions.

YOUR VOTE IS VERY IMPORTANT.

You should submit your proxy even if you plan to attend the Annual Meeting. If you properly give your proxy and submit it to us in time to vote, one of the individuals named as your proxy will vote your shares as you have directed. Any stockholder attending the Annual Meeting may vote in person even if he or she previously submitted a proxy.

All shares entitled to vote and represented by properly submitted proxies (including those submitted electronically and in writing) received before the polls are closed at the Annual Meeting, and not revoked or superseded, will be voted at the Annual Meeting in accordance with the instructions indicated on those proxies. If no direction is indicated on a proxy, your shares will be voted as follows:

- **FOR** each of the five (5) nominees for director named in the Proxy Statement;
- **FOR** approval of an amendment to the Second Amended and Restated Lantern Pharma Inc. 2018 Equity Incentive Plan, as amended (the “Equity Incentive Plan”) to increase the number of shares of the Company’s common stock available for issuance under the Equity Incentive Plan by an additional 125,000 shares;
- **FOR** the ratification of the appointment of EisnerAmper LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2024; and
- **FOR** an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the foregoing proposals.

With respect to any other matter that properly comes before the Annual Meeting or any continuation, postponement or adjournment thereof, the proxy-holders will vote as recommended by our Board, or if no recommendation is given, in their own discretion.

Revocation of Proxy

If you are a stockholder of record, you may revoke your proxy at any time before your proxy is voted at the Annual Meeting by taking any of the following actions:

- delivering to our corporate secretary a signed written notice of revocation, bearing a date later than the date of the proxy, stating that the proxy is revoked;
- signing and delivering a new proxy card, relating to the same shares and bearing a later date than the original proxy card;
- submitting another proxy over the Internet (your latest Internet voting instructions are followed); or
- attending the Annual Meeting and voting in person, although attendance at the Annual Meeting will not, by itself, revoke a proxy.

Written notices of revocation and other communications with respect to the revocation of Company proxies should be addressed to:

Lantern Pharma Inc.
1920 McKinney Avenue, 7th Floor
Dallas, Texas 75201
Attention: Corporate Secretary

If your shares are held in "street name," you may change your vote by submitting new voting instructions to your broker, bank or other nominee. You must contact your broker, bank or other nominee to find out how to do so. See below regarding how to vote in person if your shares are held in street name.

Voting at the Meeting

If you are a stockholder of record or hold your shares of common stock in street name, you can vote at the virtual Annual Meeting by accessing the meeting website at www.virtualshareholdermeeting.com/LTRN2024, entering the control number found on your proxy card or, if you hold your shares of common stock in street name, entering the control number on the voting instruction form delivered to you by your broker and following the instructions on the website for voting at the Annual Meeting.

Additional information regarding the rules and procedures for participating in the Annual Meeting will be set forth in our meeting rules of conduct, which stockholders can view during the meeting at the meeting website. We will also post a recording of the meeting on our investor relations website, which will be available for replay following the meeting for 60 days.

Quorum and Votes Required

The inspector of election appointed for the Annual Meeting will tabulate votes cast by proxy or in person at the Annual Meeting. The inspector of election will also determine whether a quorum is present. In order to constitute a quorum for the conduct of business at the Annual Meeting, not less than a majority of the voting power of all of the shares of the stock entitled to vote at the Annual Meeting must be present in person or represented by proxy at the Annual Meeting. Shares that abstain from voting on any proposal, or that are represented by broker non-votes (as discussed below), will be treated as shares that are present and entitled to vote at the Annual Meeting for purposes of determining whether a quorum is present. If there is no quorum, the Chair of the Annual Meeting or the holders of a majority of the shares present at the Annual Meeting in person or represented by proxy and entitled to vote may adjourn the Annual Meeting to another date.

A broker non-vote occurs when a broker, bank or other agent holding shares for a beneficial owner has not received instructions from the beneficial owner and does not have discretionary authority to vote the shares for certain non-routine matters. Shares represented by proxies that reflect a broker non-vote will be counted for purposes of determining the presence of a quorum. We believe that the election of directors (Proposal 1) will be considered a non-routine matter and broker non-votes, if any, will have no effect on the result of the vote. We believe that the amendment of the Equity Incentive Plan (Proposal 2) will be considered a non-routine matter and broker non-votes, if any, will not be counted as present and entitled to vote at the Annual Meeting. We believe that the ratification of the appointment of EisnerAmper LLP as our independent registered public accounting firm (Proposal 3) will be considered a routine matter on which a broker, bank or other agent will have discretionary authority to vote, and on this basis we do not expect any broker non-votes in connection with this proposal.

Proposal No. 1: Election of Directors. A plurality of the votes cast by the holders of shares entitled to vote in the election of directors at the Annual Meeting is required for the election of directors. Accordingly, the five (5) director nominees receiving the highest number of votes will be elected. Abstentions and broker non-votes will not have any effect on the outcome of the election of directors.

Proposal No. 2: Amendment to Equity Incentive Plan. The affirmative vote of the holders of a majority of the shares of our common stock present in person or represented by proxy and entitled to vote at the Annual Meeting is required for the approval of the amendment of the Equity Incentive Plan (Proposal 2). An abstention on Proposal 2 will have the same effect as a vote against Proposal 2. A broker non-vote will not be counted as present and entitled to vote at the Annual Meeting and, therefore, will not have any effect on Proposal 2.

Proposal No. 3: Ratification of Independent Registered Public Accounting Firm. The affirmative vote of the holders of a majority of the votes present and entitled to vote at the Annual Meeting is required for the ratification of the appointment of EisnerAmper LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2024. We believe that brokers will have discretionary authority to vote on the ratification of our independent registered public accounting firm and, therefore, we do not expect there to be broker non-votes resulting from the vote on Proposal No. 3. Abstentions in connection with Proposal No. 3 will have the effect of a vote against this proposal.

Proposal No. 4: Approval to Adjourn the Annual Meeting. The affirmative vote of the holders of a majority of the votes present and entitled to vote at the Annual Meeting is required for the approval of an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Proposals 1, 2 or 3. We believe that brokers will have discretionary authority to vote on an adjournment of the Annual Meeting, if necessary, to solicit additional proxies and, therefore, we do not expect there to be broker non-votes resulting from the vote on Proposal No. 4. Abstentions in connection with Proposal No. 4 will have the effect of a vote against this proposal.

We will also consider any other business that properly comes before the Annual Meeting, or any adjournment or postponement thereof. As of the record date, we are not aware of any other matters to be submitted for consideration at the Annual Meeting. If any other matters are properly brought before the Annual Meeting, the persons designated as proxies will vote the shares as recommended by our Board, or if no recommendation is given, in their own discretion.

Solicitation of Proxies

Our Board is soliciting proxies for the Annual Meeting from our stockholders. We will bear the entire cost of soliciting proxies from our stockholders. In addition to the solicitation of proxies by delivery of this Proxy Statement by mail, we will request that brokers, banks and other nominees that hold shares of our common stock, which are beneficially owned by our stockholders, forward proxy materials to those beneficial owners and secure those beneficial owners' voting instructions. We will reimburse those record holders for their reasonable expenses. We do not intend to hire a proxy solicitor to assist in the solicitation of proxies. We may use several of our regular employees, who will not be specially compensated, to solicit proxies from our stockholders, either personally or by Internet, facsimile or special delivery letter.

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Stockholder List

A list of stockholders eligible to vote at the Annual Meeting will be available for inspection, for any purpose germane to the Annual Meeting, during the Annual Meeting at the meeting website and at the principal executive office of the Company during regular business hours for a period of no less than ten (10) days prior to the Annual Meeting.

Forward-Looking Statements

This Proxy Statement contains "forward-looking statements" (as defined in the Private Securities Litigation Reform Act of 1995). These statements are based on our current expectations and involve risks and uncertainties, which may cause results to differ materially from those set forth in the statements. The forward-looking statements may include statements regarding actions to be taken by us. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. Forward-looking statements should be evaluated together with the many uncertainties that affect our business, particularly those mentioned in the risk factors in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the Securities and Exchange Commission on March 18, 2024 (the "2023 Annual Report") and in our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K.

PROPOSAL NO. 1 ELECTION OF DIRECTORS

Board Nominees

Our Board currently consists of five (5) members, four (4) of whom are independent under the listing standards for independence of the NASDAQ and Rule 10A-3 under the Securities Exchange Act of 1934, as amended (which we refer to as the "Exchange Act"). Based upon the recommendation of the Nominating and Corporate Governance Committee of our Board, our Board determined to nominate the five (5) current members of the Board for election at the Annual Meeting.

Our Board and the Nominating and Corporate Governance Committee believe the following director nominees collectively have the experience, qualifications, attributes and skills to effectively oversee the management of the Company, including a high degree of personal and professional integrity, an ability to exercise sound business judgment on a broad range of issues, sufficient experience and background to have an appreciation of the issues facing the Company, a willingness to devote the necessary time to Board duties, a commitment to representing the best interests of the Company and our stockholders and a dedication to enhancing stockholder value.

Each director elected at the Annual Meeting will serve a one (1) year term until the Company's next annual meeting and until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. Unless otherwise instructed, the proxy-holders will vote the proxies received by them for the five (5) nominees named below. If any of the nominees is unable or declines to serve as a director at the time of the Annual Meeting, the proxies will be voted for any nominee designated by the present Board to fill the vacancy. It is not presently expected that any of the nominees named below will be unable or will decline to serve as a director.

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Set forth below are the names, ages and positions of our director nominees as of the date of this Proxy Statement:

Name	Age	Position
Donald Jeff Keyser ^{(a),(b)}	71	Chairman of the Board
Panna Sharma	53	Chief Executive Officer, President and Director
Vijay Chandru ^{(a),(c)}	70	Director
Maria Maccacchini ^{(a),(b)}	73	Director
David S. Silberstein ^(c)	73	Director

(a) Member of the Audit Committee of our Board.

(b) Member of the Compensation Committee of our Board.

(c) Member of the Nominating and Corporate Governance Committee of our Board.

Board Recommendation

OUR BOARD RECOMMENDS A VOTE "FOR" EACH OF THE FIVE (5) NOMINEES FOR DIRECTOR NAMED IN THIS PROXY STATEMENT.

Vacancies on our Board, including any vacancy created by an increase in the size of our Board, may be filled by a majority of the directors remaining in office (even though less than a quorum of our Board) or a sole remaining director. A director elected by our Board to fill a vacancy will serve until the next annual meeting of stockholders and until such director's successor is elected and qualified, or until such director's earlier retirement, resignation, disqualification, removal or death.

If any nominee should become unavailable for election prior to the Annual Meeting, an event that currently is not anticipated by our Board, the proxies will be voted in favor of the election of a substitute nominee or nominees proposed by our Board. Each nominee has agreed to serve if elected and our Board has no reason to believe that any nominee will be unable to serve.

