BIOLINERX LTD.

NOTICE OF EXTRAORDINARY GENERAL MEETING OF SHAREHOLDERS ON MARCH 5, 2020

Notice is hereby given that an Extraordinary General Meeting of the shareholders (the "**Meeting**") of BioLineRx Ltd. (the "**Company**") will be held at the offices of the Company at Modi'in Technology Park, 2 HaMa'ayan Street, Modi'in 7177871, Israel, on March 5, 2020 at 3:00 p.m. for the purpose of approving an amendment to the Company's Compensation Policy for Executives and Directors with respect to directors' and officers' liability insurance only, as further described in the Proxy Statement.

Shareholders of record at the close of business on February 4, 2020 (the **"Record Date**") are entitled to notice of and to vote at the Meeting. All shareholders are cordially invited to attend the Meeting in person.

Whether or not you plan to attend the Meeting, you are urged to promptly complete, date and sign the enclosed proxy and to mail it in the enclosed envelope, which requires no postage if mailed in the United States. A proxy from the holder of ordinary shares must be received by the Company no later than 3:00 p.m. on March 3, 2020 to be validly included in the tally of ordinary shares voted at the Meeting; a proxy from the holder of the Company's American Depositary Shares must be received by The Bank of New York Mellon as Depositary no later than 12:00 p.m. EDT on March 2, 2020 to be validly included in the tally of votes for the Meeting. Return of your proxy does not deprive you of your right to attend the Meeting, to revoke the proxy or to vote your shares in person.

Beneficial owners who hold their shares through members of the Tel Aviv Stock Exchange ("**TASE**") may (i) vote their shares in person at the Meeting by presenting a certificate signed by a member of the TASE which complies with the Israel Companies Regulations (Proof of Ownership for Voting in General Meetings), 5760-2000 as proof of ownership of the shares, (ii) send such certificate along with a duly executed proxy to the Company at 2 HaMa'ayan Street, Modi'in 7177871, Israel, Attention: General Counsel, or (iii) complete the Internet voting process via the electronic voting system of the Israel Securities Authority the ("**ISA**") after receiving a personal identifying number, an access code and additional information regarding this Meeting from the member of the TASE and after carrying out a secured identification process, up to six hours before the time set for the Meeting.

By Order of the Board of Directors,

BioLineRx Ltd.

January 30, 2020

PROXY STATEMENT

BIOLINERX LTD. Modi'in Technology Park 2 HaMa'ayan Street Modi'in 7177871 Israel

EXTRAORDINARY GENERAL MEETING OF SHAREHOLDERS ON MARCH 5, 2020

The enclosed proxy is being solicited by our Board of Directors for use at our Extraordinary General Meeting of shareholders (the "**Meeting**") to be held on March 5, 2020 at 3:00 p.m., or at any adjournment thereof, at the offices of the Company at Modi'in Technology Park, 2 HaMa'ayan Street, Modi'in 7177871, Israel. The record date for determining which of our shareholders is entitled to notice of, and to vote at, the Meeting is established as of the close of trade on February 4, 2020 (the "**Record Date**"). On the date hereof, we have outstanding and entitled to vote 177,008,993 of our ordinary shares, nominal value New Israeli Shekels ("**NIS**") 0.10 each (the "**Ordinary Shares**").

INFORMATION CONCERNING SOLICITATION AND VOTING

Record Date and Shares Outstanding

You are entitled to vote at the Meeting if you were a shareholder at the close of trade on the Record Date. Subject to the terms described herein, you are also entitled to vote at the Meeting if you held Ordinary Shares through a bank, broker or other nominee which was a shareholder of record of the Company at the close of trade on the Record Date or which appeared in the participant listing of a securities depository on that date.

Quorum, Voting, Solicitation and Revocation of Proxies.

At least two shareholders who attend the Meeting in person, by proxy or by means of voting via the electronic voting system of the Israel Securities Authority (the "**ISA Electronic Voting System**") who hold or represent together at least 25% of the voting rights of our issued share capital will constitute a quorum for the Meeting. If a quorum is not present within half an hour from the time scheduled for the Meeting, the Meeting will be adjourned to the following week, at the same time and place, without it being necessary to notify our shareholders. A quorum at such adjourned meeting shall be any number of participants. Each outstanding Ordinary Share held by a shareholder is entitled to one vote.

