BNY: PO BOX 505006, Louisville, KY 40233-5006

Your vote matters!

Have your ballot ready and please use one of the methods below for **easy voting:**

Your control number

Have the 12 digit control number located in the box above available when you access the website and follow the instructions.

BioLineRx, Ltd.

Annual General Meeting of Shareholders

For Shareholders of record as of August 24, 2026

Wednesday, September 23, 2026 3:00 PM, Local Time

Modi'in Technology Park, 2 HaMa'ayan Street, Modi'in 7177871, Israel

Mail:

- Mark, sign and date your Proxy Card
- Fold and return your Proxy Card in the postage-paid envelope provided

YOUR VOTE IS IMPORTANT!
PLEASE VOTE BY: 12:00 p.m. EST on September 18, 2026

BIOLINERX LTD.

Instructions to The Bank of New York Mellon, as Depositary
(Must be received prior to 12:00 p.m. EST on September 18, 2026)

The undersigned shareholder of BioLineRx Ltd. (the "Company") hereby appoints Mali Zeevi and/or Raziel Fried, and each or either of them, the true and lawful attorney, agent and proxy of the undersigned, with full power of substitution, to vote, as designated below, all of the ordinary shares of the Company which the undersigned is entitled in any capacity to vote at the Annual General Meeting of the shareholders of the Company which will be held at the offices of the Company at Modi'in Technology Park, 2 HaMa'ayan Street, Modi'in 7177871, Israel, on September 23, 2026 at 3:00 p.m. (Israel time), and all adjournments and postponements thereof.

NOTES:
1. Please direct the Depositary how it is to vote by placing an "X" in the appropriate box opposite each agenda item. It is understood that, if this form is signed and returned but no instructions are indicated in the boxes, then a discretionary proxy will be given to a person designated by the Company.
2. It is understood that, if this form is not signed and returned, the Depositary will deem such holder to have instructed the Depositary to give a discretionary proxy to a person designated by the Company.

To view the notice and proxy statement, please visit:
https://ir.biolinerx.com/events/event-details/2026-annual-meeting-shareholders

PLEASE BE SURE TO SIGN AND DATE THIS PROXY CARD AND MARK ON THE REVERSE SIDE

Please make your marks like this: ☒

PROPOSAL		YOUR VOTE	
1. TO APPROVE the re-election of the following persons as Class III directors, each to serve until the Company's annual general meeting of shareholders to be held in 2029, and until their respective successors have been duly elected and qualified.			
	FOR	AGAINST	ABSTAIN
Dr. Aharon Schwartz	☐	☐	☐
Dr. Sandra Panem	☐	☐	☐
Dr. Shaoyu Yan	☐	☐	☐
2. TO APPROVE an increase in the Company's authorized share capital, and to amend the Company's Articles of Association accordingly.	☐	☐	☐
3. TO APPROVE the grant of equity-based compensation, in the form of options and performance stock units, to Philip Serlin, the Company's Chief Executive Officer.	☐	☐	☐
4. TO APPROVE the grant of equity-based compensation in the form of options to certain directors of the Company.	☐	☐	☐
5. TO APPROVE the reappointment of Kesselman & Kesselman, Certified Public Accountants (Isr.), a member firm of PricewaterhouseCoopers International Limited, as the Company's independent registered public accounting firm for the year ending December 31, 2026, and until the Company's next annual general meeting of shareholders, and to authorize the Audit Committee of the Board of Directors to fix the compensation of said auditors in accordance with the scope and nature of their services.	☐	☐	☐

Authorized Signatures - Must be completed for your instructions to be executed.
Please sign exactly as your name(s) appears on your account. If held in joint tenancy, all persons should sign. Trustees, administrators, etc., should include title and authority. Corporations should provide full name of corporation and title of authorized officer signing the Proxy/Vote Form.

Signature (and Title if applicable) ____________ Date

Signature (if held jointly) ____________ Date