

## SCHEDULE 14A INFORMATION

### Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934 (Amendment No.\_\_\_\_)

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Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to § 240.14a-12

### **X4 Pharmaceuticals, 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 Rule 14a-6(i)(1) and 0-11
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**X4 PHARMACEUTICALS, INC.**  
**61 North Beacon Street, 4<sup>th</sup> Floor**  
**Boston, Massachusetts 02134**



**NOTICE OF SPECIAL MEETING OF STOCKHOLDERS**

**To Be Held On September 1, 2022**

Dear Stockholder of X4 Pharmaceuticals, Inc.:

You are cordially invited to attend a Special Meeting of Stockholders (the “Special Meeting”) of X4 Pharmaceuticals, Inc., a Delaware corporation (the “Company”). The Special Meeting will be held on Thursday, September 1, 2022 at 11:00 a.m. Eastern Time at the offices of Cooley LLP, 500 Boylston Street, 14th Floor, Boston, Massachusetts 02116. The Special Meeting will be held for the following purposes:

1. To approve an amendment to the Company’s Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of common stock from 125,000,000 to 500,000,000. We refer to this proposal as the “Increase in Number of Authorized Shares of Common Stock Proposal” or “Proposal 1.”
2. To approve one or more adjournments of the Special Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the foregoing proposal. We refer to this proposal as the “Adjournment Proposal” or “Proposal 2.”

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

The record date for the Special Meeting is August 1, 2022. Only stockholders of record at the close of business on that date may vote at the Special Meeting or any adjournment or postponement thereof. A list of stockholders entitled to vote at the Special Meeting will be available at our principal executive offices for examination during normal business hours by any stockholder for any purpose germane to the Special Meeting for a period of ten days prior to the Special Meeting through the close of the Special Meeting.

**Important Notice Regarding the Availability of Proxy Materials for the Special Meeting of Stockholders  
to Be Held on Thursday, September 1, 2022 at 11:00 a.m. Eastern Time at the Offices of Cooley LLP, 500 Boylston Street, 14th Floor, Boston,  
Massachusetts 02116.**

The proxy statement and annual report to stockholders are available at [www.proxyvote.com](http://www.proxyvote.com).

By Order of the Board of Directors,

A handwritten signature in blue ink that reads 'Paula M. Ragan'.

Paula Ragan, Ph.D.  
President, Chief Executive Officer and Director  
Boston, Massachusetts  
August , 2022

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**You are cordially invited to attend the Special Meeting. Whether or not you expect to attend the Special Meeting, please vote by telephone or through the Internet, or complete, date, sign and return the enclosed proxy by mail, as promptly as possible in order to ensure your representation at the Special Meeting. Voting instructions are provided in the enclosed proxy card and included in the accompanying Proxy Statement. Even if you have voted by proxy, you may still vote in person if you attend the Special Meeting. Please note, however, that if your shares are held of record by a brokerage firm, bank or other agent and you wish to vote at the Special Meeting, you must obtain a proxy issued in your name from that agent in order to vote your shares that are held in such agent's name and account.**

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**X4 PHARMACEUTICALS, INC.  
61 North Beacon Street, 4th Floor  
Boston, Massachusetts 02134**

**PROXY STATEMENT  
FOR THE SPECIAL MEETING OF STOCKHOLDERS  
TO BE HELD ON SEPTEMBER 1, 2022**

**QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING**

**Why am I receiving these materials?**

We have sent you these proxy materials because the Board of Directors (the “Board”) of X4 Pharmaceuticals, Inc. (sometimes referred to as the “Company” or “X4”) is soliciting your proxy to vote at this Special Meeting of Stockholders (the “Special Meeting”), including at any adjournments or postponements of the Special Meeting. You are invited to attend the Special Meeting in person to vote on the proposals described in this Proxy Statement. However, you do not need to attend the Special Meeting to vote your shares. Instead, you may simply complete, sign and return the enclosed proxy card, or follow the instructions below to submit your proxy over the telephone or through the internet.

We intend to mail these proxy materials on or about August \_\_\_\_\_, 2022 to all stockholders of record entitled to vote at the Special Meeting.