Information about Director Nominees

Set forth below is biographical information for each nominee and a summary of the specific qualifications, attributes, skills and experiences which led our Board to conclude that each nominee should serve on our Board at this time. There are no family relationships among any of the directors, director nominees or executive officers of the Company.

Donald Jeff Keyser has served as a director since January 2018 and Chairman since November 2019. Since 2017, Dr. Keyser has served in leadership positions with Renibus Therapeutics, a company developing novel therapies for the diagnosis, treatment and prevention of kidney disease. Dr. Keyser founded Renibus and currently serves as director, president and chief executive officer. Dr. Keyser also served as chief operating officer of Renibus from 2017 until becoming chief executive officer in March 2024. Dr.

Keyser also founded ZS Pharma and served since 2008 as a director and chief operating officer of that company until December 2015 when it was acquired by Astra Zeneca for \$2.7 Billion. Dr. Keyser was the inventor of the Mucinex product line for Adams Respiratory Therapeutics. Dr. Keyser developed and executed the R&D and Regulatory strategy for Adams Respiratory Therapeutics as Vice President of Development and Regulatory Affairs during his period there from 1998 to 2004. Adams Respiratory Therapeutics was acquired by Reckitt Benckiser for \$2.3 Billion. He was previously employed as Chief Compliance Officer & Vice President Regulatory Affairs, Encysive Pharmaceuticals, Vice President Technical & Regulatory Affairs, Medeva Americas, Sr. Director Regulatory Affairs, Marion Merrell Dow and Regulatory Principal, Abbott Laboratories. Dr. Keyser received his Pharmacy degree from Creighton University, a Juris Doctorate from Creighton University, a MPA from the University of Missouri-Kansas City and a PhD in Economics from The University of Texas at Dallas. Based on the above qualifications, the Company believes Dr. Keyser is qualified to be on the Board.

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Panna Sharma has served as our Chief Executive Officer and President since July 2018 and a director since August 2018. As Chief Executive Officer, Mr. Sharma oversees our use of AI and genomics in developing our therapy product pipeline to innovate the rescue, revitalization and development of precision therapeutics in oncology. From May 2010 to February 2018, Mr. Sharma served as President, Chief Executive Officer and director of Cancer Genetics, a Nasdaq company and provider of DNA-based cancer diagnostics and services to medical institutions throughout the world. In 2001, Mr. Sharma founded TSG Partners, a specialty advisory group combining corporate strategy and corporate finance to create stockholder value for companies and investors in the life sciences, biotechnology and environmental sciences sectors. Prior to TSG, Mr. Sharma served in the roles of Senior Vice President of E-Business Solutions and Chief Strategy Officer at iXL Inc. (later merged with Scient). For the six years prior to his being at iXL Inc., Mr. Sharma helped successfully found, manage and sell or take public two other consulting and professional services firms. From 1996 to 1998, Mr. Sharma was a partner at Interactive Solutions, Inc. Prior to that, Mr. Sharma served as a consultant to Putnam Investment Management, LLC and Bank of America Corporation. Mr. Sharma currently serves as a Board member of Continental Lithium, Inc. Mr. Sharma holds a Bachelor of Science in the Philosophy of Science, Neural Networks and Artificial Intelligence from Boston University. Based on the above qualifications, the Company believes Mr. Sharma is qualified to be on the Board.

Vijay Chandru has served as a director since October 2019. Currently, Dr. Chandru is a co-founder of OPFORD Foundation, a non-profit in India with an open platform for orphan diseases and with a mission to support development of affordable and accessible therapeutics for orphan diseases of which many are rare genetic disorders. He was also a co-founder of Strand Life Sciences, India's leading precision medicine solutions company, an offshoot of the Indian Institute of Science, which now has over 20 diagnostic laboratories and over 800 employees spread across India. He served as Executive Chairman of Strand Life Sciences from 2000 to 2018, and currently serves as a Director and Chair of the Science Advisory Board at Strand Life Sciences. A technology pioneer of the World Economic Forum since 2006, he was elected President (2009-2012) of the Association of Biotech Led Enterprises (ABLE), the apex trade body that represents the Indian biotech industry. Dr. Chandru co-founded two startups in the last five years – Yantri Labs Inc. (an algorithmic trading technology company), and CrisprBits Private Limited, a CRISPR technology mediated company in diagnostics and gene-editing. Dr. Chandru serves as a Director of Yantri Labs and as the acting Chief Scientific Officer of CrisprBits. Dr. Chandru is an academic entrepreneur whose academic career has spanned almost four decades. After his doctoral work at MIT he was a tenured professor at Purdue University for a decade in the 1980s and at the Indian Institute of Science in Bangalore since then. A fellow of both the academy of science and engineering, he is currently an Indian National Academy of Engineering's Distinguished Technologist in Bio-Engineering. Based on the above qualifications, the Company believes Dr. Chandru is qualified to be on the Board.

Maria L. Maccacchini has served as a director since June 2022. Dr. Maccacchini founded Annovis Bio, Inc., a New York Stock Exchange listed, clinical stage, drug platform company addressing neurodegeneration, such as Alzheimer's disease and Parkinson's disease. She has served as President and CEO and as a director of Annovis since May 2008. Dr. Maccacchini has over 30 years of experience in neuroscience and the workings of the brain. She was partner and director of two angel groups, Robin Hood Ventures, from 2002 to 2009, and MidAtlantic Angel Group, from 2005 to 2009. In 1992, she founded and became chief executive officer of Symphony Pharmaceuticals/Annovis, a biotech company, which was sold in 2001 to Transgenomic. From 1987 to 1991 she was General Manager of Bachem Bioscience, the US subsidiary of Bachem AG, Switzerland and Head of Molecular Biology at Mallinckrodt. Dr. Maccacchini conducted post-doctoral research at Caltech and the Roche Institute of Immunology. She earned a Ph.D. in biochemistry from the Biocenter of Basel with a two-year visiting fellowship at The Rockefeller University. Dr. Maccacchini serves on several boards of biotechnology companies, organizations that promote entrepreneurship, international trade, women and charitable organizations. She has been a lecturer at Wharton Business School since 2016. Based on the above qualifications, the Company believes Dr. Maccacchini is qualified to be on the Board.

David S. Silberstein has served as a director since June 2018. Dr. Silberstein has served as chief operating officer/VP R&D of BioMimetix JV, LLC since 2013. Dr. Silberstein has served as a director of Biological Mimetics, Inc. since 2016. Dr. Silberstein received his PhD in Immunology at Columbia University and Postdoctoral training at Harvard Medical School/Brigham & Women's Hospital. Dr. Silberstein continued for seven years as Assistant Professor at Harvard, leading a research team studying the biochemistry of inflammation. This was followed by 20 years at AstraZeneca Pharmaceuticals where Dr. Silberstein had leadership roles in genomics, translational science, company-wide portfolio management, and science support for two products through launch to aggregate sales of greater than \$30 billion. Since 2013, Dr. Silberstein has worked independently with a number of early stage biotech companies and as a consultant to investment firms. Over this period he has served in leadership roles for NCI oncology trials, including Principal Investigator of a trial in patients with multiple brain metastases. Current work includes his role as Principal Investigator of an NCI-funded clinical trial in patients with multiple brain metastases. Based on the above qualifications, the Company believes Dr. Silberstein is qualified to be on the Board.

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CORPORATE GOVERNANCE

Board Composition

Our Board may establish the authorized number of directors from time to time by resolution. At the conclusion of our Annual Meeting, our Board will consist of five (5) authorized members. During the year ended December 31, 2023, our Board met five times and acted five times by unanimous written consent. Our Board does not have a policy regarding Board members' attendance at meetings of our stockholders, however four members of our Board attended our 2023 annual meeting of stockholders. During the year ended December 31, 2023, all directors attended at least 75% of all meetings of the Board and Board committees on which they served.

Generally, under the listing requirements and rules of the Nasdaq Stock Market, independent directors must comprise a majority of a listed company's board of directors. Our Board has undertaken a review of its composition, the composition of its committees and the independence of each director. Our Board has determined that, other than Mr. Sharma, none of our director nominees has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each is "independent" as that term is defined under the applicable rules and regulations of the SEC and the listing requirements and rules of the Nasdaq Stock Market. In making these determinations, our Board considered the current and prior relationships that each nonemployee director nominee has with our Company and all other facts and circumstances our Board deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each nonemployee director nominee. Accordingly, a majority of our directors are independent, as required under applicable Nasdaq Stock Market rules, as of the date of this Proxy Statement.

Committees of the Board of Directors

Our Board has established an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. Our Board may establish other committees to facilitate the management of our business. The composition and functions of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our Board.

Each of our committees operates under a written charter, copies of which are available at our investor relations website located at ir.lanternpharma.com/corporate-governance/governance-documents.

Audit Committee

Our Audit Committee consists of Donald Jeff Keyser, Vijay Chandru and Maria Maccicchini, with Dr. Keyser serving as chair. The composition of our Audit Committee meets the requirements for independence under current Nasdaq Stock Market listing standards and SEC rules and regulations. Each member of our Audit Committee meets the financial literacy requirements of the Nasdaq Stock Market listing standards and is also a nonemployee director, as defined pursuant to Rule 16b-3 promulgated under the Exchange Act. Dr. Keyser is an audit committee financial expert within the meaning of Item 407(d) of Regulation S-K under the Securities Act of 1933, as amended, or the Securities Act. Our Audit Committee, among other things:

- selects a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- discusses the scope and results of the audit with the independent registered public accounting firm;
- reviews, with management and the independent registered public accounting firm, our interim and year-end operating results;
- develops procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviews our policies on risk assessment and risk management;
- reviews related-party transactions; and
- approves (or, as permitted, pre-approves) all audit and all permissible nonaudit services, other than de minimis nonaudit services, to be performed by the independent registered public accounting firm.

Our Audit Committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of the Nasdaq Stock Market. During the year ended December 31, 2023, our Audit Committee met six times and acted once by unanimous written consent.

Compensation Committee

Our Compensation Committee currently consists of Maria Maccicchini and Donald Jeff Keyser, with Dr. Maccicchini serving as Chair. The composition of our Compensation Committee meets the requirements for independence under the Nasdaq Stock Market listing standards and SEC rules and regulations. Each member of the Compensation Committee is also a nonemployee director, as defined pursuant to Rule 16b-3 promulgated under the Exchange Act. The purpose of our Compensation Committee is to discharge the responsibilities of our Board relating to compensation of our executive officers. Our Compensation Committee, among other things:

- reviews, approves and determines the compensation of our executive officers;
- administers our stock and equity incentive plans;
- makes recommendations to our Board regarding director compensation and the establishment and terms of incentive compensation and equity plans; and
- establishes and reviews general policies relating to compensation and benefits of our employees.

