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

FORM S-3
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

ENTERA BIO LTD.

(Exact name of registrant as specified in its charter)

State of Israel
*(State or other jurisdiction of
incorporation or organization)*

**Kiryat Hadassah
Minrav Building - Fifth Floor
Jerusalem, Israel 9112002
Tel: +972-2-532-7151**
*(Address, including zip code, and telephone
number, including area code, of registrant's
principal executive offices)*

Not Applicable
*(I.R.S. Employer
Identification Number)*

**Northwest Registered Agent Service, Inc.
8 The Green, #22450
Dover, Delaware 19901
Tel: 302-581-4070**
*(Name, address, including zip code, and telephone number,
including area code, of agent for service)*

With a copy to:

**Drew M. Altman, Esq.
Sami B. Ghneim, Esq.
Greenberg Traurig, P.A.
333 S.E. 2nd Avenue, Suite 4400
Miami, Florida 33131
Phone: (305) 579-0500**

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. The selling shareholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and we are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED MAY 8, 2026

PROSPECTUS

19,569,472 Ordinary Shares offered by the Selling Shareholders



ENTERA BIO LTD.

This prospectus relates to the offer and resale from time to time by the selling shareholders identified in this prospectus (the "Selling Shareholders") of up to 19,569,472 of our ordinary shares, par value of NIS 0.0000769 per share ("ordinary shares"), composed of (i) 2,425,000 ordinary shares, (ii) up to 5,402,789 ordinary shares issuable upon exercise of pre-funded warrants (the "Pre-Funded Warrants") and (iii) up to 11,741,683 ordinary shares issuable upon exercise of warrants (the "Ordinary Share Warrants" and, together with the Pre-Funded Warrants, the "Warrants"). We issued the foregoing securities in a private placement consummated on April 2, 2026 (the "Private Placement").

We are registering the ordinary shares issued or issuable upon exercise of the Warrants issued in the Private Placement pursuant to our obligations contained in that certain registration rights agreement, dated April 2, 2026, by and among us and the Selling Shareholders (as amended, the "Registration Rights Agreement"). We refer to the 19,569,472 ordinary shares offered by the Selling Shareholders hereunder as the "Shares."

The Selling Shareholders may offer, sell or distribute the Shares from time to time in amounts, at prices and on terms that will be determined at the time of any such offering. We will pay certain fees and expenses in connection with the registration of the Shares offered hereby, and we will not receive any of the proceeds from the sale of any Shares by the Selling Shareholders. However, we may receive proceeds from any cash exercise of the Warrants by the holders. See "Use of Proceeds".

The securities covered by this prospectus may be offered through one or more underwriters, dealers and agents, or directly to purchasers. The names of any underwriters, dealers or agents, if any, will be included in a supplement to this prospectus. For general information about the distribution of the Shares, please see "Plan of Distribution."

Our ordinary shares are listed on the Nasdaq Capital Market, or Nasdaq, under the symbol "ENTX". On May 7, 2026, the closing price of our ordinary shares was \$1.37.

Investing in our securities involves risks. See "RISK FACTORS" beginning on page 6 for information you should consider before investing in our securities.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is , 2026.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the U.S. Securities and Exchange Commission (the “SEC”), using a “shelf” registration process. Under the shelf registration statement of which this prospectus forms a part, the Selling Shareholders may, from time to time, sell the Shares described in this prospectus in one or more offerings through any means described in the section entitled “Plan of Distribution.” Additional or more specific terms of transactions in which the Selling Shareholders offer and sell the Shares may be provided in a prospectus supplement that describes, among other things, the specific amounts and prices of the Shares being offered and the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus. Any statement that we make in this prospectus will be modified or superseded by any inconsistent statement made by us in a prospectus supplement. To the extent there is a conflict between the information contained in this prospectus and the prospectus supplement, if any, you should rely on the information in the prospectus supplement, provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in this prospectus or any prospectus supplement—the statement in the document having the later date modifies or supersedes the earlier statement. You should carefully read both this prospectus and any applicable prospectus supplement, together with additional information described under the headings “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference” before deciding to invest in any of the Shares being offered.

This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the Shares, you should refer to the registration statement, including the exhibits thereto.

Neither we nor the Selling Shareholders have authorized any other person to provide you with information different from or in addition to that included in this prospectus and any prospectus supplement. Neither we nor the Selling Shareholders are making an offer to sell the Shares in any jurisdiction where the offer or sale is not permitted. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front cover of those documents.

In this prospectus, the terms “Entera,” “we,” “us,” “our,” “the Company” and “our company” refer to Entera Bio Ltd. and its consolidated subsidiaries, unless the context otherwise requires.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Accordingly, we are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the SEC’s website is www.sec.gov.

We make available free of charge on or through our website, www.enterabio.com, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with or otherwise furnish it to the SEC.

We have filed with the SEC a registration statement under the Securities Act of 1933, as amended (the “Securities Act”), relating to the Shares offered under this prospectus. The registration statement, including the attached exhibits, contains additional relevant information about us and the securities. If a document has been filed as an exhibit to the registration statement, we refer you to the copy of the document that has been filed. Each statement in this prospectus relating to a document filed as an exhibit is qualified in all respects by the filed exhibit. This prospectus does not contain all of the information set forth in the registration statement. You can obtain a copy of the registration statement for free at www.sec.gov. The registration statement and the documents referred to below under “Incorporation of Certain Documents by Reference” are also available on our website, www.enterabio.com.

Information contained on or accessible through our website is not incorporated by reference in this prospectus and does not constitute a part hereof.

PROSPECTUS SUMMARY

This prospectus summary highlights selected information appearing elsewhere in this prospectus and in documents we file with the SEC that are incorporated by reference in this prospectus. This summary may not contain all of the information that may be important to you. To understand this offering fully, you should read this entire prospectus carefully, including the information incorporated by reference herein, the information set forth under the heading “Risk Factors” and our financial statements and the related notes thereto incorporated by reference in this prospectus.

Overview

Entera is a clinical stage company focused on developing first-in-class oral tablet formats of peptides or protein replacement therapies. We focus on underserved, chronic medical conditions for which oral administration of a protein therapy has the potential to significantly shift a treatment paradigm. Our pipeline includes differentiated, first-in-class oral peptide programs targeting PTH(1-34), GLP-1/Glucagon and GLP-2.

Currently, most protein therapies are administered via frequent intravenous, subcutaneous, or intramuscular injections. In chronic diseases where patients require persistent management, these cumbersome, often painful and high-priced injections can create a major treatment gap. From a technical standpoint, oral delivery of peptides and therapeutic proteins is challenging due to the enzymatic degradation within the gastrointestinal tract and poor absorption into the blood stream. We leverage our N-Tab[®] platform, which is designed to simultaneously stabilize large (4kD+) hydrophilic peptides in the gastrointestinal tract and promote their absorption into the bloodstream.

EB613 Program

Our most advanced product candidate, EB613, oral PTH(1-34), is being developed as the first oral, osteoanabolic (bone building) once-daily tablet treatment for osteoporosis. EB613 is intended to provide an oral anabolic treatment earlier in an osteoporosis patient’s journey to increase skeletal mass, reduce the risk of fracture and limit the disease progression, and decrease disability and mortality. A placebo controlled, dose ranging Phase 2 study of EB613 tablets (n= 161) met primary (pharmacodynamic/bone turnover biomarker) and secondary endpoints (bone mineral density (“BMD”)). In April 2024, the Phase 2 data was published in the Journal of Bone and Mineral Research (JBMR).

In July 2025, we announced that in a written response to a Type A meeting request, the U.S. Food and Drug Administration (“FDA”) agreed that a new drug application filing for EB613 could be supported by a phase 3 study in women with postmenopausal osteoporosis, where change in total hip BMD is evaluated as the primary endpoint, and incidence of new or worsening vertebral fractures is evaluated as the key secondary endpoint at 24 months.