Shareholders entitled to vote at the Meeting may attend the Meeting in person and vote thereat, appoint a proxy, vote by written ballot or, if they hold Ordinary Shares through a TASE member, may vote electronically via the ISA Electronic Voting System after receiving a personal identifying number, an access code and additional information regarding the Meeting from the relevant member of the TASE and after carrying out a secured identification process, up to six hours before the time set for the Meeting. A proxy from the holder of Ordinary Shares must be received by the Company no later than 3:00 p.m. on March 3, 2020 to be validly included in the tally of Ordinary Shares voted at the Meeting; a proxy from the holder of the Company's American Depositary Shares ("**ADSs**") must be received by The Bank of New York Mellon as Depositary no later than 12:00 p.m. EDT on March 2, 2020 to be validly included in the tally of votes for the Meeting.

Each member of the TASE (a "**Member**") is required to e-mail a link to the Proxy Statement and Position Statements published on the websites of the TASE and the ISA (http://www.tase.co.il/tase/ and http://www.magna.isa.gov.il, respectively) to each shareholder who is not listed in the Company's shareholder register and whose shares are held through the Member; except in cases in which a shareholder has notified the Member that he/she/it is not interested in receiving such links and has submitted the notice (a) with respect to a specific securities account, and (b) prior to the Record Date.

A shareholder whose shares are held through a Member may obtain, upon request from the Member, a certification of ownership regarding his/her/its shares. Such certification may be obtained in the Member's offices or may be sent to the shareholder by mail (subject to payment of the cost of mailing), at the election of the shareholder, on condition that the shareholder's request be submitted with respect to a specific securities account.

Pursuant to the Section 267A of the Companies Law, the proposal described in this proxy statement (the "**Proposal**") requires the affirmative vote of a simple majority of shares present at the Meeting, in person or by proxy, and voting thereon, or voting via the ISA Electronic Voting System, as long as either:

- the majority of shares that voted for the approval of the Proposal includes at least a majority of the shares held by non-controlling and non-interested shareholders voted at the Meeting (excluding abstaining votes) and via the ISA Electronic Voting System; or
- the total number of shares of non-controlling and non-interested shareholders that voted against the approval of the Proposal does not exceed two percent of the aggregate voting rights in the company ("**Disinterested Majority**").

Shareholders are requested to notify us whether or not they have a "Personal Interest" in connection with the Proposal. If any shareholder casting a vote in connection with the Proposal does not notify us as to whether or not he, she or it has a Personal Interest with respect to the Proposal, that shareholder's vote with respect to such proposal will be disqualified and will not be counted in determining whether the above Disinterested Majority approval requirements are satisfied.

For the purpose of determining whether the Disinterested Majority approval requirements have been satisfied, "Personal Interest" is defined as: (1) a shareholder's personal interest in the approval of an act or a transaction of the company, including (i) the personal interest of his or her relative (which includes for these purposes any members of his/her (or his/her spouse's) immediate family or the spouses of any such members of his or her (or his/her spouse's) immediate family); and (ii) a personal interest of a body corporate in which a shareholder or any of his/her aforementioned relatives serves as a director or the chief executive officer, owns at least 5% of its issued share capital or its voting rights or has the right to appoint a director or chief executive officer, but (2) excluding a personal interest arising solely from the fact of holding shares in the company or in a body corporate. Under the Companies Law, in the case of a person voting by proxy for another person, "Personal Interest" includes a personal interest of either of the proxy holder or the shareholder granting the proxy, whether or not the proxy holder has discretion how to vote.

As of the date of this Proxy Statement, the Company has no controlling shareholders within the meaning of the Companies Law. In addition, it believes that the vast majority of its shareholders should not have a Personal Interest in the Proposal.

You may change your mind and cancel your proxy card by filing a written notice of revocation with the Company, by completing and returning a duly executed proxy card bearing a later date or by voting in person at the Meeting. Attendance at the Meeting will not in and of itself constitute revocation of proxy. Subject to the foregoing paragraph, shares represented by a valid proxy card will be voted in favor of the proposed resolution to be presented at the Meeting, unless you clearly vote against a specific resolution.