Our chief executive officer may, from time to time, provide input and recommendations to our Compensation Committee concerning the compensation of our other executive officers. Our chief executive officer may also, from time to time, attend Compensation Committee meetings, but he is not present during the Committee's deliberations regarding his own compensation. Our Compensation Committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of the Nasdaq Stock Market. During the year ended December 31, 2023, our Compensation Committee met two times.

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance Committee consists of Vijay Chandru and David Silberstein, with Dr. Chandru acting as Chair. The composition of our Nominating and Corporate Governance Committee meets the requirements for independence under Nasdaq Stock Market listing standards and SEC rules and regulations and each member of our Nominating and Corporate Governance Committee is also a nonemployee director, as defined pursuant to Rule 16b-3 promulgated under the Exchange Act. Our Nominating and Corporate Governance Committee, among other things:

- identifies, evaluates and makes recommendations to our Board regarding nominees for election to our Board and its committees;
- evaluates the performance of our Board and of individual directors;
- considers and makes recommendations to our Board regarding the composition of our Board and its committees;
- reviews developments in corporate governance practices;
- evaluates the adequacy of our corporate governance practices and reporting; and
- develops and makes recommendations to our Board regarding corporate governance guidelines and matters.

When evaluating director candidates, our Nominating and Corporate Governance Committee seeks to ensure that our Board has the requisite skills and experience and that its members consist of persons with appropriately complementary and independent backgrounds. The Nominating and Corporate Governance Committee will consider all aspects of a candidate's qualifications in the context of Lantern's needs, including: industry experience, preferably at an executive level; experience in the same business sector as that of the Company; subject matter expertise and operations experience in areas important to the Company's growth and advancement; experience as an officer or director of a public company; independence from management; practical business judgment; personal and professional integrity and ethics; and the ability to commit sufficient time and attention to the activities of the Board, as well as the absence of any potential conflicts with our Company's interests. While we do not have a formal diversity policy, we understand the desirability of having a Board comprised of directors with diverse and varied backgrounds, experience and opinions, and in the event we expand our Board or replace retiring Board members our Nominating and Corporate Governance Committee will place special emphasis on finding qualified candidates with diverse gender and ethnic backgrounds. However, the Nominating and Corporate Governance Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of the Board, the operating requirements of our Company, and the long-term interests of our stockholders.

Our Nominating and Corporate Governance Committee will consider for directorship candidates nominated by third parties, including stockholders. The Nominating

and Corporate Governance Committee's consideration will take into account the comprehensive criteria for Board membership determined by the Committee within the context of the needs of the Company at the time. At this time our Nominating and Corporate Governance Committee does not have a policy with regard to the consideration of director candidates recommended by stockholders. The Nominating and Corporate Governance committee believes that it is in the best position to identify, review, evaluate, and select qualified candidates for Board membership, based on the comprehensive criteria for Board membership determined by the Committee. However, pursuant to the proxy access provisions of our bylaws, a stockholder, or group of up to 10 stockholders, that has owned continuously for at least three years shares of our common stock representing an aggregate of at least 3% of our outstanding shares, may nominate and include in our proxy materials director nominees constituting up to the greater of two or 20% of our Board, provided that the stockholder(s) and nominee(s) satisfy the requirements in the proxy access provisions of our bylaws.

For a third party to suggest a candidate, one should provide our corporate secretary, David Margrave, with the name of the candidate, together with a brief biographical sketch and a document indicating the candidate's willingness to serve if elected.

The Nominating and Corporate Governance Committee operates under a written charter that satisfies the applicable listing requirements and rules of the Nasdaq Stock Market. During the year ended December 31, 2023, our Nominating and Corporate Governance Committee met three times.

Board Leadership Structure and Role in Risk Oversight

Donald Jeff Keyser serves as our chairman of the Board and Panna Sharma serves as our president and chief executive officer. We have neither adopted a formal policy on whether the chairman and chief executive officer positions should be separate or combined nor do we have a lead director. We believe that, given the small size of our Board and establishment of separate Audit, Compensation, and Nominating and Corporate Governance Committees consisting of independent directors, our present Board structure is in the best interest of us and our stockholders. Our Board has an active role in overseeing our areas of risk. While the full Board has overall responsibility for risk oversight, the Board has assigned certain areas of risk primarily to designated committees, which report back to the full Board.

Process for Stockholders to Send Communications to our Board of Directors

Because we have always maintained open channels of communication with our stockholders, we do not have a formal policy that provides a process for stockholders to send communications to our Board. However, if a stockholder would like to send a communication to our Board, please address the letter to the attention of our corporate secretary, David R. Margrave, and it will be distributed to each director.

Employee, Officer and Director Hedging

We have adopted a policy that no director, officer, or designated employees of Lantern may engage in any short term or speculative transactions, involving securities of the Company, unless advance approval is obtained from the Company's compliance officer. These prohibited speculative transactions include short sales, publicly traded options, hedging transactions, margin accounts, and pledged securities.

Compensation Committee Interlocks and Insider Participation

None of our independent directors, Donald Jeff Keyser, Vijay Chandru, Maria Maccicchini, and David S. Silberstein, is currently or has been at any time one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board or compensation committee of any entity that has one or more executive officers serving as a member of our Board.

We have adopted a code of conduct for all employees, including the chief executive officer, principal financial officer and principal accounting officer or controller, and/or persons performing similar functions, which is available on our investor relations website located at ir.lanternpharma.com/corporate-governance/governance-documents.

Limitation of Liability of Directors and Indemnification of Directors and Officers

The Delaware General Corporation Law provides that corporations may include a provision in their certificate of incorporation relieving directors of monetary liability for breach of their fiduciary duty as directors, provided that such provision shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for unlawful payment of a dividend or unlawful stock purchase or redemption, or (iv) for any transaction from which the director derived an improper personal benefit. Our certificate of incorporation provides that directors are not liable to us or our stockholders for monetary damages for breach of their fiduciary duty as directors to the fullest extent permitted by Delaware law. In addition to the foregoing, our certificate of incorporation provides that we shall indemnify directors, officers, employees or agents to the fullest extent permitted by law and we have agreed to provide such indemnification to each of our executive officers and directors by way of written indemnification agreements.

The above provisions in our certificate of incorporation and bylaws and in the written indemnification agreements may have the effect of reducing the likelihood of derivative litigation against directors and may discourage or deter stockholders or management from bringing a lawsuit against directors for breach of their fiduciary duty, even though such an action, if successful, might otherwise have benefited us and our stockholders. However, we believe that the foregoing provisions are necessary to attract and retain qualified persons as directors.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

PROPOSAL NO. 2 APPROVAL OF AN AMENDMENT TO THE SECOND AMENDED AND RESTATED LANTERN PHARMA INC. 2018 EQUITY INCENTIVE PLAN, AS AMENDED, TO INCREASE THE NUMBER OF SHARES OF OUR COMMON STOCK AVAILABLE FOR ISSUANCE UNDER THE PLAN BY AN ADDITIONAL 125,000 SHARES

At the Annual Meeting, our stockholders will be asked to approve an amendment to the Second Amended and Restated Lantern Pharma Inc. 2018 Equity Incentive Plan, as amended (the "Equity Incentive Plan"), which would increase the number of shares of our common stock available for issuance under the Equity Incentive Plan by 125,000 shares. Our stockholders approved the Equity Incentive Plan on August 29, 2018, and approved amendments to the Equity Incentive Plan on August 7, 2019, June 3, 2020, and June 16, 2023. Subject to the terms and conditions of the Equity Incentive Plan and excluding the amendment to be approved at the Annual Meeting, the number of shares remaining for future grants under the Equity Incentive Plan as of the date of this Proxy Statement is 487,095 shares.

Effective April 15, 2024, our Board approved an amendment to the Equity Incentive Plan (the "Amendment"), subject to stockholder approval at the Annual Meeting, to increase the number of shares available for issuance under the Equity Incentive Plan by 125,000 shares of common stock to 1,864,680 shares. Of that amount, approximately 612,095 shares (487,095 shares available for grant as of the date of this proxy statement plus 125,000 shares being requested under this proposal) would be available for new

awards, not including any shares that would become available again upon the expiration, termination, cancellation, cash settlement or forfeiture of certain previously-issued awards, as described below.

Plan Highlights

The purposes of the Equity Incentive Plan are to:

- align the interests of our stockholders and recipients of awards under the Equity Incentive Plan by increasing the proprietary interests of such recipients in the Company's growth and success;

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- advance the interests of the Company by enhancing the Company's ability to attract and retain non-employee directors, officers, other employees, and consultants; and
- motivate such persons to act in the long-term best interests of the Company and our stockholders.

Under the Equity Incentive Plan, the Company may grant:

- non-qualified stock options;
- incentive stock options (within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"))
- restricted stock or restricted stock units ("RSUs");
- performance awards consisting of rights to receive cash, common stock, other property or a combination thereof, if designated performance goal(s) are achieved; and
- stock bonus awards.

As of April 15, 2024, approximately three executive officers, 18 employees, four non-employee directors and an indeterminate number of consultants are eligible to participate in the Equity Incentive Plan if selected for participation by the Board or the Compensation Committee of our Board.

Some of the key features of the Equity Incentive Plan include:

- The Equity Incentive Plan is administered by our Board, unless the Board appoints a committee with the authority to administer the Plan. Our Compensation Committee, comprised entirely of independent directors, has been granted non-exclusive authority to act as Administrator under the Equity Incentive Plan, with our Board also retaining the ability to take actions as Administrator under the Equity Incentive Plan;
- Stock options granted under the Equity Incentive Plan may not be repriced without the approval of our stockholders;
- Under the Equity Incentive Plan and after taking into account the Amendment, the maximum number of shares of our common stock authorized for grant is 1,864,680 shares, other than substitute awards granted in connection with a corporate transaction, with 612,095 shares remaining available for future grant;
- The exercise price of stock options granted under the Equity Incentive Plan may not be less than the fair market value of a share of our common stock on the date of grant, subject to certain exceptions for substitute awards granted in connection with a corporate transaction;
- The Equity Incentive Plan prohibits the grant of dividend equivalents with respect to stock options, and subjects all dividends and dividend equivalents paid with respect to stock bonus awards or performance awards to the same vesting conditions as the underlying awards; and
- The Equity Incentive Plan does not contain a liberal change in control definition.

Description of the Amended Equity Incentive Plan

The following description is qualified in its entirety by reference to the Equity Incentive Plan, as proposed to be amended by the Amendment (the "Amended Equity Incentive Plan"). A copy of the Amendment is attached to this proxy statement as Exhibit A.

