
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

Form 6-K

**Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16
under the Securities Exchange Act of 1934**

For the month of: September 2025

Commission file number: 001-36578

ENLIVEX THERAPEUTICS LTD.
(Translation of registrant's name into English)

14 Einstein Street, Nes Ziona, Israel 7403618
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F ☒

Form 40-F ☐

Annual General Meeting of Shareholders

On September 25, 2025, Enlivex Therapeutics Ltd., a company organized under the laws of the State of Israel (the “Company”), announced that it will hold its Annual General Meeting of Shareholders of the Company (the “Annual Meeting”) on Monday, November 10, 2025, beginning at 7:00 p.m. Israel time, at the offices of the Company located at 14 Einstein Street, Nes Ziona, Israel 7403618. Copies of the notice and proxy statement and the related proxy card are attached to this Report on Form 6-K as Exhibit 99.1 and Exhibit 99.2, respectively, and incorporated herein by reference.

Exhibit No.

99.1	Enlivex Therapeutics Ltd. Notice and Proxy Statement for the Annual General Meeting of Shareholders to be held on November 10, 2025.
99.2	Form of Proxy Card.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Enlivex Therapeutics Ltd.
(Registrant)

By: /s/ Oren HersHKovitz
Name: Oren HersHKovitz
Title: Chief Executive Officer

Date: September 25, 2025

ENLIVEX THERAPEUTICS LTD.

NOTICE OF ANNUAL GENERAL MEETING OF SHAREHOLDERS

To be held on November 10, 2025

Dear Shareholder:

We cordially invite you to attend the Annual General Meeting of Shareholders (the “**Meeting**”) of Enlivex Therapeutics Ltd. (the “**Company**”) to be held on Monday, November 10, 2025, at 7:00 p.m. (Israel time), at the offices of the Company at 14 Einstein Street, Ness Ziona, Israel 7403618, for the following purposes:

1. To elect the following persons to the Company’s Board of Directors, each to serve until the Company’s next annual general meeting of shareholders and until their respective successors are duly elected and qualified: Shai Novik, Dr. Roger Pomerantz, Dr. Abraham Havron, Dr. Gili Hart and Andrew Singer.
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 re-appointment of Yarel & Partners, Certified Public Accountants, a member of BKR International, as the Company’s independent registered public accounting firm for the year ending December 31, 2025 and until the next annual general meeting of shareholders, and to authorize the Company’s Board of Directors (with power of delegation to its audit committee) to set the fees to be paid to such auditors in accordance with the volume and nature of their services.

In addition, the Company’s shareholders will have the opportunity to hear from representatives of the Company’s management, who will be available at the Meeting to review and discuss with shareholders the consolidated financial statements of the Company for the year ended December 31, 2024.

Our Board of Directors recommends that you vote “FOR” each of the foregoing proposals, which are described in the attached proxy statement.

Shareholders of record at the close of business on October 3, 2025 (the “**Record Date**”) are entitled to notice of and to vote at the Meeting and any adjournments or postponements thereof. You are also entitled to vote at the Meeting if you held ordinary shares through a bank, broker or other nominee that was a shareholder of record at the close of business on the Record Date or which appeared in the participant listing of a securities depository on that date, and if you held your shares through the Tel Aviv Stock Exchange (“**TASE**”) on that date. The proxy statement and the enclosed proxy card will first be mailed to our shareholders of record on or about October 6, 2025. On or about October 6, 2025, the Company will begin mailing to our beneficial owners (not including holders of shares through a member of the TASE) a Notice of Internet Availability of Proxy Materials (the “**Notice**”) and will post our proxy materials on the website referenced in the Notice.

Whether or not you plan to attend the Meeting, you are urged to vote your shares: (1) by telephone, (2) through the Internet or (3), if you received printed copies of the proxy materials, by promptly completing, dating and signing the enclosed proxy card and mailing it in the enclosed envelope, which requires no postage if mailed in the United States, unless you hold shares through a member of the TASE, in which case you must vote in accordance with the procedures of the TASE described below. For specific instructions on how to vote your shares, please refer to the instructions on the Notice, in the section titled “How You Can Vote” of the proxy statement, on the proxy card or those provided by your broker, bank, trustee or nominee, as applicable.

A mailed proxy must be received by our transfer agent or at our registered office in Israel no later than 7:00 p.m. (Israel time) on November 7, 2025, to be validly included in the tally of ordinary shares voted at the Meeting. Return of your proxy does not deprive you of your right to attend the Meeting, to revoke your proxy or to vote your shares in person at the Meeting.

If you hold shares through a member of the TASE, you may vote your shares (i) in person at the Meeting, by presenting a certificate signed by a member of the TASE that complies with the Israel Companies Regulations (Proof of Ownership of Shares for Voting at General Meetings), 5760-2000 (an “**Ownership Certificate**”), confirming ownership

of the shares on the Record Date. An Ownership Certificate may be obtained at the TASE 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, provided that the shareholder's request is submitted with respect to a specific securities account, (ii) by proxy, by delivering a duly executed proxy card together with a valid Ownership Certificate as of the Record Date, to the Company office's at 14 Einstein Street, Ness Ziona, Israel 7403618, Attention: Chief Financial Officer, no later than 7:00 p.m. (Israel time) on November 7, 2025, or (iii) electronically 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 the 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 (i.e., by no later than 1:00 p.m. Israel time, on November 10, 2025). You should receive instructions about electronic voting from the TASE member through which you hold your shares.

