

BIOLINERX LTD.

**For the Annual General Meeting of Shareholders
to be held on April 16, 2018**

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned shareholder of BioLineRx Ltd. (the "Company") hereby appoints Norman Kotler 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 April 16, 2018 at 3:00 p.m. (local time), 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.

April 16, 2018

THIS PROXY WHEN PROPERLY EXECUTED WILL BE VOTED AS DIRECTED HEREIN.
IF NO DIRECTION IS INDICATED, THIS PROXY WILL BE VOTED "FOR" THE PROPOSALS HEREIN.

Please mark your vote for the following resolutions as in this example

- | | FOR | AGAINST | ABSTAIN |
|--|--------------------------|--------------------------|--------------------------|
| 1. TO RE-ELECT the following persons to serve as directors of the Company for the coming year until the next annual general meeting of the Company's shareholders or until their respective successors are duly elected: | | | |
| a. Aharon Schwartz | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Michael Anghel | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. B.J. Bormann | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Raphael Hofstein | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Sandra Panem | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. TO APPROVE the grant to Philip Serlin, the Company's Chief Executive Officer, of (i) options to purchase 719,500 Ordinary Shares and (ii) 359,800 performance stock units, all as described in the Proxy Statement. | FOR | AGAINST | ABSTAIN |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a "Personal Interest" (as defined in the Proxy Statement) with respect to the subject matter of this proposal?
(Please note: if you do not mark either "Yes" or "No" your shares will not be voted on Proposal 2) | YES | NO | |
| | <input type="checkbox"/> | <input type="checkbox"/> | |

3. TO REAPPOINT Kesselman & Kesselman, a member of Pricewaterhouse-Coopers International Limited, as the independent registered public accounting firm of the Company for the year ending December 31, 2018 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

AGAINST

ABSTAIN

Name: _____

Number of shares: _____

Signature: _____

Date: _____

NOTE: Please mark date and sign exactly as the name(s) appear on this proxy. If the signer is a corporation, please sign the full corporate name by a duly authorized officer. Executors, administrators, trustees, etc. should state their full title or capacity. Joint owners should each sign.