**How do I attend the Special Meeting?**

The Special Meeting will be held in person on Thursday, September 1, 2022 at 11:00 a.m. Eastern Time at the offices of Cooley LLP, 500 Boylston Street, 14th Floor, Boston, Massachusetts 02116. Directions to the Special Meeting may be found at <http://www.proxydocs.com/XFOR>. Information on how to vote in person at the Special Meeting is discussed below.

**What are the health and safety protocols to attend the Special Meeting?**

We continue to be mindful of the public health concerns posed by the COVID-19 pandemic. In-person attendance will require compliance with protocols consistent with then applicable federal, state and local guidelines, mandates or recommendations, as well as with requirements imposed by Commonwealth of Massachusetts regulations and in particular, the building at 500 Boylston Street where the Special Meeting is being held. You are required to be fully vaccinated in order to attend the Special Meeting. In order to enter the meeting space, you will be required to complete a health questionnaire attesting to your fully vaccinated status before you are admitted to the Special Meeting. In addition, any person in attendance who does not comply with such measures, who exhibits cold or flu-like symptoms or who has been exposed to COVID-19, may be asked to leave the premises for the protection of the other attendees. To ensure the continued safety of all, once the Special Meeting has concluded, all attendees will be asked to leave the premises as soon as possible. These measures are subject to change due to the fluidity of the public health situation, and we reserve the right to make adjustments, take any additional precautionary measures or impose any additional procedures or limitations on meeting attendees as we deem appropriate in relation to the physical meeting and access.

**Who can vote at the Special Meeting?**

Only stockholders of record at the close of business on August 1, 2022 will be entitled to vote at the Special Meeting. On this record date, there were \_\_\_\_\_ shares of common stock outstanding and entitled to vote. A list of stockholders entitled to vote at the Special Meeting will be available at our principal executive offices for examination during normal business hours by any stockholder for any purpose germane to the Special Meeting for a period of ten days prior to the Special Meeting through the close of the Special Meeting.

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

If on August 1, 2022, your shares were registered directly in your name with our transfer agent, Computershare Trust Company, N.A., then you are a stockholder of record. As a stockholder of record, you may vote in person at the Special Meeting or vote by proxy prior to the Special Meeting. Whether or not you plan to attend the Special Meeting, we urge you to fill out and return the enclosed proxy card or vote by proxy electronically through the Internet or over the telephone to ensure your vote is counted.

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

If on August 1, 2022, your shares were held not in your name but rather in an account at a brokerage firm, bank or other similar organization, then you are the beneficial owner of shares held in “street name” and these proxy materials are being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Special Meeting. As a beneficial owner, you have the right to direct your broker, bank or other agent regarding how to vote the shares in your account. You are also invited to attend the Special Meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the Special Meeting unless you request and obtain a valid proxy from your broker, bank or other agent.

### **What am I voting on?**

There are two proposals being presented for stockholder approval:

- To approve an amendment to our Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of common stock from 125,000,000 to 500,000,000. We refer to this proposal as the “Increase in Number of Authorized Shares of Common Stock Proposal” or “Proposal 1.”
- To adjourn the Special Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the foregoing proposal. We refer to this proposal as the “Adjournment Proposal” or “Proposal 2.”

### **What if another matter is properly brought before the Special Meeting?**

The Board knows of no other matters that will be presented for consideration at the Special Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

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

The procedures for voting are as follows:

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

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

- To vote in person, come to the Special Meeting and we will give you a ballot when you arrive; however, due to the ongoing COVID-19 pandemic and related government guidelines, we urge our stockholders to monitor the applicable government guidelines and to not attend the Special Meeting in person if the Commonwealth of Massachusetts implements any “stay-at-home” advisory, or if other applicable government guidelines continue to encourage people not to attend public gatherings.
- To vote through the Internet before the Special Meeting, go to [www.proxyvote.com](http://www.proxyvote.com) to complete an electronic proxy card. You will be asked to provide the 16-digit control number from the enclosed proxy card. Your Internet vote must be received by 11:59 p.m., Eastern Time, on August 31, 2022 to be counted.

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- To vote over the telephone from a location in the United States, dial toll-free 1-800-690-6903 using a touch-tone phone and follow the recorded instructions. You will be asked to provide the control number from the enclosed proxy card. Your telephone vote must be received by 11:59 p.m., Eastern Time, on August 31, 2022 to be counted.
- To vote by using a printed proxy card that may be delivered to you, simply complete, sign and date the enclosed proxy card and return it promptly in the envelope provided. If you return your signed proxy card to us before the Special Meeting, we will vote your shares as you direct.