The last date for submitting a request to include a proposal for consideration at the Meeting in accordance with Section 66(b) of the Israeli Companies Law, 5759-1999 (the "**Companies Law**"), is October 2, 2025.

The presence (in person, by proxy or via the ISA's electronic voting system) of any two or more shareholders holding, in the aggregate, at least twenty-five percent (25%) of the voting rights of the Company constitutes a quorum for purposes of the Meeting. If such quorum is not present within an hour from the time scheduled for the Meeting, the Meeting will be adjourned to the following week, to the same day, time, and place, without it being necessary to notify our shareholders. At such an adjourned meeting, the presence of any two shareholders (in person or by proxy or via the ISA's electronic voting system) (regardless of the voting power represented by their ordinary shares) will constitute a quorum.

The approval of each of the proposals requires the affirmative vote of a majority of the ordinary shares present, in person, by proxy or via the ISA's electronic voting system, and voting on such proposal (excluding abstentions).

Shareholders may review the full version of the proposed resolutions in the accompanying proxy statement as well as the accompanying proxy card, at www.proxyvote.com as described in the Notice, via the website of the U.S. Securities and Exchange Commission at www.sec.gov or via the ISA's electronic filing system at <http://www.magna.isa.gov.il> or the website of the TASE at <http://maya.tase.co.il> and at the "Investor Relations" portion of our website, which can be found at www.enlivex.com, and also at the Company's offices, upon prior notice and during regular working hours (14 Einstein Street, Ness Ziona, Israel 7403618; Tel: +972-8-6380301 (phone)), until the date of the Meeting. The information contained on, or accessible through, the foregoing websites is not incorporated by reference in, and does not form a part of, this notice or the accompanying proxy statement.

By Order of the Board of Directors,

/s/ Shai Novik

Shai Novik

Executive Chairman of the Board of Directors

September 25, 2025

ENLIVEX THERAPEUTICS LTD.
14 Einstein Street,
Ness Ziona 7403618
Israel

PROXY STATEMENT

ANNUAL GENERAL MEETING OF SHAREHOLDERS

To be held on November 10, 2025

This proxy statement is being furnished in connection with the solicitation of proxies on behalf of the Board of Directors of Enlivex Therapeutics Ltd. (“**we**,” “**us**,” “**our**” or the “**Company**”) to be voted at an Annual General Meeting of Shareholders (the “**Meeting**”), or at any adjournment or postponement thereof, pursuant to the accompanying Notice of Annual General Meeting of Shareholders. The Meeting will be held on Monday, November 10, 2025, at 7:00 p.m. (Israel time) at the offices of the Company at 14 Einstein Street, Ness Ziona, Israel 7403618.

You are entitled to receive notice of, and vote at, the Meeting if you were a shareholder of record at the close of business on October 3, 2025 (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 that was a shareholder of record at the close of business on the Record Date or which appeared in the participant listing of a securities depository on that date, and if you held your shares through the Tel Aviv Stock Exchange (“**TASE**”) on that date. See below “How You Can Vote.”

Purpose of the Annual General Meeting

At the Meeting, shareholders of the Company will be asked to consider and vote upon the following: (1) the election of the following persons to the Company’s Board of Directors, each to serve until the Company’s next annual general meeting of shareholders and until their respective successors are duly elected and qualified: Shai Novik, Dr. Roger Pomerantz, Dr. Abraham Havron, Dr. Gili Hart and Andrew Singer; (2) the approval of an increase in the Company’s authorized share capital and to amend the Company’s Articles of Association accordingly; and (3) the approval of the re-appointment of Yarel & Partners, Certified Public Accountants, a member of BKR International, as the Company’s independent registered public accounting firm for the year ending December 31, 2025 and until the next annual general meeting of shareholders, and to authorize the Company’s Board of Directors (with power of delegation to its audit committee) to set the fees to be paid to such auditors in accordance with the volume and nature of their services. In addition, the Company’s shareholders will have the opportunity to hear from representatives of the Company’s management, who will be available at the Meeting to review and discuss with shareholders the consolidated financial statements of the Company for the year ended December 31, 2024.

Board Recommendation

Our Board of Directors unanimously recommends that you vote “FOR” each of the above proposals, which are described in greater detail elsewhere in this Proxy Statement.

We are not aware of any other matters that will come before the Meeting. If any other matters properly come before the Meeting, the persons designated as proxies intend to vote on such matters in accordance with their judgment and recommendation of the Board of Directors.

Quorum and Adjournment

The presence (in person, by proxy or via the electronic voting system of the Israel Securities Authority (“**ISA**”)) of any two or more shareholders holding, in the aggregate, at least at least twenty-five percent (25%) of the voting rights of the Company constitutes a quorum for purposes of the Meeting. If such quorum is not present within an hour following the time scheduled for the Meeting, the Meeting will be adjourned to the following week, to the same day, time and place, without it being necessary to notify our shareholders. At such an adjourned meeting, the presence of any two shareholders (in person, by proxy or via the ISA’s electronic voting system) (regardless of the voting power represented by their ordinary shares) will constitute a quorum.