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Administration

The Amended Equity Incentive Plan will be administered by our Board as administrator (the "Administrator"), with non-exclusive authority to act as Administrator granted to our Compensation Committee. Four of the five current members of our Board are non-employee directors and are independent under the listing standards for independence of the NASDAQ and Rule 10A-3 under the Exchange Act. Our Compensation Committee charter provides that the committee shall consist of two or more members of our Board, each of whom is (i) a "non-employee director" within the meaning of Rule 16b-3 under the Exchange Act, and (ii) "independent" within the meaning of Nasdaq Rules. If the committee is comprised of at least three members, the committee may have one non-independent member in accordance with Rule 5605(d)(2)(B) of the Nasdaq marketplace rules.

Subject to the express provisions of the Amended Equity Incentive Plan, the Administrator of the Amended Equity Incentive Plan will have the authority to select eligible persons to receive awards and determine all of the terms and conditions of each award. All awards will be evidenced by an agreement containing such provisions not inconsistent with the Amended Equity Incentive Plan as the Administrator will approve. The Administrator will also have authority to establish rules and regulations for administering the Amended Equity Incentive Plan and to decide questions of interpretation or application of any provision of the Amended Equity Incentive Plan. The Administrator may, in its sole discretion and for any reason at any time, take action such that (i) any or all outstanding stock options will become exercisable in part or in full, (ii) all or a portion of a restriction period on any award will lapse, (iii) all or a portion of any performance period applicable to any award will lapse and (iv) any performance measures applicable to any outstanding award will be deemed satisfied at target, maximum or any other level.

Available Shares

As discussed above, if approved by our stockholders, the Amendment would increase the total number of shares available for issuance under the Equity Incentive Plan by 125,000 shares from 1,739,680 shares to 1,864,680 shares, in each case, subject to the adjustment provisions set forth in the Amended Equity Incentive Plan. All of the available shares of our common stock under the Amended Equity Incentive Plan may be issued in connection with incentive stock options.

The number of available shares under the Equity Incentive Plan will be reduced by the sum of the aggregate number of shares of our common stock which become subject to outstanding stock options, restricted stock awards, restricted stock units, performance awards and stock bonus awards, other than substitute awards granted in connection with a corporate transaction. To the extent that shares of our common stock subject to an outstanding stock option, restricted stock award, restricted stock unit, performance award or stock bonus award granted under the Amended Equity Incentive Plan are not issued or delivered by reason of (i) the expiration, termination, cancellation or forfeiture of such award or (ii) the settlement of such award in cash, then such shares of our common stock will again be available under the Amended Equity Incentive Plan. The following shares of common stock, however, may not again be made available for issuance as awards under the Amended Equity Incentive Plan: (i) shares not issued or delivered as a result of the net settlement of an outstanding option, regardless of the number of shares actually used to make such settlement; (ii) shares used to pay the exercise price or for settlement of any award; (iii) shares used to satisfy withholding taxes related to the exercise or settlement of any award; and (iv) shares subject to a restricted stock award that have been forfeited.

As of the record date, the closing price of a share of Company common stock, as reported on Nasdaq, was \$5.72.

Change in Control

Subject to the terms of the applicable award agreement, in the event of a change in control, the Administrator of the Amended Equity Incentive Plan may take any of the following actions: (i) determine that any outstanding option granted under the Amended Equity Incentive Plan shall immediately become fully vested and exercisable; (ii) determine that the remaining restriction period on any shares of common stock subject to a restricted stock award or restricted stock unit award granted under the Amended Equity Incentive Plan shall lapse and the shares shall become fully transferable, subject to any applicable federal or state securities laws; (iii) determine that all performance goals and conditions shall be deemed to have been satisfied and all restrictions shall lapse on any outstanding performance awards, which immediately shall become payable (either in full or pro-rata based on the portion of the applicable performance period completed as of the change in control); and (iv) determine that all vesting and/or other restrictions shall lapse on any outstanding stock bonus award shares that are subject to vesting and/or other restrictions. In addition, the Administrator may, in its sole discretion and without the consent of any participant in the Amended Equity Incentive Plan, determine that, upon the occurrence of a change in control, each or any option outstanding immediately prior to the change in control shall be cancelled in exchange for a payment with respect to each vested share of common stock subject to such cancelled option in (i) cash, (ii) stock of the Company or of a corporation or other business entity that is a party to the change in control, or (iii) other property which, in any such case, shall be in an amount having a fair market value equal to the excess of the fair market value of the consideration to be paid per share of common stock in the change in control transaction over the exercise price per share under such option. The Administrator, in its sole discretion and without the consent of any participant in the Amended Equity Incentive Plan, may also cancel at the time of a change in control any outstanding option that has an exercise price that exceeds the fair market value of the consideration to be paid per share of common stock in the change in control transaction.

Under the terms of the Amended Equity Incentive Plan, a change in control is generally defined, subject to certain exceptions described in the Amended Equity Incentive Plan, as a change in ownership or control of the Company effected through or upon the occurrence of any of the following events: (i) if any one person, or more than one person acting as a group under the Amended Equity Incentive Plan, acquires ownership of voting stock of the Company that, together with other voting stock held by such person or group, constitutes more than fifty percent (50%) of the total fair market value or total voting power of the capital stock of the Company; (ii) if a majority of the members of the Company's Board are replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of the Company's Board prior to the date of the appointment or election; or (iii) if there is a change in the ownership of a substantial portion of the Company's assets, which shall occur on the date that any one person, or more than one person acting as a group acquires (or has acquired during the 12-month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than forty percent (40%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions.

Effective Date, Termination and Amendment

If approved by the affirmative vote of a majority of the shares of our common stock present in person or represented by proxy at the Annual Meeting, the Amended Equity Incentive Plan will become effective as of the date on which the Amendment is approved by our stockholders. The Equity Incentive Plan became effective as of August 29, 2018 and will continue in effect until its termination by the Board, provided, however, that no new awards under the Amended Equity Incentive Plan may be granted on or after August 28, 2028. Awards under the Amended Equity Incentive Plan may be made at any time prior to the termination of the Amended Equity Incentive Plan, provided that no new awards may be granted on or after August 28, 2028. Our Board may amend or modify the Amended Equity Incentive Plan at any time, but no amendment or modification, without obtaining stockholder approval, shall (i) materially increase the benefits accruing to participants under the Amended Equity Incentive Plan; (ii) increase the amount of common stock for which awards may be made under the Amended Equity Incentive Plan (except as already permitted under the Amended Equity Incentive Plan); or (iii) change the provisions relating to the eligibility of individuals to whom awards may be made under the Amended Equity Incentive Plan. Other than certain exceptions provided in the Amended Equity Incentive Plan, no amendment or modification may materially impair the rights of a holder of an outstanding award without the consent of such holder.

Eligibility

Participants in the Amended Equity Incentive Plan will consist of such officers, other employees, non-employee directors, consultants, and persons expected to become officers, other employees, non-employee directors, and consultants of the Company and its subsidiaries, as selected by the Administrator.

Stock Options

The Amended Equity Incentive Plan provides for the grant of non-qualified stock options and incentive stock options. The Administrator will determine the conditions to the exercisability of each stock option.

Each stock option will be exercisable for no more than ten years after its date of grant, unless the stock option is an incentive stock option and the optionee owns greater than ten percent (10%) of the voting power of all shares of our capital stock (a "ten percent holder"), in which case the stock option will be exercisable for no more than five years after its date of grant. The exercise price of a stock option will not be less than 100% of the fair market value of a share of our common stock on the date of grant, unless the stock option is an incentive stock option and the optionee is a ten percent holder, in which case the stock option exercise price will be the price required by the Code, currently 110% of fair market value. The aggregate fair market value of the underlying common stock (determined at the grant date) as to which incentive stock options granted under the Amended Equity Incentive Plan may first be exercised by a participant in any one calendar year shall not exceed \$100,000.

Restricted Stock, Restricted Stock Units (RSUs) and Stock Bonus Awards

The Amended Equity Incentive Plan provides for the grant of restricted stock, RSUs and stock bonus awards.

Except as otherwise provided in the Amended Equity Incentive Plan or in a participant's award agreement, a participant shall be entitled to receive all dividends and other distributions paid with respect to issued and outstanding shares of common stock subject to an award of restricted stock, while such award remains outstanding. During the restriction period, participants holding issued and outstanding shares of common stock subject to an award of restricted stock may exercise full voting rights with respect to the

restricted stock, while such award remains outstanding. The Administrator, in its discretion, may provide in the agreement evidencing any RSU award that the participant shall be entitled to receive dividend equivalents with respect to the payment of cash dividends on common stock having a record date prior to the date on which the RSUs held by the participant are settled. The shares of common stock subject to an award of restricted stock or RSUs may not be transferred, pledged, or assigned until the termination of the applicable restriction period specified in the award agreement.

Stock bonus awards are intended to serve as a form of discretionary bonus to be paid in shares of common stock to employees selected by the Administrator. The number of shares in a stock bonus award and any terms and restrictions applicable to the stock bonus award shall be designated by the Administrator at the time of grant. Stock bonus awards may, but are not required to, be subject to vesting requirements and/or other restrictions. Prior to satisfaction of the restrictions, the participant shall be entitled to vote the shares issued under a stock bonus award to the extent such shares are issued and outstanding. In addition, any dividends paid on such shares while subject to restrictions shall, as provided in the participant's award agreement, be reinvested on behalf of the participant in additional stock bonus shares under the Amended Equity Incentive Plan, and such additional shares shall be subject to the same restrictions as the other shares under the original stock bonus award.

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All of the terms relating to the satisfaction of performance measures and the termination of a restriction period, or the forfeiture and cancellation of a restricted stock award, RSU, or stock bonus award upon a termination of employment, whether by reason of disability, retirement, death or any other reason, will be determined by the Administrator. If a participant's employment or services are terminated for any reason, any portion of any restricted stock award, RSU or stock bonus award that is not yet vested shall automatically terminate and be forfeited by the participant.

No RSUs or stock bonus awards have been granted under the Equity Incentive Plan to date. As of the date of this Proxy Statement, the Administrator has granted three restricted stock awards that together totaled 80,512 shares of common stock.

Performance Awards

The Amended Equity Incentive Plan also provides for the grant of performance awards. The Administrator, in its discretion, may grant performance awards to participants and may determine the performance goal(s) to be attained pursuant to each performance award. Performance awards shall consist of rights to receive cash, common stock, other property or a combination thereof, if designated performance goal(s) are achieved. The award agreement for each performance award shall specify the performance goal(s) applicable to a particular participant or group of participants, the period over which the targeted goal(s) are to be attained, the payment schedule if the goal(s) are attained, and any other general terms as the Administrator shall determine and conditions applicable to an individual performance award. Performance awards may be granted as performance shares or performance units, at the discretion of the Administrator. Performance awards shall be paid no later than two and a half (2½) months after the later of the end of the fiscal or calendar year in which the performance award is no longer subject to a substantial risk of forfeiture.