In December 2025, the FDA released the Determination for Qualification of BMD qualifying total hip BMD as a surrogate efficacy endpoint for fracture that could be used in future studies of new anti-osteoporosis therapies. FDA’s suggested a context of use (COU): “The percentage change from baseline at 24 months in total hip BMD assessed by dual-energy X-ray absorptiometry (DXA) can be used as a validated surrogate endpoint for the assessment of investigational therapies for postmenopausal women with osteoporosis at risk for fracture.”

In February 2026, we submitted to the FDA a clinical amendment which included the EB613 Phase 3 protocol, statistical analysis plan and open-label extension synopsis. Subject to regulatory feedback, we are planning to initiate the Phase 3 study in the second half of 2026.

EB612 Program

Our product candidate, EB612, is being developed as the first oral PTH(1-34) tablet peptide replacement therapy for patients with hypoparathyroidism.

In December 2025, we announced new in vivo PK/PD data supporting the development of a proprietary long-acting PTH (“LA-PTH”) analog utilizing our N-Tab[®] platform. Preclinical findings demonstrated a markedly prolonged plasma half-life and sustained elevation of serum calcium levels for more than three days following administration of a single oral tablet, in contrast to unmodified PTH(1-34) controls, which showed no calcium response. These data support the development of a once-daily oral PTH tablet for patients with hypoparathyroidism.

In February 2026, we announced the expansion of our collaboration with OPKO Biologics, Inc. (“OPKO Biologics”), a subsidiary of OPKO Health, Inc. (“OPKO”), and OPKO to jointly advance this LA-PTH program. Under the expanded collaboration, Entera and OPKO each hold a 50% pro-rata ownership interest in the LA-PTH hypoparathyroidism program, and each is responsible for 50% of development costs. We intend to accelerate development and currently expect to submit an IND application to the FDA in late 2026.

EB618 Program (Oral GLP-1/Glucagon)

In September 2023, we entered into a collaboration agreement with OPKO Biologics (the “2023 Collaboration Agreement”). Under the terms of this agreement, OPKO agreed to supply certain Oxyntomodulin (“OXM”) analogs for the development of oral tablet candidates using our proprietary N-Tab[®] platform.

The EB618 program focuses on developing the first oral dual agonist GLP-1/Glucagon (OXM) peptide as a potential once-daily tablet treatment for patients with obesity and metabolic disorders using the N-Tab[®] platform. Currently, there are no approved dual GLP-1/Glucagon agonists available.

In September 2024, we jointly announced with OPKO topline PK/PD results for the OXM program. The high plasma concentrations with prolonged systemic exposure were consistent with the reported half-life for semaglutide (Rybelsus[®]), the only approved oral GLP-1 analog. Oral OXM showed a statistically significant reduction in plasma glucose levels compared with placebo.

In March 2025, we entered into an additional collaboration agreement with OPKO and OPKO Biologics (the “2025 Collaboration Agreement”) to collaborate with respect to the preclinical and clinical development and decision making related to the Oral OXM program for the treatment of obesity, metabolic and fibrotic disorders in humans.

In February 2026, we entered into an amended and restated collaboration agreement with OPKO, which amends and restates the 2025 Collaboration Agreement, to expand the scope of the agreement to include the collaboration with respect to the preclinical and clinical development of a daily LA-PTH for the treatment of hypoparathyroidism.

OPKO is planning to initiate a single ascending dose (SAD) and multiple ascending dose (MAD) Phase 1 clinical study with the subcutaneous injection formulation in 2027. We plan to file an IND for the oral OXM tablet formulation thereafter.

Oral GLP-2

This program focuses on developing the first GLP-2 peptide tablet alternative for patients suffering from short bowel syndrome and additional disorders involving mucosal inflammation and nutrient malabsorption.

In connection with the 2023 Collaboration Agreement we and OPKO completed proof-of-concept pharmacokinetic studies in rodents and minipigs. Oral GLP-2 tablets exhibited significant systemic exposure with plasma levels about 10-fold higher than therapeutic plasma concentrations reported for subcutaneously administered teduglutide (Gattex[®] label). Rodent repeat-dose PK/PD studies showed clear pharmacologic activity in intestinal tissue. Systemic exposure was maintained for more than 24 hours with relatively low variability, supporting once-daily oral dosing.

Given the challenging compliance rates attributed to injectable GLP-2 therapy and heterogeneity of SBS patients, we believe a daily tablet format may address a significant unmet need in treating and titrating SBS patients more effectively than injectable alternatives.

Private Placement

On April 1, 2026, we entered into a Securities Purchase Agreement with the Selling Shareholders (the “Purchase Agreement”), providing for the Private Placement, in which we sold to the Selling Shareholders an aggregate of 7,827,789 units, each unit consisting of (i) one ordinary share (or, in lieu thereof, one Pre-Funded Warrant) and (ii) one Ordinary Share Warrant to purchase one and one-half ordinary shares, for aggregate proceeds of approximately \$10 million (or \$1.2775 per unit). The Private Placement closed on April 2, 2026 (the “Closing Date”).

The Selling Shareholders elected to receive a combination of ordinary shares and Pre-Funded Warrants in lieu of ordinary shares. The Pre-Funded Warrants may not be exercised if the aggregate number of ordinary shares beneficially owned by the holder thereof, together with its affiliates, would exceed 4.99% immediately after exercise thereof, subject to increases not in excess of 19.99% at the option of the holder. Each Pre-Funded Warrant has an exercise price of NIS 0.0000769 per ordinary share, is immediately exercisable and may be exercised at any time and has no expiration date, and is subject to customary adjustments.

Each Ordinary Share Warrant has an exercise price of \$1.24 per share, becomes exercisable six months following the Closing Date, expires five years from the date of issuance, and is subject to customary adjustments. The Ordinary Share Warrants purchased by the Selling Shareholders contain a provision pursuant to which such Ordinary Share Warrants may not be exercised if the aggregate number of ordinary shares beneficially owned by the holder thereof, together with its affiliates, would exceed 4.99% immediately after exercise thereof, subject to increases not in excess of 19.99% at the option of the holder. Subject to the availability of an effective registration statement with respect to the resale of the ordinary shares issuable upon exercise of the Ordinary Share Warrants, such warrants may be exercised only for cash. If all Ordinary Share Warrants were exercised for cash, then we would expect to receive additional proceeds of approximately \$14.5 million.

We intend to use the net proceeds from the Private Placement to support activities related to initiation of our phase 3 registrational study of EB613 in postmenopausal women with osteoporosis and for general working capital and corporate purposes.

The securities issued to the Selling Shareholders under the Purchase Agreement were offered in reliance on an exemption from registration provided by Section 4(a)(2) of the Securities Act. We relied on this exemption from registration based in part on representations made by each Selling Shareholder, including that each Selling Shareholder is an “accredited investor”, as defined in Rule 501(a) promulgated under the Securities Act.

We and the Selling Shareholders also entered into the Registration Rights Agreement, pursuant to which we agreed to prepare and file a registration statement with the SEC no later than May 8, 2026, to register the resale of the Shares. We have agreed to use our reasonable best efforts to have such registration statement declared effective as promptly as possible after the filing thereof. Holders of the Warrants may exercise such warrants on a cashless basis at such time as there is no effective registration statement with respect to the resale of the ordinary shares issuable upon exercise thereof. We filed the registration statement, of which this prospectus forms a part, in accordance with our obligations under the Registration Rights Agreement.

Corporate Information

Our principal and registered office is located at Kiryat Hadassah Minrav Building - Fifth Floor, Jerusalem, Israel, and our telephone number is +972-2-532-7151. Our corporate website is located at www.enterabio.com. The information on our website shall not be deemed part of this prospectus.