Abstentions and broker non-votes will be counted for purposes of determining the presence of a quorum, but they will not have an effect on the outcome of any proposal. Broker non-votes occur for a particular proposal when brokers that hold their customers' shares in street name sign and submit proxies for such shares (in which case they are considered present for purposes of determining the presence of a quorum at the Meeting) but do not have the discretionary authority to vote on such particular proposal. Brokers that have not received voting instructions from their customers may vote such shares, as the holders of record, on "routine" matters but not on "non-routine" matters. Proposal 2 and Proposal 3 are "routine" matters, but Proposal 1 is a "non-routine" matter; therefore, it is important that you vote your shares, either by proxy or in person at the Meeting.

Unsigned or unreturned proxies, including those not returned by banks, brokers, or other record holders, will not be counted for quorum or voting purposes.

How You Can Vote

- ***Shareholders of Record and Beneficial Owners of Shares Traded on Nasdaq***
 - ***Voting in person.*** If your shares are registered directly in your name with our transfer agent (i.e., you are a "registered shareholder"), you may attend and vote in person at the Meeting. If you are a beneficial owner of shares registered in the name of your broker, bank, trustee or nominee (i.e., your shares are held in "street name"), you are also invited to attend the Meeting; however, to vote in person at the Meeting as a beneficial owner, you must first obtain a "legal proxy" from your broker, bank, trustee or nominee, as the case may be, authorizing you to do so. If you vote by telephone or Internet, there is no need to vote again at the Meeting unless you wish to revoke and change your vote.
 - ***Voting by mailing your proxy.*** If you have received printed copies of the proxy materials, you may submit your proxy by mail by completing, signing and mailing the enclosed proxy card in the enclosed, postage-paid envelope, or, for shares held in street name, by following the voting instructions provided by your broker, bank, trustee or nominee. The proxy must be received by our transfer agent or at our registered office in Israel by no later than 7:00 p.m. Israel time, on November 7, 2025, to be validly included in the tally of ordinary shares voted at the Meeting. Upon the receipt of a properly signed and dated proxy in the form enclosed, the persons named as proxies therein will vote the ordinary shares represented thereby in accordance with the instructions of the shareholder indicated thereon, or, if no direction is indicated, in accordance with the recommendations of our Board of Directors.
 - ***Voting by telephone or Internet.*** If your shares are held in an account at a brokerage firm or bank or registered directly in your name with our transfer agent, you may vote those shares by accessing the Internet website address specified in the Notice of Internet Availability of Proxy Materials, the instructions provided by your broker, bank, trustee or nominee or on your proxy (as applicable), instead of completing and signing the proxy itself. If your shares are held in an account at a brokerage firm or bank, you may also call the telephone number specified in the instructions provided by your broker, bank, trustee or nominee. Submitting a telephonic or Internet proxy will not affect your right to vote at the Meeting should you decide to attend the Meeting. The telephone and Internet voting procedures are designed to authenticate shareholders' identities, to allow shareholders to give their voting instructions, and to confirm that shareholders' instructions have been recorded properly. The accompanying proxy card provides instructions on how to vote via telephone and the Internet.
- ***Beneficial Owners of Shares Traded on TASE.*** Shareholders who hold shares through members of the TASE may vote in person or vote through the published form of proxy by completing, signing, dating and mailing the proxy with a copy of their identity card, passport or certificate of incorporation, as the case may be, to the Company's offices. Shareholders who hold shares through members of the TASE, whether voting in person or by proxy, must deliver to the Company an ownership certificate confirming their ownership of the Company's shares on the Record Date ("**Ownership Certificate**"), which must be certified by a recognized financial institution, as required by the Israeli Companies Regulations (Proof of Ownership of Shares for Voting at General Meeting) of 2000, as amended. An Ownership Certificate may be obtained at the TASE 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, provided that the shareholder's request is submitted

with respect to a specific securities account. Alternatively, shareholders who hold shares through members of the TASE may vote electronically via the electronic voting system of the ISA up to six hours before the time fixed for the Meeting (i.e., by no later than 1:00 p.m. Israel time, on November 10, 2025). You should receive instructions about electronic voting from the TASE member through which you hold your shares.

Vote Required for Approval of the Proposals

Each outstanding ordinary share held by a shareholder is entitled to one vote on each matter submitted to a vote of our shareholders.

The approval of each of the proposals requires the affirmative vote of a majority of the ordinary shares present, in person, by proxy or via the ISA's electronic voting system, and voting on such proposal (excluding abstentions).

In tabulating the voting results for any particular proposal, shares that constitute broker non-votes and abstentions are not considered votes cast on that proposal and will have no effect on the vote, but such shares will be counted for purposes of determining the presence of a quorum at the Meeting. Unsigned or unreturned proxies, including those not returned by banks, brokers, or other record holders, will not be counted for voting purposes. Therefore, it is important for a shareholder that holds ordinary shares through a bank or broker to instruct its bank or broker how to vote its shares if the shareholder wants its shares to count towards the vote tally for a given proposal.

Change or Revocation of Proxy

If you are a shareholder of record, you may change your vote at any time prior to the exercise of authority granted in the proxy by delivering a written notice of revocation to us, by granting a new proxy bearing a later date, or by attending the Meeting and voting in person. Attendance at the Meeting will not cause your previously granted proxy to be revoked unless you specifically so request. You may also revoke your proxy and change your vote at any time before the final vote at the Meeting by voting again via the Internet or by telephone, as applicable.