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

If you are a beneficial owner of shares registered in the name of your broker, bank or other agent, you should have received voting instruction form with these proxy materials from that organization rather than from us. To vote prior to the Special Meeting, simply complete and mail the voting instruction form to ensure that your vote is counted. Alternatively, you may vote by telephone or over the internet as instructed by your broker or bank. To vote in person at the Special Meeting, you must obtain a valid proxy from your broker, bank or other agent. Follow the instructions from your broker, bank or other agent included with these proxy materials, or contact that organization to request a proxy form.

**We provide Internet proxy voting to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your Internet access, such as usage charges from internet access providers and telephone companies.**

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

On each matter to be voted upon, you have one vote for each share of common stock you own as of August 1, 2022.

### **If I am a stockholder of record and I do not vote, or if I return a proxy card or otherwise vote without giving specific voting instructions, what happens?**

If you are a stockholder of record and do not vote by completing a proxy card, by telephone, through the Internet or in person at the Special Meeting, your shares will not be voted.

If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted "FOR" the Increase in Number of Authorized Shares of Common Stock Proposal and "FOR" the Adjournment Proposal. If any other matter is properly presented at the Special Meeting, your proxyholder (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

### **If I am a beneficial owner of shares held in street name and I do not provide my broker or bank with voting instructions, what happens?**

If you are a beneficial owner of shares held in street name and you do not instruct your broker, bank or other agent how to vote your shares, your broker, bank or other agent may still be able to vote your shares in its discretion. In this regard, under the rules of the New York Stock Exchange ("NYSE"), brokers, banks and other securities intermediaries that are subject to NYSE rules, including those voting on behalf of beneficial owners of Nasdaq-listed companies, may use their discretion to vote your "uninstructed" shares with respect to matters considered to be "routine" under NYSE rules, but not with respect to "non-routine" matters. Under the rules and interpretations of the NYSE, "non-routine" matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals, elections of directors (even if not contested), executive compensation (including any advisory stockholder votes on executive compensation and on the frequency of stockholder votes on executive compensation), and certain corporate governance proposals, even if management-supported.

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In this regard, we believe that your broker or nominee will be permitted to vote your shares on both Proposal 1 and Proposal 2. However, this remains subject to the final determination from the NYSE regarding which of the proposals are “routine” or “non-routine.” Accordingly, if you own shares through a nominee, such as a broker, bank or other agent, please be sure to instruct your nominee how to vote to ensure that your vote is counted on all of the proposals.

***If you are a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you would prefer, you must provide voting instructions to your broker, bank or other agent by the deadline provided in the materials you receive from your broker, bank or other agent.***

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

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

### **What does it mean if I receive more than one set of proxy materials?**

If you receive more than one set of proxy materials, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions on each proxy card in the proxy materials to ensure that all of your shares are voted.

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

*Stockholder of Record: Shares Registered in Your Name*

Yes. You can revoke your proxy at any time before the final vote at the Special Meeting. If you are the record holder of your shares, you may revoke your proxy in any one of the following ways:

- You may submit another properly completed proxy card with a later date (which automatically revokes the earlier proxy).
- You may grant a subsequent proxy by telephone or through the Internet.
- You may send a timely written notice that you are revoking your proxy to our Corporate Secretary at 61 North Beacon Street, 4th Floor, Boston, Massachusetts 02134.
- You may attend the Special Meeting and vote in person. Simply attending the Special Meeting will not, by itself, revoke your proxy.

Your most current proxy card or telephone or Internet proxy is the one that is counted.

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

If your shares are held by your broker, bank or other agent, you should follow the instructions provided by your broker, bank or other agent.

### **When are stockholder proposals and director nominations due for next year’s annual meeting?**

To be considered for inclusion in next year’s proxy materials, your proposal must be submitted in writing by December 26, 2022, to our Corporate Secretary, c/o X4 Pharmaceuticals, Inc., 61 North Beacon Street, 4th Floor, Boston, Massachusetts 02134.



