

VASCULAR BIOGENICS LTD.

**PROXY FOR THE ANNUAL AND EXTRAORDINARY GENERAL MEETING OF
SHAREHOLDERS
TO BE HELD ON MAY 19, 2016
THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS**

The undersigned hereby constitutes and appoints Amos Ron as the true and lawful attorney, agent and proxy of the undersigned, with full power of substitution, to represent and to vote, on behalf of the undersigned, all of the ordinary shares of Vascular Biogenics Ltd. (the "Company"), held of record in the name of the undersigned at the close of business on April 20, 2016, at the Annual and Extraordinary General Meeting of Shareholders of the Company (the "Meeting") to be held at the offices of the Company at 6 Yoni Netanyahu St. Or Yehuda, Israel at 4:00 p.m. (local time), and at any and all adjournments or postponements thereof on the following matter, which is more fully described in the Notice of the Annual and Extraordinary General Meeting of Shareholders and Proxy Statement relating to the Meeting.

The undersigned acknowledges receipt of the Notice of the Annual General Meeting of Shareholders and Proxy Statement of the Company relating to the Meeting.

This Proxy, when properly executed, will be voted in the manner directed herein by the undersigned. If no direction is made with respect to any proposal described below, this Proxy will be voted FOR such proposal and in such manner as the holder of the proxy may determine with respect to any other business as may properly come before the Meeting or all and any adjournments or postponements thereof. Any and all proxies heretofore given by the undersigned are hereby revoked.

(Continued and to be signed on the reverse side)

ANNUAL GENERAL MEETING OF SHAREHOLDERS OF

VASCULAR BIOGENICS LTD.

MAY 19, 2016

NOTICE OF INTERNET AVAILABILITY OF PROXY MATERIAL:

The Notice of Meeting, proxy statement and proxy card
are available at - <http://www.vblrx.com>

**Please date, sign and mail
your proxy card as soon
as possible.**

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE ELECTION OF ALL
NOMINEES TO DIRECTORS LISTED IN PROPOSAL 1 AND "FOR" PROPOSALS 2, 3 AND 4.
PLEASE SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED
ENVELOPE. PLEASE MARK YOUR VOTE IN BLUE OR BLACK INK AS SHOWN
HERE**

	FOR	AGAINST	ABSTAIN
1. Re-election of the following seven incumbent directors:			
(a) Prof. Dror Harats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Dr. Bennett M. Shapiro	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Prof. Ruth Arnon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Mr. Jide Zeitlin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Mr. Jecheskiel Gonczarowski	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Dr. Dan Gelvan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) Prof. Ruth Alon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. To ratify the appointment of Kesselman & Kesselman, a member firm of PricewaterhouseCoopers International Limited, as the Company's independent registered public accounting firm for the year ending December 31, 2016, and until the next annual general meeting of shareholders of the Company and authorize the Board (with power of delegation to its audit committee) to fix the said independent registered public accounting firm's remuneration in accordance with the volume and nature of its services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. To approve the grant to Prof. Dror Harats, a member of the Board and the Chief Executive Officer of the Company, of 17,589 performance share units, to be vested upon and subject to the occurrence of certain milestone events which were approved by the Compensation Committee and the Board.

Are you a “controlling shareholder” or do you have a “personal interest” (as defined in the Proxy Statement) with respect to the subject matter of Proposal 3? * YES NO

[Kindly note that failure to mark the appropriate indication shall be deemed as if you have a personal interest in said Proposal]*

4. To approve the increase of the monthly base salary of Prof. Dror Harats, a member of the Board and the Chief Executive Officer of the Company, from NIS76,000 to NIS80,000.

Are you a “controlling shareholder” or do you have a “personal interest” (as defined in the Proxy Statement) with respect to the subject matter of Proposal 4? * YES NO

[Kindly note that failure to mark the appropriate indication shall be deemed as if you have a personal interest in said Proposal]*

Signature of shareholder Date Signature of shareholder Date

Note: Please sign exactly as your name or names appear on this Proxy. When shares are held jointly, each owner should sign. When signing as executor, administrator, attorney, trustee or guardian, please give full title as such. If the signer is a corporation, please sign full corporate name by a duly authorized officer, giving full title as such. If the signer is a partnership, please sign in partnership name by authorized person.