If your shares are held in "street name" through a broker, bank, trustee or other nominee, you may change your vote by submitting new voting instructions to your broker, bank, trustee or nominee or, if you have obtained a legal proxy from your broker, bank, trustee or nominee giving you the right to vote your shares, by attending the Meeting and voting in person.

If your shares are held via a member of the TASE, you may change your vote (i) by attending the Meeting and voting in person, by presenting a valid Ownership Certificate as of the Record Date; (ii) by delivering a later-dated duly executed proxy card, together with a valid Ownership Certificate as of the Record Date, to the Company's registered office not later than 7:00 p.m. Israel time, on November 7, 2025, or (iii) by following the relevant instructions for changing your vote via the ISA's electronic voting system by no later than six hours before the time set for the Meeting.

Solicitation of Proxies

All expenses of this solicitation will be borne by the Company. In addition to the solicitation of proxies by mail, directors, officers and employees of the Company, without receiving additional compensation therefor, may solicit proxies by telephone, email, facsimile, in person or by other means. Brokerage firms, nominees, fiduciaries and other custodians have been requested to forward proxy solicitation materials to the beneficial owners of shares of the Company held of record by such persons, and the Company will reimburse such brokerage firms, nominees, fiduciaries and other custodians for reasonable out-of-pocket expenses incurred by them in connection therewith.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

As of September 15, 2025, other than Shai Novik, the Executive Chairman of our Board of Directors, no person known to us to beneficially owns more than 5% of our outstanding ordinary shares, based on public filings or information available to us.

The following table sets forth certain information as of September 15, 2025 (unless otherwise indicated below) regarding the beneficial ownership by: (i) each of our current directors and director nominees; and (ii) all of our current directors and executive officers as a group. The percentage of ordinary shares beneficially owned is based on 24,292,833 ordinary shares issued and outstanding as of September 15, 2025.

Beneficial ownership is determined in accordance with the rules of the U.S. Securities and Exchange Commission (“SEC”) and is generally based on whether a person has voting or investment power with respect to the securities. Ordinary shares of the Company that may be acquired by an individual or group pursuant to the exercise of the Company’s outstanding options, restricted share units (“RSUs”), warrants or other rights held by such individual or group that are exercisable or will become exercisable within 60 days of September 15, 2025 are deemed beneficially owned by such individual or group, and such shares are additionally deemed outstanding for the purposes of computing the percentage of ordinary shares beneficially owned by such individual or group, but are not deemed outstanding for purposes of computing the percentage of ordinary shares beneficially owned by any other individual or group shown in the table.

Beneficial Owner	Number of Ordinary Shares Beneficially Owned	Percentage of Ordinary Shares Beneficially Owned
<i>Directors and Director Nominees</i>		
Shai Novik ⁽¹⁾	2,146,127	8.39%
Roger Pomerantz, M.D. ⁽²⁾	113,740	*
Avri Havron, Ph.D. ⁽³⁾	239,105	*
Gili Hart, Ph.D. ⁽⁴⁾	76,239	*
Andrew Singer ⁽⁵⁾	26,596	*
<i>All directors and executive officers as a group (8 persons)</i> ⁽⁶⁾	2,941,331	11.26%

* Less than 1% of our outstanding ordinary shares.

- (1) Includes 172,510 RSUs that vest within 60 days from September 15, 2025 and 1,114,842 ordinary shares underlying options currently exercisable or exercisable within 60 days from September 15, 2025, of which 132,979 options expire in December 2033 and have an exercise price of \$2.69, 145,238 options expire in December 2033 and have an exercise price of \$6.22, 250,000 options expire in May 2030 and have an exercise price of \$3.66, 250,000 options expire in May 2031 and have an exercise price of \$12.23 and 336,625 options expire in November 2032 and have an exercise price of \$5.34.
- (2) Includes 620 RSUs that vest within 60 days from September 15, 2025 and 112,500 ordinary shares underlying options currently exercisable or exercisable within 60 days from August 31, 2025, which expire in November 2032 and have an exercise price of \$5.967.
- (3) Includes 231 RSUs that vest within 60 days from September 15, 2025 and 55,729 ordinary shares underlying options currently exercisable or exercisable within 60 days from September 15, 2025, of which 53,192 options expire in December 2033 and have an exercise price of \$2.69 and 2,537 options expire in November 2032 and have an exercise price of \$5.34.
- (4) Includes 231 RSUs that vest within 60 days from September 15, 2025 and 69,027 ordinary shares underlying options currently exercisable or exercisable within 60 days from September 15, 2025, of which 66,490 expire in December 2033 and have an exercise price of \$2.69 and 2,537 options expire in November 2032 and have an exercise price of \$5.34.
- (5) Includes 26,596 ordinary shares underlying options currently exercisable or exercisable within 60 days from September 15, 2025, which expire in November 2033 and have an exercise price of \$3.53.
- (6) Includes 204,986 RSUs that vest within 60 days from September 15, 2025 and 1,614,362 ordinary shares underlying options currently exercisable or exercisable within 60 days from September 15, 2025.