THE OFFERING

Resale of Ordinary Shares

Ordinary Shares Offered by the Selling Shareholders Up to 19,569,472 shares.

Use of Proceeds We will not receive any of the proceeds from the sale of the Shares by the Selling Shareholders. However, we may receive proceeds from any cash exercise of the Warrants by the holders. See the section of this prospectus titled "Use of Proceeds."

Market for Our Ordinary Shares Our ordinary shares are listed on Nasdaq under the symbol "ENTX."

Risk Factors Any investment in the Shares offered hereby is speculative and involves a high degree of risk. You should carefully consider the information set forth under "Risk Factors" and elsewhere in this prospectus.

RISK FACTORS

An investment in our securities involves a high degree of risk. Before deciding whether to purchase our securities, you should carefully consider the risk factor set forth below and the risk factors incorporated by reference from our Annual Report on Form 10-K for the year ended December 31, 2025 filed with the SEC on March 27, 2026 (the “2025 Annual Report”) under the heading “Item 1A. Risk Factors”, any updates to those risk factors contained in our Quarterly Reports on Form 10-Q or Current Reports on Form 8-K and the other information contained in this prospectus or any applicable prospectus supplement, as updated by those subsequent filings with the SEC under the Exchange Act that are incorporated herein by reference. These risks could materially affect our business, results of operations and financial condition and could cause the value of our securities to decline in value, in which case you may lose all or part of your investment. For more information, see “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference.”

Security, political and economic instability in the Middle East may harm our business.

Our principal research facilities are located in Israel. In addition, most of our key employees, officers and two directors are residents of Israel. Accordingly, political, economic and military conditions in the Middle East may affect our business directly. Since the establishment of the State of Israel in 1948, a number of armed conflicts have occurred between Israel and its neighboring countries, Hamas (an Islamist militia and political group in the Gaza Strip), Hezbollah (an Islamist militia and political group in Lebanon), and Iran.

On October 7, 2023, thousands of Hamas terrorists infiltrated Israel’s southern border from the Gaza Strip and conducted a series of lethal attacks on Israeli civilians and some military targets. Hamas also launched extensive rocket attacks on the Israeli civilian population and industrial centers located along Israel’s border with the Gaza Strip and across the State of Israel. These attacks resulted in thousands of deaths and injuries, and Hamas additionally kidnapped over 250 Israeli civilians and soldiers. Following the attack, Israel’s security cabinet commenced a counter-offense military campaign against Hamas in Gaza. Since the onset of these events, hostilities have persisted across Israel, along Israel’s northern border with Lebanon, primarily involving the Hezbollah terror organization, as well as other extremist groups in the region, including the Houthis in Yemen and various militia groups in Syria and Iraq. Israel has conducted multiple targeted strikes against these terror organizations.

In addition, since April 2024, Israel has experienced direct attacks from Iran, involving hundreds of drones and ballistic missiles launched towards mostly densely populated civilian towns across Israel and some military bases, threatening continued aggression while also exerting considerable influence over regional militia groups encouraging them to launch attacks against Israel. The Israeli defense systems, aided by international allies, successfully intercepted the majority of the ballistic missile attacks, minimizing physical damage and casualties. Additionally, since October 2023, the Houthis, a military organization based in Yemen, have launched a series of attacks on global shipping routes in the Red Sea, as well as direct attacks on various parts of Israel. Such incidents contribute to regional instability and could potentially escalate into broader conflicts with Iran and its proxies in the Middle East, affecting Israel’s political and trade relations, especially with neighboring countries and global allies. The situation remains fluid, and the potential for further escalation exists. In October 2024, Israel initiated both air and ground operations against Hezbollah in Lebanon, culminating in a ceasefire agreement between Israel and Lebanon on November 27, 2024, the results of which remain uncertain. In response to ongoing Iranian aggression and support of proxy attacks against Israel, on June 12, 2025, Israel conducted a series of preemptive defensive air strikes in Iran targeting Iran’s nuclear program and military commanders. On June 21, 2025, U.S. President Donald Trump announced that the United States had conducted air strikes against three nuclear sites within Iran. On October 9, 2025, a ceasefire had been reached. Israel, Hamas, the United States and other countries in the region agreed to a framework for a ceasefire in Gaza between Israel and Hamas.

On February 28, 2026, following the breakdown of diplomatic efforts and heightened regional tensions, the United States and Israel conducted a series of preemptive strikes targeting Iranian military infrastructure and strategic assets. Immediately thereafter, Iran launched extensive retaliatory ballistic missile and drone attacks against multiple locations across Israel, including central and southern population centers, critical infrastructure facilities and military installations. On March 2, 2026, Hezbollah resumed hostilities, ending the November 2024 ceasefire, by launching projectiles into northern Israel, prompting Israeli airstrikes in Lebanon targeting Hezbollah operatives and assets. Since the outbreak of these hostilities, Israel has implemented nationwide emergency measures, including restrictions on public gatherings and large-scale reserve duty call-ups affecting the civilian workforce.

In early April 2026, a two-week ceasefire between the United States and Iran was agreed. However, the ceasefire's durability remains uncertain. The United States has maintained a naval blockade of Iranian ports, and Iran has responded by intermittently restricting commercial vessel passage through the Strait of Hormuz, declaring that the waterway would remain effectively closed until the blockade is lifted. There can be no assurance that this ceasefire will hold or be extended, and hostilities between the United States, Israel and Iran could resume at any time.

On April 16, 2026, following direct talks between Israeli and Lebanese officials in Washington, D.C., a 10-day cessation of hostilities between Israel and Lebanon was announced, brokered by the United States. The parties have requested that the United States facilitate further direct negotiations with the objective of achieving a comprehensive agreement for lasting security and peace. Israeli forces remain stationed in southern Lebanon and Hezbollah has not accepted the terms as binding, stating that its fighters will remain deployed and will respond to any violations. The ceasefire remains fragile, with reports of continued military operations by both sides in southern Lebanon.

How long and how severe the current conflicts in Gaza, Northern Israel, Lebanon, Iran or the broader region become is unknown at this time and any continued clash among Israel, Hamas, Hezbollah, Iran or other countries or militant groups in the region may escalate in the future into a greater regional conflict.

While we have a few employees who are in active military service, the ongoing war, the escalation of Hezbollah's attacks on Northern Israel, and the direct offensives from Iran and its proxies have not, to date, materially impacted our business or operations. Furthermore, we do not expect any delays to any of our programs as a result of such conflicts. While research and some management are located in Israel, other core activities including clinical, regulatory and our supply chain are not. However, we cannot currently predict the intensity or duration of Israel's war against Hamas, Hezbollah and Iran, and its proxies, nor can we predict how such conflicts will ultimately affect our business and operations or Israel's economy in general.

Additionally, political uprisings, social unrest and violence in various other countries in the Middle East, including Israel's neighboring countries Syria, Lebanon, Egypt and Jordan, are affecting the political stability of those countries. This instability may lead to deterioration of the political relationships that exist between Israel and certain countries and have raised concerns regarding security in the region and the potential for a broader regional armed conflict. Since February 2026, there has been a significant escalation in hostilities involving the U.S., Israel, Iran and several other countries in the middle east, including direct military exchanges. These developments have increased regional instability and may further escalate into more severe and prolonged hostilities, which could affect Israel and us.