As determined by the Administrator, performance measures of a performance award may consist of, but shall not be limited to, one or more objective or subjective corporate-wide or subsidiary, division, operating unit, line of business, project, geographic or individual measures such as: the attainment by a share of our common stock of a specified fair market value (as defined in the Amended Equity Incentive Plan) for a specified period of time; increase in stockholder value; earnings per share; return on or net assets; return on equity; return on investments; return on capital or invested capital; total stockholder return; attainment of product development objectives; earnings or income of the Company before or after taxes and/or interest; earnings before interest, taxes, depreciation and amortization; operating income; revenues; operating expenses, attainment of expense levels or cost reduction goals; market share; economic value created; strategic business criteria, and other performance criteria determined by the Administrator.

All of the terms relating to the satisfaction of performance measures and the termination of a performance period, or the forfeiture and cancellation of a performance award upon a termination of employment with or service to the Company, whether by reason of disability, retirement, death or any other reason or during a paid or unpaid leave of absence, will be determined by the Administrator. No performance awards have been granted under the Equity Incentive Plan to date.

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U.S. Federal Income Tax Consequences

The following is a brief summary of certain United States federal income tax consequences generally arising with respect to awards under the Amended Equity Incentive Plan. This discussion does not address all aspects of the United States federal income tax consequences of participating in the Amended Equity Incentive Plan that may be relevant to participants in light of their personal investment or tax circumstances and does not discuss any state, local or non-United States tax consequences of participating in the Amended Equity Incentive Plan. Each participant is advised to consult his or her personal tax advisor concerning the application of the United States federal income tax laws to such participant's particular situation, as well as the applicability and effect of any state, local or non-United States tax laws before taking any actions with respect to any awards.

Section 162(m) of the Code

Section 162(m) of the Code limits to \$1 million the amount that a publicly held corporation is allowed each year to deduct for compensation paid to the corporation's "covered employees." "Covered employees" include the corporation's chief executive officer, chief financial officer and the three most highly compensated executive officers other than the chief executive officer and chief financial officer. If an individual is determined to be a covered employee for any year beginning after December 31, 2016, then that individual will continue to be a covered employee for future years, regardless of changes in the individual's compensation or position. Under the American Rescue Plan Act signed into law on March 11, 2021, the definition of "covered employee" will be expanded to also include the Company's next five highest-paid employees for tax years beginning on or after January 1, 2027.

Stock Options

A participant will not recognize taxable income at the time a stock option is granted, and the Company will not be entitled to a tax deduction at that time. A participant will recognize compensation taxable as ordinary income (and if the participant is an employee, will be subject to income tax withholding) upon exercise of a non-qualified stock option equal to the excess of the fair market value of the shares of our common stock purchased on such date over the aggregate exercise price of such shares, and the Company will be entitled to a corresponding deduction, except to the extent the deduction limits of Section 162(m) of the Code apply. A participant will not recognize income (except for purposes of the alternative minimum tax) upon exercise of an incentive stock option. If the shares of our common stock acquired by exercise of an incentive stock option are held for at least two years from the date the stock option was granted and one year from the date it was exercised, any gain or loss arising from a subsequent disposition of those shares will be taxed as long-term capital gain or loss, and the Company will not be entitled to any deduction. If, however, those shares are disposed of within the above-described period, then in the year of that disposition the participant will recognize compensation taxable as ordinary income equal to the excess of the lesser of (i) the amount realized upon that disposition and (ii) the fair market value of those shares on the date of exercise over the exercise price, and the Company will be entitled to a corresponding deduction, except to the extent the deduction limits of Section 162(m) of the Code apply.

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A participant will not recognize taxable income at the time stock that is subject to a substantial risk of forfeiture is granted, and the Company will not be entitled to a tax deduction at that time, unless the participant makes an election to be taxed at that time. If such election is made, the participant will recognize compensation taxable as ordinary income (and if the participant is an employee, will be subject to income tax withholding) at the time of the grant in an amount equal to the excess of the fair market value of the shares of our common stock at such time over the amount, if any, paid for those shares. If such election is not made, the participant will recognize compensation taxable as ordinary income (and if the participant is an employee, will be subject to income tax withholding) at the time the restrictions constituting a substantial risk of forfeiture lapse in an amount equal to the excess of the fair market value of the shares of our common stock at such time over the amount, if any, paid for those shares. The amount of ordinary income recognized by making the above-described election or upon the lapse of restrictions constituting a substantial risk of forfeiture is deductible by the Company as compensation expense, except to the extent the deduction limits of Section 162(m) of the Code apply.

A participant will not recognize taxable income at the time an RSU is granted, and the Company will not be entitled to a tax deduction at that time. Upon settlement of RSUs, the participant will recognize compensation taxable as ordinary income (and if the participant is an employee, will be subject to income tax withholding) in an amount equal to the fair market value of any shares of our common stock delivered and the amount of any cash paid by the Company. The amount of ordinary income recognized is deductible by the Company as compensation expense, except to the extent the deduction limits of Section 162(m) of the Code apply.

The tax treatment, including the timing of taxation, of other stock awards will depend on the terms of such awards at the time of grant.

Performance Awards

A participant will not recognize taxable income at the time performance awards are granted, and the Company will not be entitled to a tax deduction at that time. Upon settlement of performance awards, the participant will recognize compensation taxable as ordinary income (and if the participant is an employee, will be subject to income tax withholding) in an amount equal to the fair market value of any shares of our common stock delivered and the amount of cash paid by the Company. This amount is deductible by the Company as compensation expense, except to the extent the deduction limits of Section 162(m) of the Code apply.

New Plan Benefits

The Administrator has the discretion to grant awards under the Amended Equity Incentive Plan and, therefore, it is not possible as of the date of this proxy statement to determine future awards that will be received by our executive officers or others under the Amended Equity Incentive Plan. Please see the section entitled “Executive Officers and Compensation” for grants made to each of our executive officers under the Equity Incentive Plan.

As discussed above, the Amendment is being submitted for approval by our stockholders at the Annual Meeting. If our stockholders approve this proposal, the Amendment will become effective as of the date on which the Amendment is approved by stockholders, and awards may be granted under the Amended Equity Incentive Plan. If our stockholders do not approve the Amendment, the Company will continue to grant awards under the Equity Incentive Plan as long as shares are available for such purpose.

Board Recommendation

OUR BOARD RECOMMENDS THAT OUR STOCKHOLDERS VOTE “FOR” THE APPROVAL OF THE AMENDMENT TO THE EQUITY INCENTIVE PLAN

**PROPOSAL NO. 3
RATIFICATION OF APPOINTMENT OF
INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Audit Committee has appointed EisnerAmper LLP (which we refer to as “Eisner”) as our independent registered public accounting firm for the year ending December 31, 2024, and our Board has directed that management submit the appointment of Eisner as our independent registered public accounting firm for ratification by the stockholders at the Annual Meeting. A representative of Eisner is expected to be available at the Annual Meeting and will have an opportunity to make a statement if he or she so desires and will be available to respond to appropriate questions.

Stockholder ratification of the selection of Eisner as our independent registered public accountants is not required by our Bylaws or otherwise. However, our Board is submitting the appointment of Eisner to the stockholders for ratification as a matter of corporate practice. If the stockholders fail to ratify the appointment, the Audit Committee will reconsider whether or not to retain Eisner. Even if the selection is ratified, the Audit Committee, in its discretion, may direct the appointment of a different independent registered public accountant at any time during the year if the Audit Committee determines that such a change would be in the Company’s and our stockholders’ best interests.

Board Recommendation

**OUR BOARD RECOMMENDS A VOTE “FOR” THE RATIFICATION OF EISNERAMPER LLP
AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
FOR THE FISCAL YEAR ENDING DECEMBER 31, 2024**

Fees Incurred for Services by Principal Accountant

The following table sets forth the aggregate fees billed to us for services rendered to us for the years ended December 31, 2023 and 2022 by our independent registered public accounting firm, EisnerAmper LLP and their affiliates.

	<u>2023</u>	<u>2022</u>
Audit Fees ^(A)	\$ 168,000	\$ 150,150
Audit – Related Fees ^(B)	72,450	—
Tax Fees	18,900	17,312
	<u>\$ 259,350</u>	<u>\$ 167,462</u>

(A) The audit fees consisted of fees for the audit of our financial statements, the review of the interim financial statements included in our quarterly reports on Form 10-Q, and other professional services provided in connection with the statutory and regulatory filings or engagements and capital market financings.

(B) The audit-related fees are for the carve-out audit of Starlight Therapeutics Inc., a wholly owned subsidiary of the Company, for 2022 and 2021.

The Audit Committee has responsibility for selecting, appointing, evaluating, compensating, retaining and overseeing the work of the independent registered public accounting firm. In recognition of this responsibility, the Audit Committee has established policies and procedures in its charter regarding pre-approval of any audit and non-audit service provided to the Company by the independent registered public accounting firm and the fees and terms thereof.

The Audit Committee considered the compatibility of the provision of other services by the Company's registered public accountant with the maintenance of their independence. The Audit Committee approved all audit, audit-related and tax services provided by Eisner in 2023 and 2022. Eisner did not perform any non-audit or non-audit-related services in 2023 or 2022, other than the tax services discussed above.

Audit Committee Report

The Audit Committee issued the following report for inclusion in this Proxy Statement and our 2023 Annual Report:

- The Audit Committee has reviewed and discussed the audited consolidated financial statements for the year ended December 31, 2023 with management of Lantern Pharma Inc. and with Lantern Pharma Inc.'s independent registered public accounting firm, EisnerAmper LLP.
- The Audit Committee has discussed with EisnerAmper LLP those matters required by Statement on Auditing Standards No. 1301, "Communications with Audit Committee," as adopted by the Public Company Accounting Oversight Board ("PCAOB").
- The Audit Committee has received and reviewed the written disclosures and the letter from EisnerAmper LLP required by the PCAOB regarding EisnerAmper LLP's communications with the Audit Committee concerning the accountant's independence and has discussed with EisnerAmper LLP its independence from Lantern Pharma Inc. and its management.

Based on the review and discussions referenced in paragraphs 1 through 3 above, the Audit Committee recommended to our Board that the audited financial statements for the year ended December 31, 2023 be included in the Annual Report on Form 10-K for that year for filing with the SEC.