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Our bylaws also establish an advance notice procedure if you wish to present a proposal (including a director nomination) before an annual meeting of stockholders but you are not requesting that your proposal or nomination be included in next year's proxy materials. To be timely for our 2023 Annual Meeting of Stockholders, our Corporate Secretary must receive the written notice at our principal executive offices not later than the close of business on March 8, 2023 nor earlier than the close of business on February 6, 2023. However, if we hold our 2023 Annual Meeting of Stockholders more than 30 days before or after June 6, 2023 (the one-year anniversary date of the 2022 Annual Meeting of Stockholders), then timely notice of a stockholder proposal that is not intended to be included in our proxy statement must be received not earlier than the close of business on the 120th day prior to the 2023 Annual Meeting of Stockholders and not later than the close of business on the later of (a) the 90th day prior to the 2023 Annual Meeting of Stockholders and (b) the 10th day following the day on which the one of the following first occurs: (i) mailing of notice of the date of the 2023 Annual Meeting of Stockholders and (ii) the first public announcement of the date of the 2023 Annual Meeting of Stockholders. You are also advised to review our bylaws, which contain additional requirements about advance notice of stockholder proposals and director nominations.

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

Votes will be counted by the inspector of election appointed for the Special Meeting, who will separately count "For" and "Against" votes, abstentions and, if applicable, broker non-votes. Abstentions will be counted towards the vote total for each proposal and will have the same effect as "Against" votes. Broker non-votes will have the same effect as "Against" votes for Proposal 1.

### **What are "broker non-votes"?**

When a beneficial owner of shares held in "street name" does not give voting instructions to his or her broker, bank or other securities intermediary holding his or her shares as to how to vote on matters deemed to be "non-routine" under NYSE rules, the broker, bank or other such agent cannot vote the shares. These unvoted shares are counted as "broker non-votes." As discussed above, we believe that your broker or nominee will be permitted to vote your shares on both Proposal 1 and Proposal 2. However, this remains subject to the final determination from the NYSE regarding which of the proposals are "routine" or "non-routine." Accordingly, if you own shares through a nominee, such as a broker, bank or other agent, please be sure to instruct your nominee how to vote to ensure that your vote is counted on all of the proposals.

*As a reminder, if you are a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you would prefer, you must provide voting instructions to your broker, bank or other agent by the deadline provided in the materials you receive from your broker, bank or other agent.*

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

The following table summarizes the minimum vote needed to approve each proposal and the effect of abstentions and broker non-votes.

<b>Proposal Number</b>	<b>Proposal Description</b>	<b>Vote Required for Approval</b>	<b>Effect of Abstentions</b>	<b>Effect of Broker Non-Votes</b>
1	Approval of an amendment to our Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of common stock from 125,000,000 to 500,000,000.	The affirmative vote of a majority of the outstanding shares entitled to vote on the matter.	Against	Against <sup>(1)</sup>
2	Authorization to adjourn the Special Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the foregoing proposal.	The affirmative vote of a majority of the votes cast by the holders of shares present in person or by proxy and entitled to vote at the Special Meeting.	Against	Not applicable <sup>(1)</sup>

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(1) This proposal is considered to be a “routine” matter under NYSE rules. Accordingly, if you hold your shares in street name and do not provide voting instructions to your broker, bank or other agent that holds your shares, your broker, bank or other agent has discretionary authority under NYSE rules to vote your shares on this proposal.

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

A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if stockholders holding at least a majority in voting power of the outstanding shares entitled to vote are present at the Special Meeting in person or represented by proxy. On the record date, there were \_\_\_\_\_ shares outstanding and entitled to vote. **Thus, the holders of \_\_\_\_\_ shares must be present in person or represented by proxy at the Special Meeting to have a quorum.**

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

### **How can I find out the results of the voting at the Special Meeting?**

Preliminary voting results will be announced at the Special Meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file within four business days after the Special Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the Special Meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

### **What proxy materials are available on the internet?**

The Proxy Statement and annual report to stockholders are available at [www.proxyvote.com](http://www.proxyvote.com).