Any hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners could have a material adverse effect on our business. Although such hostilities did not have a material adverse impact on our business in the past, we cannot guarantee that hostilities will not be renewed and have such an effect in the future. These or other Israeli political or economic factors could harm our operations and product development. Any hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners could adversely affect our operations. We could experience disruptions if acts associated with such conflicts result in any serious damage to our facilities.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains “forward-looking statements,” as that term is defined under the Private Securities Litigation Reform Act of 1995 (“PSLRA”), Section 27A of the Securities Act, and Section 21E of the Exchange Act. Various statements in this prospectus are “forward-looking statements” within the meaning of the PSLRA and other U.S. federal securities laws. In addition, historic results of scientific research and clinical and preclinical trials do not guarantee that the conclusions of future research or trials would not be different, and historic results referred to in this prospectus may be interpreted differently in light of additional research and clinical and preclinical trial results. Forward-looking statements include all statements that are not historical facts. We have based these forward-looking statements largely on our management’s current expectations and future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. Forward-looking statements involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this prospectus regarding our strategy, future operations, future financial position, projected costs, prospects, plans and objectives of management are forward-looking statements. These statements are subject to risks and uncertainties and are based on information currently available to our management. Words such as, but not limited to, “anticipate,” “believe,” “contemplates,” “continue,” “could,” “design,” “estimate,” “expect,” “intend,” “likely,” “may,” “ongoing,” “plan,” “potential,” “predict,” “project,” “will,” “would,” “seek,” “should,” “target,” or the negative of these terms and similar expressions or words, identify forward-looking statements. The events and circumstances reflected in our forward-looking statements may not occur and actual results could differ materially from those projected in our forward-looking statements. These factors include those described in “Item 1A-Risk Factors” in our 2025 Annual Report. Meaningful factors which could cause actual results to differ include, but are not limited to, the following:

- Clinical development involves a lengthy and expensive process with uncertain outcomes. We may incur additional costs and experience delays in developing and commercializing or be unable to develop or commercialize our current and future product candidates;
- The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time-consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be materially harmed;
- Preclinical development is uncertain. Our preclinical programs may experience delays or may never advance to clinical trials, which would adversely affect our ability to obtain regulatory approvals or commercialize these programs on a timely basis or at all;
- Positive results from preclinical studies and early-stage clinical trials may not be predictive of future results. Initial positive results in any of our clinical trials may not be indicative of results obtained when the trial is completed or in later stage trials;
- The scope, progress and costs of developing our product candidates such as EB613 for osteoporosis and EB612 for hypoparathyroidism or other oral peptides for the treatment of obesity, metabolic disorders (EB618) and gastrointestinal rare diseases may alter over time based on various factors such as regulatory requirements, collaboration agreements, the competitive environment and new data from pre-clinical and clinical studies;
- The accuracy of our estimates regarding expenses, capital requirements, the sufficiency of our cash resources and the need for additional financing;
- Our ability to continue as a going concern absent access to sources of liquidity;
- Our ability to raise additional funds or consummate strategic partnerships to offset additional required capital to pursue our business objectives, which may not be available on acceptable terms or at all. A failure to obtain this additional capital when needed, or failure to consummate strategic partnerships, could delay, limit or reduce our product development, and other operations;
- Even if a current or future product candidate receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success;

- The successful commercialization of our product candidates, if approved, will depend in part on the extent to which governmental authorities and third-party payors establish adequate coverage and reimbursement levels and pricing policies;
- Failure to obtain or maintain coverage and adequate reimbursement for our product candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue;
- If we are unable to obtain and maintain patent protection for our product candidates, or if the scope of the patent protection obtained is not sufficiently broad or robust, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our product candidates may be adversely affected;
- Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain;
- Our reliance on third parties to conduct our clinical trials and on third-party suppliers to supply or produce our product candidates;
- Our interpretation of FDA feedback and guidance and how such guidance may impact our clinical development plan;
- Our ability to use and expand our N-Tab® platform to additional product candidates;
- Our operation as a development stage company with limited operating history and a history of operating losses and our ability to fund our operations going forward;
- Our competitive position with respect to other products on the market or in development for the treatment of osteoporosis, hypoparathyroidism, short bowel syndrome and other rare gastrointestinal disorders, obesity, metabolic conditions and other disease categories we pursue;
- Our ability to establish and maintain development and commercialization collaborations;
- Our ability to manufacture and supply enough material to support our clinical trials and any potential future commercial requirements;
- The size of any market we may target and the adoption of our product candidates, if approved, by physicians and patients;
- Our ability to obtain, maintain and protect our intellectual property and operate our business without infringing, misappropriating, or otherwise violating any intellectual property rights of others;
- Our ability to retain key personnel and recruit additional qualified personnel;
- Our ability to comply with laws and regulations that currently apply or become applicable to our business;
- Our ability to manage growth; and
- The Israel-Hamas conflict, that has been ongoing since October 2023, including involvement from Hezbollah, Iran and its proxies in the Middle East, such as the Houthis in Yemen and militias in Iraq and Syria, as well as the hostilities between the United States, Israel and Iran and their impact on our operations and workforce, remains unknown.

All forward-looking statements contained in this prospectus are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We caution investors not to rely too heavily on the forward-looking statements we make or that are made on our behalf. Except as required by applicable law, we are under no duty, and expressly disclaim any obligation, to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures we make on related subjects in any annual, quarterly or current reports that we may file with the SEC.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the Shares offered by this prospectus, but we will bear all fees and expenses incident to our obligation to register the Shares being offered for resale hereunder by the Selling Shareholders.

We may receive proceeds from the exercise of the Warrants and issuance of the underlying ordinary shares. If all of the Ordinary Share Warrants were exercised for cash in full, the proceeds would be approximately \$14.5 million. We intend to use the net proceeds of such warrant exercises, if any, to support activities related to initiation of the phase 3 registrational study of EB613 in postmenopausal women with osteoporosis and for general working capital and corporate purposes. We can make no assurances that any of the Ordinary Share Warrants will be exercised, or if exercised, that they will be exercised for cash.

DESCRIPTION OF ORDINARY SHARES

This section describes the general terms of our ordinary shares. The following description is a summary only and is qualified by reference to the relevant provisions of Israeli law and our Amended and Restated Articles of Association, a copy of which is incorporated by reference in this prospectus.

General

We are an Israeli company incorporated with limited liability, and our affairs are governed by the provisions of our Amended and Restated Articles of Association (the “Articles”), as amended and restated from time to time, and by the provisions of applicable Israeli law, including the Companies Law of 1999 (the “Companies Law”). Our number with the Israeli Registrar of Companies is 514330604. The purpose of our company appears in Article 3 of our Articles, which is to engage in any lawful activity. In addition, our Articles authorize us to donate reasonable amounts to any charitable cause. Our registered office is at Kiryat Hadassah, Minrav Building — Fifth Floor, Jerusalem 9112002, Israel

Ordinary Shares

Our authorized share capital consists of 140,010,000 ordinary shares, par value NIS 0.0000769 per share. All of our issued ordinary shares have been validly issued, fully paid and are non-assessable. The ordinary shares are listed on Nasdaq under the symbol “ENTX.”

Our Ordinary Shares

Dividends and Liquidation Rights

We currently have only one class of shares. We have never paid or declared any cash dividends on our ordinary shares, and we do not anticipate paying any cash dividends on our ordinary shares in the foreseeable future. We intend to retain all available funds and any future earnings to fund the development and expansion of our business. Subject to the rights of holders of shares with preferential or special rights that may be authorized in the future, holders of our ordinary shares are entitled to participate in the payment of dividends pro rata in accordance with the amounts paid-up or credited as paid-up on the par value of such ordinary shares at the time of payment without taking into account any premium paid thereon. In the event that we were to go into liquidation, holders of our ordinary shares are entitled to a pro rata share of surplus assets remaining over liabilities, subject to rights conferred on any class of shares which may be issued in the future, in accordance with the amounts paid-up or credited as paid-up on the par value of such ordinary shares, without taking into account any premium paid thereon.