Board Practices, Corporate Governance and Compensation of Executive Officers and Directors

Item 6.B (“Compensation”) of our Annual Report on Form 20-F for the year ended December 31, 2024, filed with the SEC on April 30, 2025 (which we refer to as our “**2024 Form 20-F**”), contains information regarding compensation paid to our directors and officers with respect to 2024, including information concerning the annual compensation earned by our five most highly compensated executive directors and officers during 2024. Item 6.C of our 2024 Form 20-F (“Board Practices”) contains additional information regarding our Board of Directors, its committees and our corporate governance practices. We encourage you to review those portions of our 2024 Form 20-F.

PROPOSAL 1

ELECTION OF DIRECTORS

Background

Under our Articles of Association, the number of directors on our Board of Directors shall be at least five but not more than 11. Our Board of Directors is currently composed of five directors and includes Mr. Shai Novik (Executive Chairman), Dr. Roger Pomerantz (Vice Chairman), Dr. Abraham (Avri) Havron, Dr. Gili Hart and Mr. Andrew Singer. All of our currently serving directors were elected to serve in such capacity at our 2024 annual general meeting of shareholders. Each of our directors holds office until the first annual general meeting of shareholders following his or her appointment or election (unless the tenure of such director expires earlier, or a director resigns or is removed from office pursuant to the Companies Law).

We rely on the exemption available to foreign private issuers under the Nasdaq Listing Rules and follow Israeli law and practice with regard to the directors' nomination process; consequently, we are not required to maintain an independent nominating committee. In May 2022, our Board of Directors established a non-independent nominating committee, which identifies and recommends director nominees for election by the shareholders, while considering the appropriate size and composition of the Board of Directors, the requirements applicable to all members of the Board of Directors and the criteria for the selection of new members of the Board of Directors. The Board of Directors, however, retains the power and authority to exercise the authority of the nominating committee at any time. The nominating committee currently consists of two members, Mr. Shai Novik, as Chairman, and Dr. Gili Hart.

At the Meeting, shareholders will be asked to re-elect each of our currently serving directors: Shai Novik (Executive Chairman), Dr. Roger Pomerantz (Vice Chairman), Dr. Abraham (Avri) Havron, Dr. Gili Hart and Andrew Singer. If elected at the Meeting, each of the director nominees will serve until the next annual general meeting of our shareholders, and until his or her successor has been duly elected and qualified, or until his or her office is vacated in accordance with our Articles of Association or the Companies Law. Subject to shareholder approval of the election of the director nominees, our Board of Directors will consist of five members, four of whom satisfy the independence requirements of the Nasdaq Listing Rules.

We believe that our Board of Directors contains highly qualified and talented directors, including directors with global pharmaceutical, clinical, and financial experience. In accordance with the Companies Law, each of the director nominees has certified to us that he or she meets all the requirements of the Companies Law for election as a director of a public company and that he or she possesses the necessary qualifications and is able to dedicate sufficient time to fulfill his or her duties as a director of our Company, taking into consideration our Company's size and special needs.

The following biographical information is provided with respect to each director nominee based upon our records and information provided to us by each nominee.

Director	Age	Principal Occupation
<i>Shai Novik</i>	59	Shai Novik has served as the Company's Executive Chairman of the Board of Directors since 2014. Mr. Novik previously founded PROLOR Biotech in 2005 and served as its President until 2013. PROLOR Biotech was listed on the NYSE in 2010 and was sold in 2013, in a \$590 million transaction. Mr. Novik executed a strategic partnership with Pfizer for PROLOR's lead drug product, Ngenla®, and Pfizer continued with the clinical development of two-Phase III trials. Ngenla® recently obtained marketing approvals in 43 countries, including Australia, Canada, Japan, Europe & USA. Mr. Novik is the co-founder and a board member of Cortex Therapeutics, which is focused on developing and commercializing prescription digital therapies for patients with age-related diseases including macular degeneration (AMD) and presbyopia. Mr. Novik received his M.B.A. degree, with distinction, from Cornell University.