Under the terms of the Deposit Agreement among the Company, The Bank of New York Mellon, as Depositary, and the holders of the Company's ADSs, the Depositary shall endeavor (insofar as is practicable and in accordance with the applicable law and the articles of association of the Company) to vote or cause to be voted the number of Ordinary Shares represented by ADSs in accordance with the instructions provided by the holders of ADSs to the Depositary. If no instructions are received by the Depositary from any holder of ADSs with respect to any of the Ordinary Shares represented by the ADSs evidenced by such holder's receipts on or before the date established by the Depositary for such purpose (as set forth above), then the Depositary will deem the holder of the Ordinary Shares to have instructed the Depositary to give a discretionary proxy to a person designated by the Company with respect to the Ordinary Shares represented by such ADSs, and the Depositary will give such instruction. In such case, the restrictions of the Companies Law with respect to "Personal Interest" as described above, would apply as well.

PRINCIPAL SHAREHOLDERS

The following table sets forth certain information regarding the beneficial ownership of our outstanding Ordinary Shares as of January 30, 2020, by each person who we know beneficially owns 5.0% or more of the outstanding Ordinary Shares. Each of our shareholders has identical voting rights with respect to its shares. All of the information with respect to beneficial ownership of the Ordinary Shares is given to the best of our knowledge.

The beneficial ownership of Ordinary Shares is based on the 177,008,993 Ordinary Shares outstanding as of January 30, 2020, and is determined in accordance with the rules of the Securities and Exchange Commission (the "**SEC**") and generally includes any Ordinary Shares over which a person exercises sole or shared voting or investment power. For purposes of the table below, we deem shares subject to options or warrants that are currently exercisable or exercisable within 60 days of January 30, 2020, to be outstanding and to be beneficially owned by the person holding the options or warrants for the purposes of computing the percentage ownership of that person but we do not treat them as outstanding for the purpose of computing the percentage ownership of any other person. To our knowledge, none of our shareholders of record are U.S. holders. Our principal shareholders do not have different or special voting rights.

	Number of Shares Beneficially Held	Percent of Class
BVF Partners L.P. ⁽¹⁾	31,942,477	17.5

(1)Based upon information provided by the shareholder, or the BVF Group, in its Schedule 13D filed with the SEC on March 1, 2019. BVF Partners L.P., or Partners, as the general partner of Biotechnology Value Fund, L.P., or BVF, and Biotechnology Value Fund II, L.P., or BVF2, the sole member of BVF Partners OS Ltd., or Partners OS, and the investment manager of Biotechnology Value Trading Fund OS LP, or Trading Fund OS, and certain Partners-managed accounts, or the Partners Managed Accounts, may be deemed to beneficially own the 31,942,477 ordinary shares beneficially owned in the aggregate by BVF, BVF2, Trading Fund OS and the Partners Managed Accounts. BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 31,942,477 ordinary shares beneficially owned by Partners. Mark N. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 31,942,477 ordinary shares beneficially owned by BVF Inc. In addition to ADSs, the BVF Group is the beneficial owner of Series A warrants and Series B warrants issued by us in July 2017. All the warrants held by the BVF Group are subject to a blocker provision that precludes the holders from exercising the warrants to the extent that the holder and its affiliates would beneficially own in excess of 24.99% of our ordinary shares outstanding immediately after giving effect to such exercise. As of the close of business on January 30, 2020, the blocker provision does not limit the exercise of the warrants by the BVF Group. The address of the principal business office of BVF Partners L.P. is 1 Sansome Street, 30th Floor, San Francisco, California 94104.

PROPOSAL

APPROVAL OF AN AMENDMENT TO THE COMPANY'S COMPENSATION POLICY FOR EXECUTIVES AND DIRECTORS ONLY WITH RESPECT TO DIRECTORS' AND OFFICERS' LIABILITY INSURANCE

As required by the Companies Law, our shareholders approved the Compensation Policy for Executives and Directors (the "**Compensation Policy**") in December 2013, and last approved the renewal and amendment of the Compensation Policy in July 2019. The Compensation Policy provides a framework for establishing the terms of office and employment of the Company's office holders, a recoupment policy and guidelines with respect to the structure of the variable pay of office holders. The term "office holder," as defined in the Companies Law, includes directors, executive officers and any manager directly subordinate to the chief executive officer.