## PROPOSAL 1

### APPROVAL OF THE INCREASE IN NUMBER OF AUTHORIZED SHARES OF COMMON STOCK PROPOSAL

#### General

The Board has approved an amendment (the “Authorized Shares Amendment”) to the Company’s Restated Certificate of Incorporation, as amended (the “Certificate of Incorporation”), to increase the number of authorized shares of common stock from 125,000,000 to 500,000,000. The Authorized Shares Amendment will not change the number of authorized shares of preferred stock, which currently consists of 10,000,000 shares of preferred stock.

The additional shares of common stock authorized for issuance by the Authorized Shares Amendment would be a part of the existing class of common stock and, if and when issued, would have the same rights and privileges as the common stock presently issued and outstanding. The full text of the proposed Authorized Shares Amendment is attached to this Proxy Statement as **Appendix A**. However, the text of the Authorized Shares Amendment is subject to revision to include such changes as may be required by the Secretary of State of the State of Delaware and as deemed necessary and advisable to effect the Authorized Shares Amendment.

Provided the stockholders approve the Authorized Shares Amendment, the increased number of shares of common stock would be authorized for issuance, but would remain unissued until such time as the Board approves a specific issuance of shares. Other than future issuances under the Company’s equity compensation plans, future issuances of the Company’s securities under the Purchase Agreement (described below), including issuance of shares upon exercise of outstanding warrants of the Company, the Company currently has no plans or arrangements to issue the additional authorized shares of common stock that will result in the event that the Company’s stockholders approve, and the Company implements, the Authorized Shares Amendment.

Adoption of the Authorized Shares Amendment would not affect the rights of the holders of currently outstanding common stock, except for effects incidental to increasing the number of shares of our common stock outstanding, such as dilution of the earnings per share and voting rights of current holders of common stock, to the extent that any additional shares of common stock are ultimately issued out of the increase in authorized shares proposed in the Authorized Shares Amendment.

If the proposed Authorized Shares Amendment is approved by the requisite vote of the stockholders, it will become effective upon the filing of a Certificate of Amendment with the Secretary of State of the State of Delaware. The Board reserves its right to elect not to proceed with and abandon the Authorized Shares Amendment if it determines, in its sole discretion at any time, that this proposal is no longer in the best interests of our stockholders.

If we fail to obtain stockholder approval of this proposal at the Special Meeting, we intend to continue to seek to obtain stockholder approval at each subsequent annual meeting of stockholders and/or special meetings of stockholders until such approval has been obtained and we will incur the costs associated therewith.

#### Background

In addition to the \_\_\_\_\_ shares of common stock outstanding on August 1, 2022, the Company has also reserved \_\_\_\_\_ shares for issuance upon the exercise of outstanding warrants, \_\_\_\_\_ shares for issuance upon the vesting of outstanding performance-based restricted stock units, \_\_\_\_\_ shares for issuance upon the exercise of outstanding stock options and \_\_\_\_\_ shares for issuance pursuant to the Company’s equity incentive plans, including inducement equity incentive plan, and employee stock purchase plan. The Board has also authorized the Company to issue and sell (i) an aggregate of 37,649,086 shares of the Company’s common stock, (ii) pre-funded warrants to purchase an aggregate of 13,276,279 shares of common stock and (iii) accompanying warrants (the “Warrants”) to purchase an aggregate of 50,925,365 shares of common stock or pre-funded warrants, pursuant to that certain Securities Purchase Agreement dated as of June 30, 2022 (the “Purchase Agreement”), which requires an increase of the number of authorized shares of common stock under the Certificate of Incorporation for potential issuance of shares of common stock upon the exercise of the Warrants sold under the Purchase Agreement.

## **Purposes and Effects of the Authorized Shares Amendment**

The Board is recommending the proposed increase in the authorized number of shares of common stock to provide the Company with appropriate flexibility to issue additional shares in the future on a timely basis if such need arises in connection with potential financings, business combinations or other corporate purposes and to reserve the number of shares required for potential issuance upon the exercise of the Warrants sold under the Purchase Agreement. Approval of the Authorized Shares Amendment could enable us to take advantage of market conditions, the availability of more favorable financing, and opportunities for business combinations and other strategic transactions, without the potential delay and expense associated with convening a special stockholders' meeting.