According to the Companies Law, a company may make a distribution of dividends out of its profits on the condition that there is no reasonable concern that the distribution may prevent the company from meeting its existing and expected obligations when they fall due. The Companies Law defines such profit as retained earnings or earnings generated in the last two years, whichever is greater, according to the last reviewed or audited financial statements of the company, provided that the end of the period to which the financial statements relate is not more than six months before the distribution. Declaration of dividends requires a resolution of our Board, and the court, if applicable and as required by the Companies Law, the board determines that there is no reasonable concern that payment of the dividend will prevent us from satisfying our existing and foreseeable obligations as they become due, and does not require shareholder approval. Payment of dividends and proceeds from the sale of the shares or interest or other payments to non-residents of Israel, may be subject to Israeli withholding taxes. There are currently no Israeli currency control restrictions on remittances of dividends on our ordinary shares, proceeds from the sale of the shares or interest or other payments to non-residents of Israel, except for shareholders who are subjects of countries that are, or have been, in a state of war with Israel.

Voting Rights

Holders of our ordinary shares are entitled to one vote for each ordinary share on all matters submitted to a vote of shareholders, subject to any special rights of any class of shares that may be authorized in the future. Cumulative voting for the election of directors is not permitted.

Quorum

As permitted under the Companies Law, and pursuant to our Articles, a quorum is required to conduct business at a shareholders' meeting. Pursuant to our Articles, the presence, in person or by proxy, of at least two shareholders who hold in the aggregate at least 25% of the voting power of our issued and outstanding shares constitutes a quorum. A proxy may be deemed to be two (2) or more shareholders pursuant to the number of shareholders it represents. Under applicable Nasdaq rules, however, a quorum must consist of not less than an aggregate of 33 1/3 % of the voting power of our issued and outstanding shares. Therefore, notwithstanding the lower percentage set forth in our Articles, we will require the greater percentage mandated by Nasdaq in order to determine the presence of a quorum. If a quorum is not present within half an hour from the time scheduled for such meeting, the meeting will be adjourned to the same day in the next week (at the same time and place), or to a later time and date if so specified in the notice of the meeting, unless such day shall fall on a statutory holiday (either in Israel or in the United States), in which case the meeting will be adjourned to the first Business Day afterwards. If at such adjourned meeting a quorum as specified above is not present within half an hour from the time designated for holding the meeting, subject to certain exceptions, any two shareholders present in person or by proxy shall constitute a quorum.

Shareholders' Meetings and Resolutions

The Chairman of our board of directors, or any other person appointed for this purpose by the board of directors, shall preside at each shareholders' meeting. If he is absent, his deputy or another person elected by the present shareholders will preside.

A simple majority is sufficient to approve most shareholders' resolutions, including any amendment to our Articles, unless otherwise required by law or by our Articles.

We are required to hold an annual meeting of our shareholders once every calendar year, but no later than 15 months after the date of the previous annual meeting. All meetings other than the annual meeting of shareholders are referred to as special meetings. Our board of directors may call special meetings whenever it sees fit, at such time and place as it may determine. In addition, the Companies Law provides that the board of directors of a public company is required to convene a special meeting upon the request of:

- any two directors of the company or one quarter of the board of directors; or
- one or more shareholders holding, in the aggregate: (i) five percent of the outstanding shares of the company and one percent of the voting power in the company; or (ii) five percent of the voting power in the company.

The Companies Law enables our board of directors to fix a record date to allow us to determine the shareholders entitled to notice of, or to vote at, any meeting of our shareholders. Under current regulations, the record date may be not more than forty days and not less than four days prior to the date of the meeting and notice is required to be published at least 21 or 35 days prior to the meeting, depending on the items on the agenda. Under the Companies Law and regulations promulgated thereunder and pursuant to our Articles, one or more shareholders holding at least 1% of the voting rights at a general meeting of shareholders may request that the board of directors include a matter in the agenda of a general meeting of shareholders to be convened in the future, by submitting such proposal within seven days of publication of the Company's notice with respect to such meeting of shareholders and provided that certain resolutions are brought before the shareholders in such meeting.

Modification of Shareholders' Rights

We currently have only one class of shares. The rights attached to a class of shares may be altered by the approval of the shareholders of such class holding a majority of the voting rights of such class. The provisions in our Articles pertaining to general meetings also apply to any special meeting of a class of shareholders. Pursuant to our Articles, the presence, in person or by proxy, of at least two shareholders who hold in the aggregate at least 25% of the voting power of our issued and outstanding shares constitutes a quorum. A proxy may be deemed to be two (2) or more shareholders pursuant to the number of shareholders it represents. Under applicable Nasdaq rules, however, a quorum must consist of not less than an aggregate of 33 1/3 % of the voting power of our issued and outstanding shares. Therefore, notwithstanding the lower percentage set forth in our Articles, we will require the greater percentage mandated by Nasdaq in order to determine the presence of a quorum. If a quorum is not present within half an hour from the time scheduled for such meeting, the meeting will be adjourned to the same day in the next week (at the same time and place), or to a later time and date if so specified in the notice of the meeting, unless such day shall fall on a statutory holiday (either in Israel or in the United States), in which case the meeting will be adjourned to the first business day afterwards. If at such adjourned meeting a quorum as specified above is not present within half an hour from the time designated for holding the meeting, subject to certain exceptions, any two shareholders present in person or by proxy shall constitute a quorum.

Preemptive Rights

Pursuant to our Articles of Association, no preemptive rights are attached to our ordinary shares.

Restrictions on Non-Residents of Israel

The ownership or voting of our ordinary shares by non-residents of Israel is not restricted in any way by our Articles or the laws of Israel, except for ownership by nationals of some countries that are, or have been, in a state of war with Israel.

Preferred Shares

Currently there are no preferred shares authorized under the terms of our Articles. No preferred shares are outstanding.

Transfer Agent and Registrar

The transfer agent and registrar for the ordinary shares is Equiniti Trust Company, LLC.

PLAN OF DISTRIBUTION

Each Selling Shareholder and any of such Selling Shareholder's pledgees, assignees and successors-in-interest may, from time to time, sell any or all of the Shares on Nasdaq or any other stock exchange, market or trading facility on which the Shares are traded or in private transactions. These sales may be at fixed or negotiated prices. A Selling Shareholder may use any one or more of the following methods when selling Shares:

- distributions to members, partners, stockholders or other equity holders of such Selling Shareholder;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales and settlement of short sales;
- in transactions through broker-dealers that agree with such Selling Shareholder to sell a specified number of Shares at a stipulated price per Share;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the Selling Shareholders to sell a specified number of the Shares at a stipulated price per share;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Shareholders may also sell Shares under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus. The Selling Shareholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then current market price or in negotiated transactions.

In addition, a Selling Shareholder that is an entity may elect to make an in-kind distribution of securities to its members, partners or shareholders pursuant to the registration statement of which this prospectus is a part by delivering a prospectus with a plan of distribution. Such members, partners or shareholders would thereby receive freely tradeable securities pursuant to the distribution through a registration statement. To the extent a distributee is an affiliate of ours (or to the extent otherwise required by law), we may file a prospectus supplement in order to permit the distributees to use the prospectus to resell the securities acquired in the distribution. The Selling Shareholders also may transfer the Shares in other circumstances, in which case the transferees, pledgees or other successors-in-interest will be the selling beneficial owners for purposes of this prospectus. Upon being notified by the Selling Shareholders that a donee, pledgee, transferee, other successor-in-interest intends to sell Shares, we will, to the extent required, promptly file a supplement to this prospectus to name specifically such person as a Selling Shareholder.