Director	Age	Principal Occupation
<i>Roger Pomerantz, M.D.</i>	68	<p>Roger Pomerantz, M.D. has served as a director and Vice Chairman of the Board of Directors since May 2022. Dr. Pomerantz has served as Chairman of the board of directors and Chief Executive Officer of ContraFect Corporation (Nasdaq: CFRX), a clinical-stage biotechnology company, since April 2019. Prior to that, Dr. Pomerantz served as Vice Chairman of the board of directors of ContraFect Corporation since May 2014. From November 2013 to December 2019, Dr. Pomerantz served as Chairman of the board of directors of Seres Therapeutics, Inc. (Nasdaq: MCRB), a biotechnology company, and as its President and Chief Executive Officer from June 2014 to January 2019. From 2011 to 2013, Dr. Pomerantz formerly served as the Worldwide Head of Licensing & Acquisitions, Senior Vice President at Merck & Co., Inc., where he oversaw all licensing and acquisitions at Merck Research Laboratories. Previously, Dr. Pomerantz served as Senior Vice President and Global Franchise Head of Infectious Diseases at Merck. Prior to joining Merck, Dr. Pomerantz was Global Head of Infectious Diseases for Johnson & Johnson Pharmaceuticals. Dr. Pomerantz joined Johnson & Johnson in 2005 as President of Tibotec Pharmaceuticals, Inc. Dr. Pomerantz serves as Chairman of the board of directors of the public companies Collplant Biotechnologies Ltd. (Nasdaq: CLGN) since 2021, Indaptus Therapeutics, Inc. (Nasdaq: INDP) since 2021 and Viracta Therapeutics Inc. (Nasdaq: VIRX) since 2020. Dr. Pomerantz also serves as Chairman of the board of directors of the private company Silicon Therapeutics Inc. since 2019, and a member of the board of the private companies X-VAX Technology, Inc. since 2019 and VerImmune since 2020. Previously, Dr. Pomerantz served on the board of directors of public companies Rubius Therapeutics from 2014 to 2019 and Evelo Therapeutics from 2015 to 2016. Dr. Pomerantz received his B.A. in Biochemistry from Johns Hopkins University and his M.D. from the Johns Hopkins School of Medicine. Dr. Pomerantz received post-graduate training at the Massachusetts General Hospital, Harvard Medical School and M.I.T. Dr. Pomerantz is Board Certified in both Internal Medicine and Infectious Diseases. Dr. Pomerantz was Professor of Medicine, Biochemistry and Molecular Pharmacology, Chief of Infectious Diseases, and the Founding Director and Chair of the Institute for Human Virology and Biodefense at Thomas Jefferson University and Medical School. Dr. Pomerantz has developed nine drugs approved world-wide in important diseases, including HIV, HCV, and tuberculosis.</p>
<i>Abraham (Avri) Havron, Ph.D.</i>	77	<p>Abraham (Avri) Havron, Ph.D., has served as a director since 2014. Dr. Havron served as the Chief Executive Officer of PROLOR Biotech, Inc. from 2005 through 2013. Dr. Havron is a 45-year veteran of the biotechnology industry and was a member of the founding team and Director of Research and Development of Interpharm Laboratories (then, a subsidiary of Serono, later acquired by Merck) from 1980 to 1987, and headed the development of the multiple sclerosis drug REBIF, with current sales of more than Euro 1.0 billion annually. Dr. Havron served as Vice-President Manufacturing and Process-Development of BioTechnology General Ltd., from 1987 to 1999; and Vice President and Chief Technology Officer of Clal Biotechnology Industries Ltd. from 1999 to 2003. Dr. Havron's managerial responsibilities included the co-development of eight biopharmaceuticals currently in the market, including recombinant human growth hormone (BioTropin), recombinant Hepatitis B Vaccine (Bio-Hep-B), recombinant Beta Interferon (REBIF), recombinant human insulin, recombinant long-acting human growth hormone (Ngenla), a botanical burn debridement agent (Nexxobrid) and hyaluronic acid for ophthalmic and orthopedic applications. Dr. Havron earned his Ph.D. in Bio-Organic Chemistry from the Weizmann Institute of Science and served as a Research Fellow at Harvard Medical School, Department of Radiology. Dr. Havron served as a director of Kamada Ltd. (KMDA) from 2010 to 2018, and PamBio Ltd., a private biotech company, from 2016 to 2019. Dr. Havron also currently serves on the board of directors of CollPlant Biotechnologies Ltd. (CLGN), which position he has held since 2016.</p>

Director	Age	Principal Occupation
<i>Gili Hart Ph.D.</i>	50	Gili Hart, Ph.D., has served as a director since 2014. Dr. Hart is a biotech executive and since 2020, has served as the chief executive officer of SpilSense Ltd., a clinical stage company focused on transformative RNA-based treatments for pulmonary diseases. Dr. Hart has extensive experience in preclinical, clinical and global regulatory strategic planning, partnering with large-pharma, and financing. In addition, Dr. Hart brings broad experience in managing critical global programs ranging from discovery phase through Phase 3 clinical trials. Previously, Dr. Hart served as the chief executive officer of Mitoconix Bio (2017 – 2019), the General Manager of OPKO Biologics (2014 – 2017) and as VP of Pre-clinical and Clinical Pharmacology at PROLOR Biotech (2007 – 2013). During 2005 – 2007, Dr. Hart was a Research Fellow at Yale University’s School of Medicine. Dr. Hart holds Ph.D. and M.Sc. degrees, cum laude, from the Weizmann Institute of Science and a M.Sc. degree in Biotechnology Engineering, summa cum laude, from the Technion — Israel Institute of Technology. Dr. Hart has published numerous papers and patents; her scientific work is focused on autoimmunity diseases as well as on B and T cell maturation and migration that can directly affect inflammation and immune conditions.
<i>Andrew Singer</i>	54	Andrew Singer has served as a director since April 2023. Mr. Singer is currently a corporate strategy consultant to biotech companies through his firm, Fika Bio Consulting Inc. Prior to that, Mr. Singer was a Managing Director at Credit Suisse from 2019 to 2023, ultimately named Head of West Coast Biotechnology Investment Banking. Before joining Credit Suisse, Mr. Singer was a Managing Director in Biotechnology Investment Banking at Wells Fargo from 2017 to 2019. Prior to joining Wells Fargo, Mr. Singer was Executive Vice President and Chief Financial Officer of Epizyme Inc., an oncology drug discovery and development company, from 2015 to 2017. At Epizyme, Mr. Singer’s responsibilities included finance, business development, alliance management and corporate communications. From 2004 to 2015, Mr. Singer progressed from Vice President to Managing Director in the life sciences investment banking group of RBC Capital Markets. Mr. Singer holds a B.A. degree in East Asian studies from Yale University and M.B.A. degree from the Harvard Business School.