Approval of this proposal will be required for us to derive maximum value from the private placement financing governed by the Purchase Agreement, pursuant to which we issued and sold (i) an aggregate of 37,649,086 shares of our common stock, (ii) pre-funded warrants to purchase an aggregate of 13,276,279 shares of common stock and (iii) accompanying warrants (the "Warrants") to purchase an aggregate of 50,925,365 shares of common stock or pre-funded warrants, at a purchase price of \$1.095 per share of common stock and accompanying Warrant and \$1.094 per pre-funded warrant and accompanying Warrant. Each pre-funded warrant has an exercise price equal to \$0.001 per share and each Warrant has an exercise price equal to \$1.095 per share. If exercised for cash, the Warrants would result in additional gross proceeds to us of up to approximately \$55.7 million. Under the Purchase Agreement, the purchasers thereunder have agreed to vote all of their shares of common stock in favor of the Authorized Shares Amendment, subject to certain conditions.

Our success also depends in part on our continued ability to attract, retain and motivate highly qualified management and key personnel, which is of particular concern in the biotechnology community. If the Authorized Shares Amendment is not approved by our stockholders, the lack of unissued and unreserved authorized shares of common stock to provide future equity incentive opportunities could adversely impact our ability to achieve these goals and to retain employees. In short, if our stockholders do not approve this proposal, we may not be able to access the capital markets, complete corporate collaborations or partnerships, attract, retain and motivate employees, and pursue other business opportunities integral to our growth and success.

The proposed increase in the number of authorized shares of common stock will not, by itself, have an immediate dilutive effect on our current stockholders. However, if the Authorized Shares Amendment is approved, unless otherwise required by applicable law or stock exchange rules, the Board will be able to issue the additional shares of common stock from time to time in its discretion without further action or authorization by the stockholders. The newly authorized shares of common stock would be issuable for any proper corporate purpose, including capital raising transactions of equity or convertible debt securities, the establishment of collaborations or other strategic agreements, stock splits, stock dividends, issuance under current or future equity incentive plans, future acquisitions, investment opportunities, or for other corporate purposes. The future issuance of additional shares of common stock or securities convertible into our common stock, including pursuant to the Purchase Agreement, may occur at times or under circumstances that could result in a dilutive effect on the earnings per share, book value per share, voting power and percentage interest of the present holders of our common stock, some of whom have preemptive rights to subscribe for additional shares that we may issue.

## **Potential Anti-Takeover Effect**

An increase in the number of authorized but unissued shares of common stock relative to the number of outstanding shares of common stock may also, under certain circumstances, be construed as having an anti-takeover effect. Although not designed or intended for such purposes, the effect of the Authorized Shares Amendment might be to render more difficult or to discourage a merger, tender offer, proxy contest or change in control of us and the removal of management, which stockholders might otherwise deem favorable. For example, the authority of the Board to issue common stock might be used to create voting impediments or to frustrate an attempt by another person or entity to effect a takeover or otherwise gain control of us because the issuance of additional common stock would dilute the voting power of the common stock then outstanding. Our common stock could also be issued to purchasers who would support the Board in opposing a takeover bid which our board determines not to be in our best interests and those of our stockholders. In addition to the Authorized Shares Amendment, the Certificate of Incorporation and Amended and Restated Bylaws also include other provisions that may have an anti-takeover effect. These provisions, among other things, permit the Board to issue preferred stock with rights senior to those of the common stock without

any further vote or action by the stockholders, provide that special meetings of stockholders may only be called by the Board and some of our officers, and do not provide for cumulative voting rights, which could make it more difficult for stockholders to effect certain corporation actions and may delay or discourage a change in control. The Board is not presently aware of any attempt, or contemplated attempt, to acquire control of the Company and the Authorized Shares Amendment is not part of any plan by the Board to recommend or implement a series of anti-takeover measures.

#### **Vote Required**

Approval of the Increase in Number of Authorized Shares of Common Stock Proposal requires “FOR” votes, cast either in person by attendance of the Special Meeting or by proxy, of a majority of the outstanding shares of our common stock. Abstentions will have the same effect as an “against” vote on this proposal. As noted above, we believe that this proposal will be considered a “routine” matter and, as a result, we do not expect there to be any broker non-votes on this proposal. If, however, a broker non-vote occurs (or if your shares are not affirmatively voted in favor of this proposal for any other reason), it will have the same effect as an “AGAINST” vote on this proposal.