AUDIT COMMITTEE
 Donald Jeff Keyser
 Vijay Chandru
 Maria Maccicchini

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**PROPOSAL NO. 4
 APPROVE AN ADJOURNMENT OF THE ANNUAL MEETING, IF NECESSARY,
 TO SOLICIT ADDITIONAL PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR
 OF PROPOSALS 1, 2 OR 3**

Introduction

As described above, our Board has recommended: the election of five (5) directors to serve for the ensuing year as members of the Board (Proposal 1) approval of an amendment to the Equity Incentive Plan to increase the number of shares of the Company's common stock available for issuance under the Equity Incentive Plan by an additional 125,000 shares (Proposal 2); and ratification of the appointment of EisnerAmper LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2024 (Proposal 3). In furtherance of these recommendations, we are asking our stockholders to approve an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Proposals 1, 2 or 3.

Proposal 4, to approve an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Proposals 1, 2 or 3, will require the affirmative vote of a majority of the votes present and entitled to vote at the Annual Meeting with respect to such matter.

Board Recommendation

**OUR BOARD RECOMMENDS A VOTE "FOR" THE APPROVAL OF AN ADJOURNMENT OF THE ANNUAL MEETING, IF NECESSARY, TO SOLICIT
 ADDITIONAL PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR OF PROPOSALS 1, 2 OR 3.**

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**SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT
 AND RELATED STOCKHOLDER MATTERS**

The following table sets forth, as of April 15, 2024, information concerning the beneficial ownership of shares of our common stock held by our directors, director nominees and our named executive officers, our directors, director nominees and executive officers as a group, and each person known by us to be a beneficial owner of more than 5% of our outstanding common stock. Unless otherwise indicated, the business address of each of our directors, director nominees, executive officers and beneficial owners of more than 5% of our outstanding common stock is c/o Lantern Pharma Inc., 1920 McKinney Avenue, 7th Floor, Dallas, Texas 75201. Each person has sole voting and investment power with respect to the shares of our common stock, except as otherwise indicated. Beneficial ownership consists of a direct interest in the shares of common stock, except as otherwise indicated.

As used in this section, the term "beneficial ownership" with respect to a security is defined by Rule 13d-3 under the Securities Exchange Act of 1934, as amended, as consisting of sole or shared voting power (including the power to vote or direct the vote) and/or sole or shared investment power (including the power to dispose of or direct the disposition of) with respect to the security through any contract, arrangement, understanding, relationship or otherwise, subject to community property laws where applicable. Beneficial ownership also includes the number of shares that a person has the right to acquire within 60 days, pursuant to the exercise of options or warrants or the conversion of notes, debentures or other indebtedness. Two or more persons might count as beneficial owners of the same share.

There were approximately 11 holders of record of our shares of common stock as of the date of this Proxy Statement. The number of holders does not include individual participants in security positions listings.

Name and Address of Beneficial Owner ⁽¹⁾	Shares Beneficially Owned	
	Number	Percent
<i>Officers and Directors</i>		
Panna Sharma, Chief Executive Officer, President, and Director ⁽²⁾	556,591	4.92%
David R. Margrave, Chief Financial Officer and Secretary ⁽³⁾	100,775	*

Kishor G. Bhatia, Chief Scientific Officer ⁽⁴⁾	67,180	*
Donald J. Keyser, Chairman of the Board ⁽⁵⁾	90,179	*
David S. Silberstein, Director ⁽⁶⁾	16,979	*
Vijay Chandru, Director ⁽⁷⁾	11,882	*
Maria Maccacchini, Director ⁽⁸⁾	2,132	*
<i>All Officers and Directors as a group (7 people)</i>	845,718	7.31%
<i>5% Stockholders</i>		
Bios Equity Entities ⁽⁹⁾	1,263,802	11.75%
Biological Mimetics, Inc. ⁽¹⁰⁾	914,125	8.50%
ProPhase Labs, Inc. ⁽¹¹⁾	631,195	5.87%

* Represents less than 1% of shares outstanding.

- (1) All addresses above are 1920 McKinney Avenue, 7th Floor, Dallas, Texas 75201, unless otherwise stated.
- (2) Consists of 556,591 shares of common stock subject to options exercisable within 60 days. Excludes 38,897 shares of common stock underlying options which are subject to vesting conditions.

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- (3) Consists of 100,775 shares of common stock subject to options exercisable within 60 days. Excludes 3,625 shares of common stock underlying options which are subject to vesting conditions.
- (4) Consists of 67,180 shares of common stock subject to options exercisable within 60 days. Excludes 2,420 shares of common stock underlying options which are subject to vesting conditions.
- (5) Consists of (i) 44,420 shares of common stock subject to options exercisable within 60 days, (ii) 41,927 shares of common stock, and (iii) 3,832 shares of common stock issuable upon exercise of warrants. Excludes 453 shares of common stock underlying options which are subject to vesting conditions.
- (6) Consists of 16,979 shares subject to options exercisable within 60 days. Excludes 453 shares of common stock underlying options which are subject to vesting conditions. Dr. Silberstein is a director of Biological Mimetics, Inc. Dr. Silberstein disclaims any beneficial ownership in the shares of our common stock held by Biological Mimetics, Inc.
- (7) Consists of 11,882 shares of common stock subject to options exercisable within 60 days. Excludes 453 shares of common stock underlying options which are subject to vesting conditions.
- (8) Consists of 2,132 shares of common stock subject to options exercisable within 60 days. Excludes 1,068 shares of common stock underlying options which are subject to vesting conditions.
- (9) Consists of (i) 371,950 shares of common stock held by Bios Fund I, LP (“Bios Fund I”), (ii) 217,553 shares of common stock held by Bios Fund I QP, LP (“Bios Fund I QP”), (iii) 450,118 shares of common stock held by Bios Fund II QP, LP (“Bios Fund II QP”), (iv) 137,832 shares of common stock held by Bios Fund II, LP (“Bios Fund II”), (v) 60,256 shares of common stock held by Bios Fund II NT, LP (“Bios Fund II NT”), and (vi) 26,093 shares of common stock held by BP Directors, LP (“Bios Directors”). Bios Equity Partners, LP (“Bios Equity I”) is the general partner of the following entities: Bios Fund I, Bios Fund I QP, and Bios Directors. Bios Equity Partners II, LP (“Bios Equity II”) is the general partner of Bios Fund II QP, Bios Fund II, and Bios Fund II NT. Cavu Management, LP, an entity managed and controlled by Mr. Leslie W. Kreis, Jr., and Bios Capital Management, LP, an entity managed and controlled by Mr. Aaron Fletcher, are the general partners of Bios Equity I and Bios Equity II. Cavu Advisors LLC, an entity that is managed and controlled by Mr. Kreis, is the general partner of Cavu Management LP. Bios Advisors GP, LLC, an entity that is managed and controlled by Mr. Fletcher, is the general partner of Bios Capital Management, LP. The shares owned by Bios Fund I, Bios Fund I QP, Bios Fund II, Bios Fund II QP, Bios Fund II NT and Bios Directors (“Bios Equity Entities”) are aggregated for purposes of reporting share ownership information. Mr. Kreis and Mr. Fletcher share voting and investment control with respect to shares held by the Bios Equity Entities. The address for the Bios Equity Entities is 1751 River Run, Suite 400, Fort Worth, Texas 76107.
- (10) Consists of 914,125 shares of common stock. Address is 124 Byte Drive, Frederick, Maryland 21702.
- (11) Consists of 631,195 shares of common stock. Address is 711 Stewart Ave, Suite 200, Garden City, New York 11530.

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EXECUTIVE OFFICERS AND COMPENSATION

Executive Officers

The following sets forth information regarding the current executive officers of the Company. Biographical information pertaining to Panna Sharma, whom is both a director and an executive officer of the Company, may be found in the section above entitled “Proposal No. 1, Election of Directors-Information about Director Nominees.”

Name	Age	Position
Panna Sharma	53	Chief Executive Officer, President and Director
David R. Margrave	64	Chief Financial Officer and Secretary
Kishor G. Bhatia	69	Chief Scientific Officer

David R. Margrave has served as our Chief Financial Officer since November 2019 and as our Secretary since June 2018. From January 2016 until November 2019, Mr. Margrave served as a life science consultant, providing strategic advisory and legal services to growing life science companies. From January 1995 to December 2015, he served as an executive officer at BioNumerik Pharmaceuticals, Inc., a life science company focused on advancing innovative cancer therapies. During his time at BioNumerik Pharmaceuticals, Inc., Mr. Margrave served in various positions including service as President and as Chief Administrative Officer and General Counsel. Mr. Margrave has served as a consultant to BioNumerik Pharmaceuticals, Inc. since January 2016. From April 2015 to December 2016, he also served as Senior Legal Advisor to MedCare Investment Corporation, a private investment firm investing in the medical and healthcare services industries. Prior to joining BioNumerik Pharmaceuticals, Inc., Mr. Margrave was a partner at Andrews & Kurth LLP, a national law firm. Mr. Margrave serves as Chairman and a board member of the Texas Healthcare and Bioscience Institute and is a past Chairman and board member of the State of Texas Product Development & Small Business Incubator Board. He is a past board member of the Texas Technology Transfer Association. Mr. Margrave received a Bachelor of Arts and Science degree in Economics and in Petroleum Engineering from Stanford University, and a J.D. degree from The

Kishor G. Bhatia has served as our Chief Scientific Officer since December 2019, and as our scientific consultant since January 2019. Dr. Bhatia has also served as a scientific consultant to Reprocell, one of our collaborators, since December 2016, and served as a scientific consultant to Cancer Genetics, Inc. from December 2016 until November 2019. Since 2006, he has been employed as an Adjunct Investigator with the National Cancer Institute-Division of Cancer Epidemiology and Genetics. From January 2007 until July 2016, Dr. Bhatia also served as a Director-AIDS Malignancy Program at the National Cancer Institute-Office of HIV and AIDS Malignancy, and from January 2004 through January 2007, he served as a Program Director and the Director of HIV and Cancer at the National Cancer Institute-Division of Cancer Treatment and Diagnosis. Dr. Bhatia received a Bachelor of Science degree in microbiology from the University of Pune and a Ph.D. in biochemistry from the University of Mumbai and is a Fellow of the Royal College of Pathology in the United Kingdom and was a Post-Doctoral Fellow at Johns Hopkins University and a Research Assistant Professor at Georgetown University from 1985 to 1989.