We are not aware of any reason why the nominees, if elected, would be unable or unwilling to serve as directors. Should any nominee(s) be unavailable for election, the proxies will be voted for substitute nominee(s) designated by our Board of Directors.

As approved by our shareholders at the 2021 annual general meeting of shareholders, if elected at the Meeting, the non-executive directors (namely, all directors other than Mr. Novik) will be paid an annual fee of NIS 56,237 (approximately \$17,042) and a per-meeting fee of NIS 2,921 (approximately \$1,164), until June 30, 2026, which amounts will increase annually by 25% thereafter, up to the maximum fixed amount payable from time to time by us under the Companies Regulations (Rules Regarding Compensation and Expense Reimbursement of External Directors), 2000. For details regarding Mr. Novik’s compensation, as currently in effect, see our 2024 Form 20-F. In addition, if elected at the Meeting, the director nominees shall continue to benefit from the indemnification and exculpation agreement previously entered into with each of them, as well as from directors’ and officers’ liability insurance as we shall procure from time to time.

Proposal

Our shareholders are being asked to elect each of the director nominees named above to serve until our next annual general meeting of our shareholders and until his or her respective successor has been duly elected and qualified, or until his or her office is vacated in accordance with our Articles of Association or the Companies Law. Each director nominee shall be voted on separately.

Approval Required

See “Vote Required for Approval of the Proposals” above.

Board Recommendation

Our Board of Directors recommends a vote “FOR” the election of each of the director nominees named above.

PROPOSAL 2
APPROVAL OF AN INCREASE IN THE COMPANY'S AUTHORIZED SHARE CAPITAL
AND TO AMEND THE ARTICLES OF ASSOCIATION ACCORDINGLY

Background

The Company's authorized share capital is currently NIS 18,000,000, divided into 45,000,000 ordinary shares with a nominal value of NIS 0.40 each. As of September 17, 2025, 24,292,833 ordinary shares were issued and outstanding. In addition, as of such date, 6,092,385 ordinary shares were reserved for issuance under our Global Share Incentive Plan (2014) and Global Share Incentive Plan (2019) (including shares underlying outstanding options and RSUs), and 7,622,359 ordinary shares were reserved for issuance upon the exercise of outstanding warrants. Accordingly, as of such date, only 6,992,423 ordinary shares remained unissued, unreserved, and available for future issuances.

Under the Companies Law, a company may not issue shares in excess of its authorized share capital. The Company seeks to increase its authorized share capital to help ensure that it can support its corporate purposes and future business needs as they arise, including, without limitation, potential public and private offerings of the Company's ordinary shares, future equity-based compensation grants under existing or any future equity-based incentive plans adopted by the Company, and other corporate purposes, which may include, without limitation, potential strategic transactions, such as licensing agreements, acquisitions of other companies or assets, or other transactions that may involve the issuance of ordinary shares.

Any such future issuances will be subject to the discretion of our Board of Directors, unless shareholder approval is required under the Companies Law or under the Nasdaq Listing Rules (to the extent the Company elects not to rely on the home country law exemption under such rules).

Accordingly, at the Meeting, and as recommended by our Board of Directors, shareholders will be asked to approve an increase in the Company's authorized share capital from NIS 18,000,000, divided into 45,000,000 ordinary shares with a nominal value of NIS 0.40 each, to NIS 200,000,000, divided into 500,000,000 ordinary shares with a nominal value of NIS 0.40 each, and to amend Article 2.1 of the Company's Articles of Association accordingly to reflect this change.

The proposed increase in our authorized share capital would not affect the rights of the holders of currently outstanding ordinary shares. However, the possible future issuance of ordinary shares, or securities convertible into, or exercisable for, ordinary shares, could affect our current shareholders in a number of ways, including: (i) diluting the voting power of current holders of ordinary shares; (ii) diluting the market price of the ordinary shares, to the extent that new ordinary shares are issued and sold at prices below the current trading price of the existing ordinary shares, or, in the case of convertible securities, to the extent that such securities are convertible into, or exercisable for, ordinary shares at prices below current trading prices; and (iii) diluting the book value per share of the outstanding ordinary shares.

Proposal

It is therefore proposed that the following resolution be adopted at the Meeting:

"RESOLVED, to approve the increase in the Company's authorized share capital from NIS 18,000,000 divided into 45,000,000 ordinary shares with a nominal value of NIS 0.40 each, to NIS 200,000,000 divided into 500,000,000 ordinary shares with a nominal value of NIS 0.40 each, and to amend Article 2.1 of the Company's Articles of Association accordingly."

Approval Required

See "Vote Required for Approval of the Proposals" above.

Board Recommendation

Our Board of Directors recommends a vote "FOR" approval of the increase in the Company's authorized share capital and the corresponding amendment to the Company's Articles of Association.

PROPOSAL 3
RE-APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTANTS

Background

Yarel & Partners, Certified Public Accountants, a member of BKR International, has served as the Company's auditors since 2013. Except for serving as the Company's auditor, there is no other affiliation between such firm and the Company.