Broker-dealers engaged by the Selling Shareholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Shareholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

In connection with the sale of the Shares or interests therein, the Selling Shareholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the Shares in the course of hedging the positions they assume. The Selling Shareholders may also sell ordinary shares short and deliver the Shares to close out their short positions, or loan or pledge the Shares to broker-dealers that in turn may sell such Shares. The Selling Shareholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of the Shares offered by this prospectus, which Shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Shareholders and any broker-dealers or agents that are involved in selling Shares may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Shareholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the Shares. We have agreed to indemnify the Selling Shareholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective until the earlier of the date on which (a) all Shares shall have been disposed of under an effective registration statement, (b) all Shares have been previously sold in accordance with Rule 144, or (c) the Shares become eligible for resale without volume or manner-of-sale restrictions and without current public information pursuant to Rule 144 as set forth in a written opinion letter to such effect, addressed, delivered and acceptable to our transfer agent and the affected Selling Shareholders (assuming that such securities and any securities issuable upon exercise, conversion or exchange of which, or as a dividend upon which, such securities were issued or are issuable, were at no time held by any affiliate of ours), as reasonably determined by us, upon the advice of our counsel.

The Shares will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the Shares covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the Shares may not, subject to certain exceptions, simultaneously engage in market making activities with respect to the ordinary shares for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Shareholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the ordinary shares by the Selling Shareholders or any other person. We will make copies of this prospectus available to the Selling Shareholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

SELLING SHAREHOLDERS

The Shares being offered by the Selling Shareholders are those that we issued to the Selling Shareholders in connection with the Private Placement together with those issuable to the Selling Shareholders upon exercise of the Warrants. For additional information regarding the issuance of the foregoing Shares and the Warrants, see “Prospectus Summary—Private Placement” located elsewhere in this prospectus. We are registering the resale of the Shares in order to permit the Selling Shareholders to offer the Shares for resale from time to time. Except for the ownership of the Shares offered hereby and the Warrants, and as otherwise disclosed in the footnotes to the table immediately below, none of the Selling Shareholders has had any material relationship with us within the past three years.

The table below lists the names of the Selling Shareholders and other information regarding their respective beneficial ownership of ordinary shares. The second column lists the number of ordinary shares beneficially owned by each Selling Shareholder. The beneficial ownership of our ordinary shares is based on 49,225,321 ordinary shares outstanding as of May 5, 2026.

Beneficial ownership is determined according to the rules of the SEC, which generally provide that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power over that security, including derivative securities, such as options and warrants, that are currently exercisable or exercisable within 60 days. In computing the number of shares beneficially owned by a particular person or entity and the percentage ownership of that person or entity, all shares subject to options and Warrants held by such person or entity were deemed outstanding if such securities were currently exercisable, on, or become or will become exercisable within 60 days following May 5, 2026. These shares were not deemed outstanding, however, for the purpose of computing the percentage ownership of any other person or entity.

The third column lists the ordinary shares being offered by each Selling Shareholder under this prospectus, regardless of any beneficial ownership limitation contained in a Warrant.

In accordance with the terms of the Registration Rights Agreement, this prospectus covers the resale of the sum of (i) the number of ordinary shares issued to those Selling Shareholders who acquired such shares in the Private Placement and (ii) the maximum number of ordinary shares issuable upon exercise of the Warrants, as applicable, determined as if the outstanding Warrants were exercised in full as of the trading day immediately preceding the date the registration statement, of which this prospectus forms a part, was initially filed with the SEC, without regard to any limitations on the exercise of the Warrants, as described below. The fourth column (presenting the number of ordinary shares owned after this offering) assumes the sale of all of the Shares offered by the Selling Shareholders pursuant to this prospectus.

Under the terms of the Warrants, the Selling Shareholders may not exercise such Warrants to the extent such exercise would result in such Selling Shareholder, together with its affiliates and attribution parties, to beneficially own a number of ordinary shares which would exceed 4.99% (subject to increases not in excess of 19.99% at the option of such Selling Shareholder) of our then outstanding ordinary shares following such exercise, excluding for purposes of such determination ordinary shares issuable upon exercise of such Warrants which have not been exercised. The number of Shares in the third column (presenting the maximum number of ordinary shares to be sold pursuant to this prospectus) does not reflect this limitation, but the number of Shares in the second column reflects this limitation. The Selling Shareholders may sell all, some or none of their respective Shares in this offering. See “Plan of Distribution.”

We will pay the fees and the expenses incurred in effecting the registration of the Shares covered by this prospectus, including, without limitation, all registration and filing fees, stock exchange fees, printing expenses, all fees and expenses of complying with applicable securities laws, fees and expenses of our counsel and accountants. Each Selling Shareholder will pay any underwriting or broker discounts and any commissions incurred in selling its Shares.

Name of Selling Shareholder	Ordinary Shares Beneficially Owned Prior to the Offering	Maximum Number of Ordinary Shares to be Sold Pursuant to this Prospectus	Ordinary Shares Owned Following the Offering	Percentage of Ordinary Shares Ownership Following the Offering ⁽¹⁾
Biotechnology Value Fund, L.P. ⁽²⁾⁽⁶⁾	1,260,119	10,169,010	—	*
Biotechnology Value Fund II, L.P. ⁽³⁾⁽⁶⁾	962,963	7,771,000	—	*
Biotechnology Value Trading Fund OS LP ⁽⁴⁾⁽⁶⁾	162,302	1,309,762	—	*
MSI BVF SPV, LLC ⁽⁵⁾⁽⁶⁾	39,616	319,700	—	*

* Represents beneficial ownership of less than one percent (1%) of the outstanding Shares

- (1) Based on 49,225,321 ordinary shares outstanding as of May 5, 2026.
- (2) Maximum number of ordinary shares to be sold pursuant to this prospectus includes (i) 1,260,119 ordinary shares, (ii) 2,807,485 ordinary shares underlying Pre-Funded Warrants and (iii) 6,101,406 ordinary shares underlying Ordinary Share Warrants purchased by Biotechnology Value Fund, L.P. (“**BVF**”) in the Private Placement.
- (3) Maximum number of ordinary shares to be sold pursuant to this prospectus includes (i) 962,963 ordinary shares, (ii) 2,145,437 ordinary shares underlying Pre-Funded Warrants and (iii) 4,662,600 ordinary shares underlying Ordinary Share Warrants purchased by Biotechnology Value Fund II, L.P. (“**BVF II**”) in the Private Placement.
- (4) Maximum number of ordinary shares to be sold pursuant to this prospectus includes (i) 162,302 ordinary shares, (ii) 361,603 ordinary shares underlying Pre-Funded Warrants and (iii) 785,857 ordinary shares underlying Ordinary Share Warrants purchased by Biotechnology Value Trading Fund OS LP (“**BVF Trading**”) in the Private Placement.
- (5) Maximum number of ordinary shares to be sold pursuant to this prospectus includes (i) 39,616 ordinary shares, (ii) 88,264 ordinary shares underlying Pre-Funded Warrants and (iii) 191,820 ordinary shares underlying Ordinary Share Warrants purchased by MSI BVF SPV, LLC (“**MSI**”) and together with BVF, BVF II and BVF Trading, the “**BVF Entities**”) in the Private Placement.
- (6) The Warrants contain an issuance limitation that prohibits the holder from exercising the Warrants to the extent that after giving effect to such issuance after the exercise, the holder (together with the holder’s affiliates and any other persons acting as a group together with the holder or any of the holder’s affiliates) would beneficially own in excess of 4.99% of our ordinary shares outstanding immediately after giving effect to the issuance of the shares issuable upon exercise of the Warrants.