Summary Compensation Table

The following table sets forth information concerning all forms of compensation earned by our named executive officers during the fiscal years ended December 31, 2023 and 2022 for services provided to the Company and its subsidiaries, which compensation exceeded \$100,000.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Option Awards (\$) ⁽¹⁾	Other Compensation (\$) ⁽²⁾	Total (\$)
Panna Sharma, Chief Executive Officer and President	2023	\$ 525,300	\$ 149,185	\$ -	\$ 9,900	\$ 684,385
	2022	\$ 474,580	\$ 158,667	\$ 420,571	-	\$ 1,053,818
David R. Margrave, Chief Financial Officer and Secretary	2023	\$ 353,290	\$ 79,490	\$ -	\$ 9,900	\$ 442,680
	2022	\$ 332,667	\$ 61,692	\$ -	-	\$ 394,359
Kishor Bhatia, Ph.D., Chief Scientific Officer	2023	\$ 235,000	\$ 39,363	\$ -	\$ 8,874	\$ 283,237
	2022	\$ 162,889	\$ 21,438	\$ -	-	\$ 184,327

(1) For 2022, the fair value of the options granted were estimated using the Black-Scholes option-pricing model using the following weighted average assumptions: term between 5.6 and 6.2 years, risk free rate of between 2.88% and 2.89%, volatility of between 90.7% and 92.3%, and dividend yield of 0.0%. Based on these assumptions, the grant date fair value is between \$4.17 and \$4.27 per option share.

(2) Consists of employer contributions made to the Company's 401(k) plan for the benefit of the named executive officer.

Narrative Disclosure to Summary Compensation Table

We have entered into written employment agreements with the named executive officers, as described below. Each of our named executive officers has also executed our standard form of confidential information and invention assignment agreement.

Employment Agreement with Panna Sharma

We entered into an employment agreement with Mr. Sharma on July 23, 2018, that governs the terms of his employment with us as Chief Executive Officer and President. Mr. Sharma's employment agreement, as amended, currently extends until July 31, 2024. In January 2022, Mr. Sharma's employment agreement was amended to increase his annual base salary to \$449,280, reflecting a 4% cost of living adjustment. Mr. Sharma's annual base salary was increased to \$510,000 in August 2022, and in January 2023 his annual base salary was increased to \$525,300, reflecting a 3% cost of living adjustment. Mr. Sharma's employment agreement was further amended to increase his annual base salary to \$575,000 commencing January 1, 2024. Mr. Sharma received a cash bonus of \$149,185 for fiscal year 2023 and a cash bonus of \$158,667 for fiscal year 2022. In addition, Mr. Sharma will be entitled to an annual cash bonus of up to 50% of his annual base salary in future years, subject to the Company achieving certain operational and strategic milestones to be mutually agreed upon by the Board and Mr. Sharma and to additional discretionary bonuses to be determined by the Compensation Committee.

As incentive compensation, on August 8, 2022 Mr. Sharma was granted stock options to purchase 100,000 shares of our common stock under the terms and conditions of our Equity Incentive Plan. The exercise price for these options is \$5.60 per share. These options are vesting in equal monthly increments over a 36-month period that commenced September 8, 2022, with the vesting of the options to accelerate in the event the closing price for our common stock is at least \$15.00 per share.

Mr. Sharma also has the right to participate in the health insurance, vacation and other employee benefit plans and programs generally provided by us to our executive employees in effect from time to time. In 2023, the Company made employer contributions of \$9,900 to the Company's 401(k) plan for the benefit of Mr. Sharma.

Employment Agreement with David Margrave

We have entered into an employment agreement with Mr. Margrave that governs the terms of his employment with us as our Chief Financial Officer. The term of the employment agreement, as amended, currently extends until July 30, 2024. In January 2022, Mr. Margrave's employment agreement was amended to increase Mr. Margrave's annual base salary to \$312,000, reflecting a 4% cost of living adjustment. Mr. Margrave's annual base salary was increased to \$343,000 in May 2022, and in January 2023 his annual base salary was increased to \$353,290, reflecting a 3% cost of living adjustment. Mr. Margrave's employment agreement was further amended to increase his annual base salary to \$413,800 commencing January 1, 2024. Mr. Margrave received a cash bonus of \$79,490 for fiscal year 2023 and a cash bonus of \$61,692 for fiscal year 2022. In addition, Mr. Margrave will be eligible for an annual cash bonus of up to 40% of his annual base salary in future years, as determined by the Compensation Committee and subject to the Company achieving certain operational and strategic milestones to be mutually agreed upon by the CEO and Mr. Margrave.

Mr. Margrave also has the right to participate in the health insurance, vacation and other employee benefit plans and programs generally provided by us to our executive employees in effect from time to time. In 2023, the Company made employer contributions of \$9,900 to the Company's 401(k) plan for the benefit of Mr. Margrave.

Employment Agreement with Kishor G. Bhatia, Ph.D.

We have entered into an employment agreement with Dr. Bhatia that governs the terms of his employment with us as our Chief Scientific Officer. The term of the employment agreement, as amended, currently extends until July 30, 2024. In January 2022, Dr. Bhatia's employment agreement was amended to increase Dr. Bhatia's annual base salary to \$138,666, reflecting a 4% cost of living adjustment. Dr. Bhatia's annual base salary was increased to \$175,000 in May 2022, and in January 2023 his annual base salary was increased to \$235,000. Dr. Bhatia's employment agreement was further amended to increase his annual base salary to \$316,000 commencing January 1, 2024. Dr. Bhatia received a cash bonus of \$39,363 for fiscal year 2023 and a cash bonus of \$21,438 for fiscal year 2022. In addition, Dr. Bhatia will be eligible for an annual cash bonus

of up to 40% of his annual base salary in future years, as determined by the Compensation Committee and subject to the Company achieving certain operational and strategic milestones to be mutually agreed upon by the CEO and Dr. Bhatia.

Dr. Bhatia also has the right to participate in the health insurance, vacation and other employee benefit plans and programs generally provided by us to our executive employees in effect from time to time. In 2023, the Company made employer contributions of \$8,874 to the Company's 401(k) plan for the benefit of Dr. Bhatia.

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Potential Payments upon Termination and Change in Control

Regardless of the manner in which our named executive officers' services terminate, each named executive officer is entitled to receive amounts earned during their terms of service, including unpaid salary. In addition, each named executive officer is eligible to receive certain benefits pursuant to their employment agreement with us, as described below.

We or the named executive officer may terminate their employment agreement upon 30 days' notice to the other party. If the named executive officer is terminated without cause, then the named executive officer will be entitled to severance pay in an amount equal to the greater of (i) his base salary for the remainder of the term of the employment agreement or (ii) three months of his base salary. In addition, the named executive officer shall be entitled to an amount equal to his annual bonus amount prorated through the date of termination, if such bonus is earned in the calendar year of his termination. The foregoing payments are subject to the named executive officer entering into an agreement releasing all claims against us. In addition, pursuant to the Equity Incentive Plan, in the event of a change in control, as defined in the Equity Incentive Plan, all unvested securities owned by a named executive officer shall immediately vest and remain exercisable for the full term of the option. "Cause" is defined in the named executive officers' employment agreements to include, but not limited to, (i) a material breach of the named executive officers' duties as an employee or obligations under their agreement, subject to notice and an opportunity to cure such breach, (ii) a breach or threatened breach of the restrictive covenants and confidentiality provisions under their agreement, (iii) a refusal or failure to follow the reasonable instructions from our Board of Directors, (iv) failure to achieve any mutually agreed and specified material operational or strategic milestones, (v) a breach of any of our rules or policies that is likely to have a material adverse effect on us, subject to notice and an opportunity to cure the breach, (vi) a material failure, other than by reason of disability, to perform satisfactorily to the Board on a regular basis the duties as specified therein, subject to notice and an opportunity to cure the failure, (vii) any intentional or grossly negligent act or omission that causes or threatens to cause a material loss to us or our business, (viii) a commission of, indictment for, or conviction or plea of nolo contendere to a crime of moral turpitude or fraud, embezzlement or similar act of dishonesty or any violation of law or rule that materially impairs or injures us or our reputation, and (ix) any appropriation of any business opportunity belonging to us for the named executive officers' personal benefit or the benefits of any family member or affiliated entity.

Benefit Plans

We do not have any profit-sharing plan or similar plans for the benefit of our officers, directors or employees. However, we may establish such plans in the future.

Perquisites, Health, Welfare and Retirement Benefits

All of our current named executive officers are eligible to participate in our employee benefit plans, including health insurance for which we pay portions of the premiums, in each case on the same basis as all of our other employees. We pay portions of the premiums for health insurance for all of our employees, including our named executive officers. Our executive officers have the right to participate in the Company's 401(k) plan, which commenced January 1, 2023. As described in the executive officer narrative disclosure above, the Company made employer contributions to the Company's 401(k) plan in 2023 for the benefit of our executive officers. We generally do not provide perquisites or personal benefits to our named executive officers.

Nonqualified Deferred Compensation

Our named executive officers did not participate in, or earn any benefits under, a nonqualified deferred compensation plan sponsored by us during the fiscal year ended December 31, 2023. Our board of directors may elect to provide our officers and other employees with nonqualified defined contribution or other nonqualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

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Second Amended and Restated 2018 Equity Incentive Plan, as Amended

The Equity Incentive Plan was adopted by the Board of Directors and approved by the stockholders on August 29, 2018, and most recently amended on June 16, 2023. The Company reserved 1,739,680 shares of common stock for issuance under the Equity Incentive Plan, of which options to purchase 1,077,292 shares of our common stock are outstanding as of the date of this proxy statement. In addition, as of the date of this Proxy Statement, the Board of Directors has granted three restricted stock awards pursuant to the Equity Incentive Plan that together totaled 80,512 shares of common stock.

Outstanding Equity Awards at December 31, 2023

The following table sets forth certain information concerning equity awards held by our named executive officers as of December 31, 2023:

Name	Award Grant Date	Option Awards					Option Exercise Price (\$)	Option Expiration Date
		Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Options	Option Exercise Price (\$)	Option Expiration Date		
Panna Sharma, Chief Executive Officer, and President	8/29/2018	199,558	—	—	—	1.03	8/28/2028	
	12/17/2018	219,302	—	—	—	1.03	12/16/2028	
	6/15/2020	76,628	—	—	—	15.00	6/14/2030	
	8/8/2022	44,437	55,563	—	—	5.60	8/5/2032	
David Margrave, Chief Financial Officer and Secretary	6/15/2020	78,300	—	—	—	15.00	6/14/2030	
	10/29/2021	18,850	7,250	—	—	10.21	10/28/2031	

Kishor Bhatia, Ph.D.	6/15/2020	52,200	—	—	\$	15.00	6/14/2030
Chief Scientific Officer	10/29/2021	12,560	4,840	—	\$	10.21	10/28/2031

Director Compensation

Below is a summary of compensation accrued or paid to our non-executive directors during the fiscal year ended December 31, 2023.

Name	Fees Earned or Paid in Cash (\$)	Option Awards (\$)	Total (\$)
Donald J. Keyser	\$ 56,000	\$ —	\$ 56,000
David S. Silberstein	\$ 46,000	\$ —	\$ 46,000
Maria Maccacchini	\$ 51,000	\$ —	\$ 51,000
Vijay Chandru	\$ 46,000	\$ —	\$ 46,000
Frank Prendergast ⁽¹⁾	\$ 51,000	\$ —	\$ 51,000

(1) During 2023, Dr. Prendergast served as a Director of the Company until his unexpected death on October 12, 2023.

