BIOLINERX LTD.

For the Annual General Meeting of Shareholders to be held on October 1, 2024

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned shareholder of BioLineRx Ltd. (the "**Company**") hereby appoints Netanel Derovan 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 on the reverse side, all of the ordinary shares of the Company which the undersigned is entitled in any capacity to vote at the Annual General Meeting of 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 October 1, 2024 at 3:00 p.m. (Israel time) (the "**Meeting**"), and all adjournments and postponements thereof.

(CONTINUED AND TO BE SIGNED ON REVERSE SIDE) See Reverse Side

ANNUAL GENERAL MEETING OF SHAREHOLDERS OF

BIOLINERX LTD.

October 1, 2024

THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED AS DIRECTED HEREIN. IF NO DIRECTION IS INDICATED, THIS PROXY WILL BE VOTED "FOR" THE ELECTION OF THE DIRECTORS NAMED IN ITEM 1 AND "FOR" ALL OTHER PROPOSALS.

| Please mark your vote for the following resolutions as in this example [| X | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|--------------|
| 1 TO APPROVE the re-election of the following persons as Class I directors, each to serve until the Company's annual general meeting of shareholders to be held in 2027, and until their respective successors have been duly elected and qualified. | FOR | AGAINST | ABSTAIN |
| Dr. Avraham Molcho | | | |
| Mr. Gal Cohen | | | |
| Mr. Rami Dar | | | |
| 2.TO APPROVE the grant of options to purchase American Depositary Shares, each representing 15 ordinary shares of the Company, to certain directors of the Company who shall serve in such capacity immediately following the Meeting. | FOR | AGAINST | ABSTAIN |
| | | | |
| 3.TO APPROVE an increase in the Company's authorized share capital, and to amend the Company's Articles of Association accordingly. | FOR | AGAINST | ABSTAIN |
| 4.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, 2024, 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. | □ FOR | | □ ABSTAIN |
| | | | |
| Name: | | | |
| Number of shares: | | | |
| Signature: | | | |
| Date: | | | |
| NOTE: Please mark date and sign exactly as the name(s) appear on this please sign the full corporate name by a duly authorized officer. Executor state their full title or capacity. Joint owners should each sign. | | | |