BVF I GP LLC, as general partner of BVF, may be deemed to beneficially own the shares held by BVF. BVF II GP LLC, as general partner of BVF II, may be deemed to beneficially own the shares held by BVF II. BVF GP Holdings LLC, as the sole member of BVF I GP LLC and BVF II GP LLC, may be deemed to beneficially own the shares beneficially owned by BVF and BVF II. BVF Partners OS Ltd, as general partner of BVF Trading, may be deemed to beneficially own the shares beneficially owned by BVF Trading. BVF Partners L.P. (“**BVF Partners**”), as the sole member of BVF Partners OS Ltd. and the investment adviser of each of BVF, BVF II, BVF Trading and MSI, may be deemed to beneficially own the shares beneficially owned by BVF, BVF II, BVF Trading and MSI. BVF Inc., as general partner of BVF Partners, and Mark N. Lampert, as officer and director of BVF Inc., may be deemed to beneficially own the shares beneficially owned by BVF Partners and has shared voting and dispositive power over such shares. Each of BVF I GP LLC, BVF II GP LLC, BVF GP Holdings LLC, BVF Partners OS Ltd., BVF Partners, BVF Inc. and Mr. Lampert disclaim beneficial ownership over the shares. The principal business address of the BVF Entities is 44 Montgomery Street, 40th Floor, San Francisco, CA 94104.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” the information we have filed with it, which means that we can disclose important information to you by referring you to the documents containing such information. The information we incorporate by reference is an important part of this prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and all future documents (excluding information furnished pursuant to Items 2.02, 7.01 and 9.01 of Form 8-K or any other information that is identified as “furnished” rather than filed) we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of this prospectus and prior to the termination of this offering:

- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2025, filed with the SEC on March 27, 2026;
- Our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2026, filed with the SEC on May 8, 2026;
- Our Current Reports on Form 8-K (not including any information furnished under Item 2.02, 7.01 or 9.01 of such Form 8-K or any other information that is identified as “furnished” rather than filed, which information is not incorporated by reference herein), filed with the SEC on [February 4, 2026](#), [February 9, 2026](#) and [April 3, 2026](#); and
- The description of our ordinary shares contained in our registration statement on [Form 8-A](#), filed on June 25, 2018, and any amendment or report filed for the purpose of updating such description, including without limitation, [Exhibit 4.1](#) of our Annual Report on Form 10-K for the year ended December 31, 2022 filed with the SEC on March 31, 2023.

Additionally, all filings filed by us pursuant to the Exchange Act after the date of the initial filing of the registration statement of which this prospectus forms a part and prior to the effectiveness of such registration statement (excluding information furnished pursuant to Items 2.02, 7.01 and 9.01 of Form 8-K or any other information that is identified as “furnished” rather than filed) shall also be deemed to be incorporated by reference into this prospectus.

You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone else to provide you with different information. Any statement contained in a document incorporated by reference into this prospectus will be deemed to be modified or superseded for the purposes of this prospectus to the extent that a later statement contained in this prospectus or in any other document incorporated by reference into this prospectus modifies or supersedes the earlier statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date of this prospectus or the date of the documents incorporated by reference in this prospectus.

We will provide without charge to each person to whom a copy of this prospectus is delivered, upon written or oral request, a copy of any or all of the reports or documents that have been incorporated by reference in this prospectus but not delivered with this prospectus (other than an exhibit to these filings, unless we have specifically incorporated that exhibit by reference in this prospectus). Any such request should be addressed to us at: Kiryat Hadassah, Minrav Building - Fifth Floor, Jerusalem, Israel, Attention: Miranda Toledano, Chief Executive Officer, or made by phone at +972-2-532-7151. You may also access the documents incorporated by reference in this prospectus through our website at www.enterabio.com. Except for the specific incorporated documents listed above, no information available on or through our website shall be deemed to be incorporated in this prospectus or the registration statement of which it forms a part.

SERVICE OF PROCESS AND ENFORCEMENT OF JUDGMENTS

We are incorporated under the laws of the State of Israel. Service of process upon us and upon our directors and officers and any Israeli experts named in this prospectus, may be difficult to obtain within the United States. Furthermore, because substantially all of our assets and a significant number of our directors and officers are located outside the United States, any judgment obtained in the United States against us or any of our directors and officers may not be collectible within the United States.

We have been informed by our legal counsel in Israel, Herzog Fox & Neeman, that it may be difficult to initiate an action with respect to U.S. securities law in Israel. Israeli courts may refuse to hear a claim based on an alleged violation of U.S. securities laws reasoning that Israel is not the most appropriate forum to hear such a claim. In addition, even if an Israeli court agrees to hear a claim, it may determine that Israeli law and not U.S. law is applicable to the claim. If U.S. law is found to be applicable, the content of applicable U.S. law must be proved as a fact by expert witnesses, which can be a time-consuming and costly process. Certain matters of procedure may also be governed by Israeli law. There is little case law in Israel addressing these matters.

Subject to certain time limitations and legal procedures, Israeli courts may enforce a U.S. judgment in a civil matter which, subject to certain exceptions, is non-appealable, including judgments based upon the civil liability provisions of the Securities Act and the Exchange Act and including a monetary or compensatory judgment in a non-civil matter, provided that:

- the judgment was rendered after due process by a court which was, according to the laws of the state of the court, competent jurisdiction to render the judgment;
- the judgment is final and is not subject to any right of appeal; and
- the obligations imposed by the judgment are enforceable according to the laws of the State of Israel and according to the laws of the state in which the judgement was given, and the substance of the judgment is not contrary to public policy.

Even if these conditions are met, an Israeli court will not declare a foreign civil judgment enforceable if:

- the judgment was given in a state whose laws do not provide for the enforcement of judgments of Israeli courts (subject to exceptional cases);
- the enforcement of the judgment is likely to prejudice the sovereignty or security of the State of Israel;
- the judgment was obtained by fraud;
- the opportunity given to the defendant to bring its arguments and evidence before the court was not reasonable in the opinion of the Israeli court;
- the judgment was rendered by a court not competent to render it according to the laws of private international law as they apply in Israel;
- the judgment is contradictory to another judgment that was given in the same matter between the same parties and that is still valid; or
- at the time the action was brought in the foreign court, a lawsuit in the same matter and between the same parties was pending before a court or tribunal in Israel.

If a foreign judgment is enforced by an Israeli court, it generally will be payable in Israeli currency, which can then be converted into non-Israeli currency and transferred out of Israel. The usual practice in an action before an Israeli court to recover an amount in a non-Israeli currency is for the Israeli court to issue a judgment for the equivalent amount in Israeli currency at the rate of exchange in force on the date of the judgment, but the judgment debtor may make payment in foreign currency. Pending collection, the amount of the judgment of an Israeli court stated in Israeli currency ordinarily will be linked to the Israeli consumer price index plus interest at the annual statutory rate set by Israeli regulations prevailing at the time. Judgment creditors must bear the risk of unfavorable exchange rates.

LEGAL MATTERS

The validity of the ordinary shares in respect of which this prospectus is being delivered will be passed upon by Herzog, Fox & Neeman, Tel Aviv, Israel.

EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2025 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in note 1c to the financial statements) of Kesselman & Kesselman, Certified Public Accountants (Isr.), a member firm of PricewaterhouseCoopers International Limited, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.



Entera Bio Ltd.

PROSPECTUS



PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated expenses to be borne by the registrant in connection with the issuance and distribution of the securities being registered hereby.

Securities and Exchange Commission registration fee	\$	3,100
Accounting fees and expenses		10,000*
Legal fees and expenses		35,000*
Miscellaneous fees and expenses		1,000*
Total	\$	<u>49,100*</u>

* Estimated

Item 15. Indemnification of Directors and Officers

General. Our Amended and Restated Articles of Incorporation the (“Articles”) set forth the following provisions regarding the grant of insurance coverage, indemnification and an exemption from liability to any of our directors or officers, all subject to the provisions of applicable law. In accordance with such provisions and pursuant to the requisite corporate approvals, we have obtained liability insurance covering our directors and officers, have granted indemnification undertakings to our directors and officers and have agreed to exempt our directors and officers from liability in each case, to the fullest extent permitted by our amended Articles and applicable law, including with respect to liabilities resulting from this offering to the extent that these liabilities are not covered by insurance.