The Compensation Policy currently permits the Company to purchase insurance policies ("**D&O Insurance**") (including run-off policies) to cover the liability of directors and officers that are currently in office and that shall be in office from time to time, including directors and officers that may have a controlling interest in the Company (if such becomes applicable in the future), within the following limits: (a) the premium for each policy period shall be not more than \$250,000; (b) the maximum aggregate limit of liability pursuant to the policies shall be not more than \$20 million for each insurance period; and (c) the maximum deductible shall be not more than \$250,000. Our Compensation Committee is authorized to increase the coverage purchased, and/or the premium paid for such policies, by up to 20% in any year, as compared to the previous year, or cumulatively for a number of years, without an additional shareholders' approval to the extent permitted under the Companies Law.

In preparing to renew its D&O Insurance for the period 2019-2020, the Company found that market conditions had changed drastically in the past year. Due to substantial increases both in the number of class action lawsuits and the size of settlements, as well as large payments related to natural and man-made disasters, insurers have greatly increased the premiums for coverage of director and officer liability. Renewal of the Company's D&O Insurance with acceptable levels of protection for directors and officers within the limits imposed by the current Compensation Policy will therefore not be possible and amendment of the Policy is necessary in order for the Company to cope with insurers' demands. In response to current market conditions, our Compensation Committee and Board approved an amendment to the Compensation Policy allowing a maximum premium of \$500,000 per policy period and authorizing the Compensation Committee to increase coverage and/or premiums by up to 30% in any year, as compared to the previous year, or cumulatively for a number of years, without an additional shareholders' approval. As a basis for such approval, the Compensation Committee and Board made the following determinations:

- 1. The proposed amendment to the Compensation Policy regarding D&O Insurance will enable the Company to purchase insurance policies providing acceptable levels of protection for directors and officers acting on behalf of a public company.
- 2. The proposed amendment to the Compensation Policy will enable the Company to recruit and retain directors and senior executives who are capable of leading the Company to long-term business success, achieving the Company's goals and meeting the challenges it faces.
- 3. The proposed amendment to the Compensation Policy has been prepared in accordance with the recommendations of the Company's insurance and compensation advisors in light of the responsibilities and potential exposure of the Company's directors and officers.
- 4. In the opinion of the Board, the terms of the proposed amendment are reasonable and in the best interest of the Company given market conditions and the Company's potential exposure and scope of insurance coverage. The proposed amendment takes into account, among other things, the size of the Company, the scope of its business operations, its risk management policy and the objectives that the Company aims to achieve from time to time.
- 5. The proposed amendment allows the Company's management reasonable discretion to determine the terms of D&O Insurance in the future and flexibility to deal with special circumstances that may arise.

Therefore, our Board of Directors will present the following resolution for adoption at the Meeting:

"RESOLVED, to approve the following amendment to the Company's Compensation Policy for Executives and Directors:

'On page 17 of the Compensation Policy, the paragraph beginning "The Company is authorized to purchase insurance policies ..." is hereby amended as follows:

'The Company is authorized to purchase insurance policies (including run-off policies) to cover the liability of directors and officers that are currently in office and that shall be in office from time to time, including directors and officers that may have a controlling interest in the Company (if such becomes applicable in the future), within the following limits: (a) the premium for each policy period shall be not more than $\frac{250,000550,000}{2000}$; (b) the maximum aggregate limit of liability pursuant to the policies shall be not more than 250,000. The Compensation Committee shall be authorized to increase the coverage purchased, and/or the premium paid for such policies, by up to $\frac{2930}{200}$ in any year, as compared to the previous year, or cumulatively for a number of years, without an additional shareholders' approval to the extent permitted under the Companies Law.'

Pursuant to the Companies Law, approval of this proposal requires the affirmative vote of a Disinterested Majority of shares present at the meeting, in person or by proxy, and voting thereon.