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE APPROVAL OF THE INCREASE IN NUMBER OF AUTHORIZED SHARES OF COMMON STOCK PROPOSAL.**

## PROPOSAL 2

### APPROVAL OF ONE OR MORE ADJOURNMENTS OF THE SPECIAL MEETING, IF NECESSARY, TO SOLICIT ADDITIONAL PROXIES

#### General

If the Special Meeting is convened and a quorum is present, but there are not sufficient votes to approve Proposal 1, or if there are insufficient votes to constitute a quorum, our proxy holders may move to adjourn the Special Meeting at that time in order to enable the Board to solicit additional proxies.

In this proposal, we are asking our stockholders to authorize the holder of any proxy solicited by the Board to vote in favor of adjourning the Special Meeting to another time and place, if necessary or appropriate (as determined in good faith by the Board), to solicit additional proxies in the event there are not sufficient votes to approve Proposal 1. If our stockholders approve this proposal, we could adjourn the Special Meeting and any adjourned or postponed session of the Special Meeting and use the additional time to solicit additional proxies, including the solicitation of proxies from our stockholders that have previously voted. Among other things, approval of this proposal could mean that, even if we had received proxies representing a sufficient number of votes to defeat Proposal 1, we could adjourn the Special Meeting without a vote on such proposal and seek to convince our stockholders to change their votes in favor of such proposal.

If it is necessary or appropriate (as determined in good faith by the Board) to adjourn the Special Meeting, no notice of the adjourned meeting is required to be given to our stockholders, other than an announcement at the Special Meeting of the time and place to which the Special Meeting is adjourned, so long as the meeting is adjourned for 30 days or less and no new record date is fixed for the adjourned meeting. At the adjourned meeting, we may transact any business which might have been transacted at the original meeting.

#### Vote Required

Approval of the Adjournment Proposal requires “FOR” votes from the holders of a majority of the shares represented at the Special Meeting. Abstentions will have the same effect as an “against” vote on this proposal. As noted above, we believe that this proposal will be considered a “routine” matter and, as a result, we do not expect there to be any broker non-votes on this proposal. If, however, your shares are represented at the Special Meeting and your broker fails to vote your shares on this proposal, it will have the same effect as an “AGAINST” vote on this proposal.

**THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE “FOR” APPROVAL OF THE ADJOURNMENT PROPOSAL.**

## HOUSEHOLDING OF PROXY MATERIALS

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for Special Meeting materials with respect to two or more stockholders sharing the same address by delivering a single set of Special Meeting materials addressed to those stockholders. This process, which is commonly referred to as “householding,” potentially means extra convenience for stockholders and cost savings for companies.

For this meeting, a number of brokers with account holders who are X4 stockholders will be “householding” the Company’s proxy materials. A single set of Special Meeting materials 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 broker that they will be “householding” communications to your address, “householding” will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in “householding” and would prefer to receive a separate set of Special Meeting materials, please notify your broker or X4. Direct your written request to X4 Pharmaceuticals, Inc., Attn: Corporate Secretary, 61 North Beacon Street, 4th Floor, Boston, MA 02134 or contact the Corporate Secretary at (857) 529-8300. Stockholders who currently receive multiple copies of the Special Meeting materials at their addresses and would like to request “householding” of their communications should contact their brokers.

**OTHER MATTERS**

The Board knows of no other matters that will be presented for consideration at the Special Meeting. If any other matters are properly brought before the Special Meeting, it is the intention of the person named in the accompanying proxy to vote on such matters in accordance with his best judgment.

By Order of the Board of Directors,

A handwritten signature in blue ink, appearing to read "Paula M. Ragan", with a long horizontal flourish extending to the right.