At the Meeting, shareholders will be asked to approve the re-appointment of Yarel & Partners as the Company's independent registered public accountants for the fiscal year ending December 31, 2025 and for such additional period until our next annual general meeting of shareholders, pursuant to the recommendation of our Audit Committee and Board of Directors.

In accordance with the rules of the SEC, Israeli law and our Articles of Association, our Audit Committee pre-approves and recommends to the Board of Directors, and our Board of Directors approves the compensation of Yarel & Partners for audit and other services, in accordance with the volume and nature of their services. For the year ended December 31, 2024, we paid Yarel & Partners \$135,000 for audit services and \$17,000 for tax services.

Proposed Resolution

It is proposed that the following resolution be adopted at the Meeting:

"RESOLVED, to approve the re-appointment of Yarel & Partners, Certified Public Accountants, a member of BKR International, as the Company's independent registered public accounting firm for the year ending December 31, 2025 and until the next annual general meeting of shareholders, and to authorize the Company's Board of Directors (with power of delegation to its audit committee) to set the fees to be paid to such auditors in accordance with the volume and nature of their services."

Vote Required

See "Vote Required for Approval of the Proposals" above.

Board Recommendation

Our Board of Directors recommends that you vote "FOR" the approval of the re-appointment of Yarel & Partners, Certified Public Accountants, a member of BKR International, as our independent registered public accounting firm for the year ending December 31, 2025.

REVIEW OF THE COMPANY'S AUDITED CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2024

In addition to considering the foregoing proposals at the Meeting, we will also present our audited consolidated financial statements for the fiscal year ended December 31, 2024. The audited consolidated financial statements of the Company for the fiscal year ended December 31, 2024 were filed together with our 2024 Form 20-F with the SEC and are available on the SEC's website at www.sec.gov, the ISA's website at www.magna.isa.gov.il and the TASE's website at <http://maya.tase.co.il>, as well as under the "Investor Relations" portion of our website at www.enlivex.com. This item will not involve a vote by the shareholders. None of the audited financial statements, the 2024 Form 20-F nor the contents of our website form part of this Proxy Statement.

OTHER BUSINESS

The Board of Directors is not aware of any other business to be transacted at the Meeting other than those described in this proxy statement. If any other matters are properly brought before the Meeting, it is intended that the persons named as proxies in the enclosed form of proxy will vote upon such matters, pursuant to their discretionary authority, in accordance with their best judgment in the interest of the Company.

ADDITIONAL 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, the TASE's website at <http://maya.tase.co.il> and under the "Investor Relations" portion of our website at www.enlivex.com. The contents of the foregoing websites do not form part of this Proxy Statement.

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.

By Order of the Board of Directors

/s/ Shai Novik

Shai Novik

Executive Chairman of the Board of Directors

September 25, 2025

ENLIVEX THERAPEUTICS LTD.
C/O COGENCY GLOBAL INC.
122 EAST 42ND STREET, 18TH FLOOR
NEW YORK, NY 10168



SCAN TO
VIEW MATERIALS & VOTE



VOTE BY INTERNET - www.proxyvote.com or scan the QR Barcode above
Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 p.m. Eastern Time on November 6, 2025. Have your proxy card in hand when you access the website and follow the instructions to obtain your records and to create an electronic voting instruction form.

ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS

If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 p.m. Eastern Time on November 6, 2025. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

V79982-TBD

KEEP THIS PORTION FOR YOUR RECORDS
DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

ENLIVEX THERAPEUTICS LTD.

The Board of Directors recommends you vote FOR the following proposals:

1. To elect the following persons to the Board of Directors, each to serve until the next annual general meeting of shareholders and until their respective successors are duly elected and qualified: Shai Novik, Roger Pomerantz, Abraham Havron, Gili Hart and Andrew Singer.

Nominees:

- 1a. Shai Novik
1b. Roger Pomerantz
1c. Abraham Havron
1d. Gili Hart
1e. Andrew Singer

For Against Abstain

- ☐ ☐ ☐
☐ ☐ ☐
☐ ☐ ☐
☐ ☐ ☐
☐ ☐ ☐
☐ ☐ ☐

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 re-appointment of Yarel & Partners, Certified Public Accountants, a member of BKR International, as the Company's independent registered public accounting firm for the year ending December 31, 2025 and until the next annual general meeting of shareholders, and to authorize the Company's Board of Directors (with power of delegation to its audit committee) to set the fees to be paid to such auditors in accordance with the volume and nature of their services.

For Against Abstain

- ☐ ☐ ☐

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

Signature [PLEASE SIGN WITHIN BOX] Date

Signature (Joint Owners) Date

Important Notice Regarding the Availability of Proxy Materials for the Annual General Meeting:
The Notice and Proxy Statement is available at www.proxyvote.com.

V79983-TBD

ENLIVEX THERAPEUTICS LTD.

Annual General Meeting of Shareholders to be held on November 10, 2025

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned shareholder of Enlivex Therapeutics Ltd. (the "**Company**") hereby appoints Ms. Shachar Shlosberger, the true and lawful attorney, agent and proxy of the undersigned, 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 Shareholders of the Company, to be held at the corporate offices of the Company at 14 Einstein Street, Ness Ziona 7403618, Israel on Monday, November 10, 2025, at 7:00 p.m. (Israel time), and all adjournments and postponements thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

(CONTINUED AND TO BE SIGNED ON REVERSE SIDE)