Our Board of Directors recommends a vote "FOR" approval of the proposed amendment to the Compensation Policy.

The Companies Law allows our Board of Directors to approve this proposal even if it was not approved by our shareholders, provided that our Compensation Committee and thereafter the Board of Directors have determined that the proposal is for the good of the Company and decided to reapprove the proposal, based on detailed reasoning, and after having re-examined the proposed Compensation Policy as amended and taken into consideration, among other things, the shareholder rejection.

Shareholders are permitted to express their position on the proposal to be voted on at the Meeting by submitting a written statement, through the Company, to the other shareholders (a "**Position Statement**"). Position Statements should be submitted to the Company at its registered offices at 2 HaMa'ayan Street, Modi'in 7177871, Israel, Attn: Norman Kotler, General Counsel and Corporate Secretary. Any Position Statement received will be furnished to the SEC in a Report of Foreign Private Issuer on Form 6-K and will be made available to the public on the SEC's website at http://www.sec.gov, and in addition at http://www.magna.isa.gov.il or http://maya.tase.co.il. Position Statements must be submitted no later than February 24, 2020.

Where to Find More Information

We are subject to the information reporting requirements of the U.S. Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), applicable to foreign private issuers and we fulfill the obligations with respect to those requirements by filing reports with the SEC. Our SEC filings are available to the public on the SEC's website at www.sec.gov, the ISA's website at www.magna.isa.gov.il and the Company's website at www.biolinerx.com. Shareholders may obtain information (including the full text of the Proxy Statement, the proposed resolution and Position Statements, if any) directly from the Company, whose registered office is at 2 HaMa'ayan Street, Modi'in 7177871, Israel from Sunday to Thursday (excluding Israeli holidays), 10:00 a.m. to 5:00 p.m. (Israel time), and whose telephone number is +972-8-642-9100.

As a foreign private issuer, we are exempt from the rules under the Exchange Act related to the furnishing and content of proxy statements. The circulation of this proxy statement and related notice should not be taken as an admission that we are subject to those proxy rules. Furthermore, our officers, directors and principal shareholders are exempt from the reporting and "short-swing" profit recovery provisions contained in Section 16 of the Exchange Act and the rules thereunder, with respect to their purchases and sales of securities. Lastly, we are not required under the Exchange Act to

file periodic reports and financial statements with the SEC as frequently or as promptly as United States companies whose securities are registered under the Exchange Act.

YOU SHOULD RELY ONLY ON THE INFORMATION CONTAINED IN THIS PROXY STATEMENT OR THE INFORMATION FURNISHED TO YOU IN CONNECTION WITH THIS PROXY STATEMENT WHEN VOTING ON THE MATTERS SUBMITTED TO SHAREHOLDER APPROVAL HEREUNDER. WE HAVE NOT AUTHORIZED ANYONE TO PROVIDE YOU WITH INFORMATION THAT IS DIFFERENT FROM WHAT IS CONTAINED IN THIS DOCUMENT. THIS PROXY STATEMENT IS DATED JANUARY 30, 2020. YOU SHOULD NOT ASSUME THAT THE INFORMATION CONTAINED IN THIS DOCUMENT IS ACCURATE AS OF ANY DATE OTHER THAN JANUARY 30, 2020, AND THE MAILING OF THIS DOCUMENT TO SHAREHOLDERS SHOULD NOT CREATE ANY IMPLICATION TO THE CONTRARY.

Shareholders are urged to complete and return their proxies promptly in order to, among other things, ensure the presence of a quorum at the Meeting and to avoid the expense of additional solicitation. If the accompanying proxy is properly executed (including the indication of a vote on the proposed matters) and returned in time for voting, the shares represented thereby will be voted as indicated thereon. IF NO SPECIFICATION IS MADE, AND EXCEPT AS OTHERWISE MENTIONED IN THIS PROXY STATEMENT, THE ORDINARY SHARES REPRESENTED BY THE PROXY WILL BE VOTED IN FAVOR OF THE PROPOSALS DESCRIBED IN THIS PROXY STATEMENT.

By Order of the Board of Directors

BioLineRx Ltd.

January 30, 2020