Paula Ragan  
President, Chief Executive Officer and Director

August                   , 2022

**A copy of the Company's Annual Report to the Securities and Exchange Commission on Form 10-K for the fiscal year ended December 31, 2021 is available without charge upon written request to: Corporate Secretary, X4 Pharmaceuticals, Inc., 61 North Beacon Street, 4th Floor, Boston, MA 02134.**



**CERTIFICATE OF AMENDMENT OF THE RESTATED  
CERTIFICATE OF INCORPORATION OF X4 PHARMACEUTICALS, INC.**

(Pursuant to Section 242 of the  
General Corporation Law of the State of Delaware)

X4 Pharmaceuticals, Inc. (the "Corporation"), a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "General Corporation Law"),

**DOES HEREBY CERTIFY:**

1. A resolution was duly adopted by the Board of Directors of the Corporation pursuant to Section 242 of the General Corporation Law proposing this Amendment of the Corporation's Restated Certificate of Incorporation and declaring the advisability of this Amendment of the Restated Certificate of Incorporation, and authorizing the appropriate officers of the Corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment is as follows:

RESOLVED, that the first paragraph of Article FOURTH of the Restated Certificate of Incorporation of the Corporation, as amended, be and hereby is deleted in its entirety and the following paragraphs are inserted in lieu thereof:

"FOURTH. The total number of shares of all classes of stock which the Corporation shall have authority to issue is 510,000,000 shares, consisting of (i) 500,000,000 shares of Common Stock, \$0.001 par value per share ("Common Stock"), and (ii) 10,000,000 shares of Preferred Stock, \$0.001 par value per share ("Preferred Stock")."

2. This Certificate of Amendment of the Restated Certificate of Incorporation has been duly adopted by the stockholders of the Corporation in accordance with the provisions of Section 242 of the General Corporation Law.

[Remainder of page intentionally blank]

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**IN WITNESS WHEREOF**, this Corporation has caused this Certificate of Amendment of the Restated Certificate of Incorporation to be signed by its President and Chief Executive Officer this \_\_\_\_ day of \_\_\_\_\_, 2022.

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Paula Ragan, Ph.D.  
President and Chief Executive Officer



X4 PHARMACEUTICALS, INC.  
67 N. BEACON STREET  
4TH FLOOR  
BOSTON, MA 02134



**SCAN TO**  
VIEW MATERIALS & VOTE

**VOTE BY INTERNET - [www.proxyvote.com](http://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 August 31, 2022. 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.

**ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS**  
If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

**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 August 31, 2022. 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:

D89750-551058

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

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

X4 PHARMACEUTICALS, INC.

The Board of Directors recommends a vote FOR Proposal 1 and FOR Proposal 2.

For Against Abstain

- |   |   |                          |                          |                          |                          |                          |                          |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <ol style="list-style-type: none"> <li>1. To approve an amendment to the Company's Restated Certificate of Incorporation, as amended, to increase the number of authorized shares of common stock from 125,000,000 to 500,000,000.</li> <li>2. To approve one or more adjournments of the Special Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the foregoing proposal.</li> </ol> | <table border="0"> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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**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.

Signature [PLEASE SIGN WITHIN BOX]	Date

Signature (Joint Owners)	Date

**Important Notice Regarding the Availability of Proxy Materials for the Special Meeting:**  
The Notice and Proxy Statement and Annual Report are available at [www.proxyvote.com](http://www.proxyvote.com).

D89751-SS1058



**Proxy for Special Meeting of Stockholders to be held  
on Thursday, September 1, 2022 at 11:00 AM EDT**

**This proxy is being solicited on behalf of the Board of Directors**

**Please vote, date and sign this Proxy on the reverse side and return it in the enclosed envelope.**

The Stockholder(s) signing on the reverse side (the "undersigned"), having received the Annual Report and Proxy Statement, hereby appoint(s) Paula Ragan and Adam Mostafa, and either of them, Proxies of the undersigned (with full power of substitution) to attend the Special Meeting of Stockholders of X4 Pharmaceuticals, Inc. (the "Company") to be held on Thursday, September 1, 2022 at 11:00 AM EDT, at the offices of Cooley LLP, 500 Boylston Street, 14th Floor, Boston, Massachusetts 02116, and all adjournments and postponements thereof (the "Meeting"), and to vote all shares of Common Stock of the Company that the undersigned would be entitled to vote, if personally present, in regard to all matters that may properly come before the Meeting.

The undersigned hereby confer(s) upon the Proxies, and either of them, discretionary authority to consider and act upon such business, matters or proposals as may properly come before the Meeting. **The Proxy, when properly executed, will be voted in the manner specified herein. If no specification is made, the Proxies intend to vote FOR Proposal 1 and FOR Proposal 2.**

**Continued and to be signed on reverse side.**