Effective upon the closing of our initial public offering, our Audit Committee Chair began receiving a cash fee of \$10,000 per year and our Compensation Committee Chair and our Nominating and Corporate Governance Committee Chair began receiving a cash fee of \$5,000 per year. In addition, effective November 1, 2021, each of our non-executive directors began receiving a cash fee of \$46,000 per year for their Board service.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

In addition to the compensation arrangements, including employment, termination of employment and change in control arrangements discussed elsewhere in this Proxy Statement, the following is a description of each transaction since January 1, 2022 to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed the lesser of \$120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years; and
- any of our directors, executive officers or holders of more than 5% of our capital stock, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest.

In May 2021, we entered into a Collaboration Agreement with Actuate Therapeutics, Inc. (“Actuate”), a clinical stage private biopharmaceutical company focused on the development of compounds for use in the treatment of cancer, and inflammatory diseases leading to fibrosis. Pursuant to the agreement, we are collaborating with Actuate on utilization of our RADR[®] platform to develop novel biomarker derived signatures for use with one of Actuate’s product candidates. As part of the collaboration, we received 25,000 restricted shares of Actuate stock, subject to meeting certain conditions of the collaboration, as well as the potential to receive additional Actuate stock if results from the collaboration are utilized in future development efforts. In 2023, the term of the Collaboration Agreement was extended to continue until March 31, 2024. We are currently in discussions with Actuate to extend the Collaboration Agreement. Certain of the Bios Equity Entities hold substantial beneficial ownership interests in both the Company and Actuate. Leslie W. Kreis, Jr., a director of the Company until June 8, 2022, is also a director of Actuate.

Policies and Procedures for Related Party Transactions

Our audit committee has the primary responsibility for reviewing and approving or disapproving “related party transactions,” which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed the lesser of \$120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years, and in which a related person has or will have a direct or indirect material interest. Our policy regarding transactions between us and related persons provides that a related person is defined as a director, executive officer, nominee for director or greater than 5% beneficial owner of our common stock, in each case since the beginning of the most recently completed year and any of their immediate family members. Our audit committee charter provides that our audit committee will review and approve or disapprove any related party transactions.

OTHER MATTERS

Stockholder Proposals and Director Nominations for 2025 Annual Meeting

For any proposal, other than director nominees, to be considered for inclusion in our Proxy Statement and form of proxy for submission to the stockholders at our 2025 annual meeting pursuant to Rule 14a-8 of the Securities Exchange Act of 1934, it must be submitted in writing and comply with the requirements of Rule 14a-8. Such proposals must be received by the Company at its offices at 1920 McKinney Avenue, 7th Floor, Dallas, Texas 75201 on or before January 9, 2025; provided, however, that if our 2025 annual meeting of stockholders is held before May 13, 2025 or after July 13, 2025, then the deadline is a reasonable amount of time prior to the date we begin to print and mail our proxy statement for the 2025 annual meeting of stockholders. In addition, pursuant to the proxy access provisions of our bylaws, a stockholder, or group of up to 10 stockholders, that has owned continuously for at least three years shares of our common stock representing an aggregate of at least 3% of our outstanding shares, may nominate and include in our proxy materials director nominees constituting up to the greater of two or 20% of our Board, provided that the stockholder(s) and nominee(s) satisfy the requirements in the proxy access provisions of our bylaws. Notice of proxy access director nominees must be received not earlier than the close of business on December 10, 2024 and not later than the close of business on January 8, 2025. Our Board will review any proposals from eligible stockholders that it receives by the required date and will make a determination whether any such proposals will be included in our proxy materials. Any proposal received after the required date shall be considered untimely and shall not be made a part of our proxy materials.

A stockholder who wishes to make a proposal, including director nominees other than through proxy access, at the 2025 annual meeting of stockholders without including the proposal in our proxy statement must also notify us no later than March 14, 2025 and not earlier than February 13, 2025; provided, however, if our 2025 annual meeting of stockholders is held prior to May 13, 2025 or after August 12, 2025, then to be timely the proposal should be received by us not earlier than the close of business on the 120th day prior to the 2025 annual meeting and not later than the close of business on the later of: (1) the 90th day prior to the 2025 annual meeting and (2) the close of business on the tenth day following the first date of our public disclosure of the date of the 2025 annual meeting. If a stockholder fails to give us advance notice in accordance with the foregoing, then, except as otherwise required by law, the chair of the 2025 annual meeting shall have the power and duty to declare that any such nomination shall be disregarded or that any such proposal shall not be transacted. In addition, notice of a nomination must comply with the additional requirements of Rule 14a-19(b) of the Exchange Act.

Householding of Proxy Materials

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

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This year, a number of banks and brokers with account holders who are our stockholders will be householding our proxy materials. A single proxy statement will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your bank or broker that it will be householding communications to your address, householding will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in householding and would prefer to receive a separate proxy statement and annual report, please notify your bank or broker, direct your written request to Lantern Pharma Inc., 1920 McKinney Avenue, 7th Floor, Dallas, Texas 75201, Attention: Investor Relations, or contact Investor Relations by telephone at 628-777-3153; or find our materials posted online at <https://ir.lanternpharma.com/>. Stockholders who currently receive multiple copies of the proxy statement at their address and would like to request householding of their communications should contact their bank or broker.

Other Matters

We will also consider any other business that properly comes before the Annual Meeting, or any adjournment or postponement thereof. As of the record date, we are not aware of any other matters to be submitted for consideration at the Annual Meeting. If any other matters are properly brought before the Annual Meeting, the persons designated as proxies will vote the shares they represent using their best judgment.

Incorporation by Reference

Notwithstanding anything to the contrary set forth in any of our previous filings under the Securities Act, or the Exchange Act, which might incorporate future filings made by us under those statutes, the preceding Audit Committee Report will not be incorporated by reference into any of those prior filings, nor will any such report be incorporated by reference into any future filings made by us under those statutes. In addition, information on our website, other than our Proxy Statement, notice and form of proxy, is not part of the proxy soliciting materials and is not incorporated herein by reference.

By Order of the Board of Directors

/s/ Donald J. Keyser

Donald J. Keyser,
Chairman of the Board of Directors

Dallas, Texas
April 29, 2024

A copy of the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2023 is available without charge upon written request to: Corporate Secretary, Lantern Pharma Inc., 1920 McKinney Avenue, 7th Floor, Dallas, Texas 75201.

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EXHIBIT A

AMENDMENT TO SECOND AMENDED AND RESTATED

LANTERN PHARMA INC. 2018 EQUITY INCENTIVE PLAN, AS AMENDED

WHEREAS, Lantern Pharma Inc., a Delaware corporation (the “Company”), maintains the Second Amended and Restated Lantern Pharma Inc. 2018 Equity Incentive Plan, as amended (the “Equity Incentive Plan”);

WHEREAS, pursuant to Section 8.6 of the Equity Incentive Plan, the Board of Directors of the Company (the “Board”) has the authority to amend the Equity Incentive Plan as it shall deem advisable, subject to any requirement of stockholder approval as provided in the Equity Incentive Plan or as required by applicable law, rule or regulation; and

WHEREAS, the Board deems it advisable and in the best interests of the Company and its stockholders to amend the Equity Incentive Plan to increase the available shares thereunder, subject to stockholder approval of such amendment.

NOW, THEREFORE, BE IT RESOLVED, that the Equity Incentive Plan is hereby amended, effective as of the date on which the stockholders of the Company approve such amendment, as follows:

Section 1.7(a) of the Equity Incentive Plan is hereby deleted in its entirety and replaced with the following:

“The Corporation has reserved 1,864,680 shares of Common Stock for issuance pursuant to stock-based Awards under the Plan, all of which shares may be granted pursuant to Incentive Stock Options under the Plan. All provisions in this Section 1.7 shall be adjusted, as applicable, in accordance with Article VII.”

LANTERN PHARMA INC.
 1300 ROCKWELL AVENUE, 7TH FLOOR
 DALLAS, TX 75207



VOTE BY INTERNET
 Before The Meeting - Go to www.proxyvote.com or scan the QR Barcode above

Use the Internet to transmit your voting instructions and for electronic delivery of information. Vote by 11:59 p.m. Eastern Time on June 12, 2024. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting - Go to www.virtualshareholdermeeting.com/LTRN2024

You may attend the meeting via the Internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions. Vote by 11:59 p.m. Eastern Time on June 12, 2024. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

V48286-F12226

KEEP THIS PORTION FOR YOUR RECORDS
 DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

LANTERN PHARMA INC.		For All	Withhold All	For All Except	To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.	
The Board of Directors recommends you vote FOR the following:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	
1. Election of Directors						
Nominees:						
01) Donald Jeff Keyser	04) Maria Maccocchi					
02) Panna Sharma	05) David S. Silberstein					
03) Vijay Chandru						
The Board of Directors recommends you vote FOR proposals 2, 3 and 4.						
2.	Approval of an amendment to the Second Amended and Restated Lantern Pharma Inc. 2018 Equity Incentive Plan, as amended (the "Equity Incentive Plan") to increase the number of shares of the Company's common stock available for issuance under the Equity Incentive Plan by an additional 125,000 shares.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3.	Ratification of the appointment of EisnerAmper LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2024.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4.	Adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Proposals 1, 2 or 3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
NOTE: Such other business as may properly come before the meeting or any adjournment thereof.						
Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.						
<input type="text"/>		<input type="text"/>		<input type="text"/>		
Signature (PLEASE SIGN WITHIN BOX)		Date		Signature (Joint Owners)		Date

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:
The Notice, Proxy Statement and Annual Report are available at www.proxyvote.com.

V48287-P12226

LANTERN PHARMA INC.
Annual Meeting of Stockholders
June 13, 2024
This proxy is solicited by the Board of Directors

The stockholder(s) hereby appoint(s) Panna Sharma and Donald Jeff Keyser, or either of them, as proxies, each with the power to appoint his substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this proxy, all of the shares of Common Stock of LANTERN PHARMA INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 11:00 AM, Eastern Time on Thursday, June 13, 2024, and any adjournment or postponement thereof.

The Annual Meeting is being held virtually and stockholders may join the meeting at www.virtualshareholdermeeting.com/LTRN2024 as described in the Proxy Statement.

THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED AS DIRECTED BY THE STOCKHOLDER(S). IF NO SUCH DIRECTIONS ARE MADE, THIS PROXY WILL BE VOTED FOR THE ELECTION OF THE NOMINEES LISTED ON THE REVERSE SIDE FOR THE BOARD OF DIRECTORS, FOR PROPOSAL 2, FOR PROPOSAL 3, AND FOR PROPOSAL 4.

Continued and to be signed on reverse side