Insurance. We are entitled to insure the liability of any director or officer to the fullest extent permitted by law. Without derogating from the aforesaid, we may enter into a contract to insure the liability of a director or officer for an obligation imposed on him or her in consequence of an act done in his or her capacity as such, in any of the following cases:

- a breach of the duty of care toward us or a third party, to the extent such a breach arises out of the negligent conduct of the office holder;
- a breach of the duty of loyalty toward us, provided that the director or officer acted in good faith and had reasonable basis to believe that the act would not harm us;
- a monetary obligation imposed on him or her in favor of a third party in respect of an act done in his or hers capacity as an office holder in respect of an act done in his or her capacity as an office holder;
- a payment imposed on him or her in favor of an injured party as set forth in Section 52(54)(a)(1)(a) of the Israeli Securities Law; or
- reasonable litigation expenses, including attorney fees, incurred by him or her in connection with a proceeding under Chapters H’3, H’4 or I’1 of the Israeli Securities Law or under Article D of the Fourth Chapter, Ninth Part of the Companies Law, if applicable, including reasonable legal expenses, which term includes attorney fees.

Indemnification. We are entitled to indemnify a director or officer to the fullest extent permitted by law, either retroactively or pursuant to an undertaking given in advance. Without derogating from the aforesaid, we may indemnify our directors or officers for liability or expense imposed on him or her in consequence of an action taken by him in his capacity as such, as follows:

- a financial obligation or liability imposed on or incurred in favor of another person and/or legal entity, including by any government office, or expended as a result of a court judgment, including in a settlement or an arbitrator’s decision approved by a court of law, in respect of any act or omission taken or made by him or her in his or her capacity as a director or an officer of the Company of any of its subsidiaries. However, if an undertaking to indemnify an office holder with respect to such liability is provided in advance, then such an undertaking must be limited to events which, in the opinion of the board of directors, can be foreseen based on the company’s activities when the undertaking to indemnify is given, and to an amount or according to criteria determined by the board of directors as reasonable under the circumstances, and such undertaking shall detail such foreseen events and amount or criteria;

- reasonable legal expenses, including attorney's fees, expended by him or her as a result of an investigation or proceeding instituted against him or her by a competent authority, provided that such investigation or proceeding concluded without the filing of an indictment against him or her and without any financial liability imposed on him or her in lieu of criminal proceedings, or that is concluded with the imposition of a financial liability in lieu of criminal proceedings but relates to a criminal offense that does not require proof of criminal intent or in connection with a financial sanction imposed on him or her in his or her capacity as a director or an officer of the Company or of any of its subsidiaries;
- reasonable legal expenses, including attorney's fees, and all other costs, expenses and obligations incurred in connection with investigating, defending, being a witness in or participating in (including on appeal), or preparing to defend in or participate, in any action, suit, proceeding, alternative dispute resolution mechanism, hearing, inquiry or investigation brought against him or her by the Company or on its behalf or by another person or in any criminal prosecution in which he or she was acquitted, or in a criminal prosecution of a crime which does not require proof of criminal intent, in which he or she was convicted, all in respect of actions taken by him or her in his or her capacity as a director or an officer of the Company or of any of its subsidiaries;
- a payment he or she was obligated to make to an injured party as set forth in Section 52(54)(a)(1)(a) of the Israeli Securities Law;
- reasonable litigation expenses, including attorney fees, incurred by the director or officer in connection with a proceeding under Chapters H'3, H'4 or I'1 of the Israeli Securities Law; or
- any other circumstances arising under the law in respect of which the Company may indemnify a director or an officer of the Company (including, without limitation, Section 50P(b)(2) of the Israeli Restrictive Trade Practices Law, 5758-1988).

Exemption. We are entitled to exempt a director or officer in advance from any or all of his or her liability for damage caused by a breach of his or her duty of care toward us, to the fullest extent permitted by law, but only if a provision authorizing such exculpation is included in its articles of association. Our Articles include such a provision. Notwithstanding, a company may not exculpate in advance a director from liability arising out of a breach of duty of care caused by dividend or distribution to shareholders.

Limitations. The Companies Law provides that a company may not provide its directors or officers with insurance or indemnification or exempt its directors or officers from liability with respect to the following:

- a breach of the duty of loyalty to the Company or any of its subsidiaries, except to the extent permitted by the Companies Law, with respect to insurance coverage or indemnification for a breach of the duty of loyalty to the Company or any of its subsidiaries while acting in good faith and having reasonable cause to assume that such act would not prejudice the interest of the Company or any of its subsidiaries, as applicable;
- a willful or reckless breach of the duty of care, other than a breach committed solely by negligence;
- an action taken or not taken with the intent of unlawfully realizing personal gain; or
- a fine, monetary sanction, forfeit or penalty levied against, or imposed upon, the office holder.

Item 16. Exhibits and Financial Statements.

Exhibit No.	Document
<u>3.1</u>	<u>Amended and Restated Articles of Association of Entera Bio Ltd. (incorporated by reference to Exhibit 1.1 to the Company's Form 20-F Annual Report, filed on March 18, 2021).</u>
<u>4.1</u>	<u>Securities Purchase Agreement, dated as of April 1, 2026, by and among Entera Bio Ltd. and the purchasers party thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on April 3, 2026).</u>
<u>4.2</u>	<u>Registration Rights Agreement, dated as of April 2, 2026, by and among Entera Bio Ltd. and the purchasers party thereto (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K, filed on April 3, 2026).</u>
<u>4.3</u>	<u>Form of Pre-Funded Warrant (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, filed on April 3, 2026).</u>
<u>4.4</u>	<u>Form of Ordinary Share Warrant (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K, filed on April 3, 2026).</u>
<u>5.1</u>	<u>Opinion of Herzog Fox & Neeman, Israeli counsel to the Registrant, as to the validity of the Shares.</u>
<u>23.1</u>	<u>Consent of Kesselman & Kesselman, Certified Public Accountants, a member firm of PricewaterhouseCoopers International Limited, an independent registered public accounting firm.</u>
<u>23.2</u>	<u>Consent of Herzog Fox & Neeman (included in Exhibits 5.1).</u>
<u>24.1</u>	<u>Powers of Attorney (included on signature page to the Registration Statement).</u>
<u>107</u>	<u>Filing Fees</u>

Item 17. Undertakings

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - i. To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended;
 - ii. To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Filing Fee Tables" or "Calculation of Registration Fee" table, as applicable, in the effective registration statement; and
 - iii. To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

provided, however, that paragraphs (1)(i), (ii) and (iii) above do not apply if the registration statement is on Form S-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended, that are incorporated by reference in the registration statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act to any purchaser:
 - i. each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - ii. each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering being made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

- (5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- i. Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - ii. Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - iii. The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - iv. Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (6) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (7) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Jerusalem, Israel, on May 8, 2026.

ENTERA BIO LTD.

By: /s/ Miranda Toledano

Name: Miranda Toledano

Title: Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each person whose signature appears below constitutes and appoints Miranda Toledano and Dana Yaacov-Garbeli, and each of them acting individually, his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments, including post-effective amendments, to this registration statement, and any registration statement relating to the offering covered by this registration statement and filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Miranda Toledano</u> Miranda Toledano	Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	May 8, 2026
<u>/s/ Dana Yaacov-Garbeli</u> Dana Yaacov-Garbeli	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	May 8, 2026
<u>/s/ Geno J. Germano</u> Geno J. Germano	Director, Chairman of the Board of Directors	May 8, 2026
<u>/s/ Yonatan Malca</u> Yonatan Malca	Director	May 8, 2026
<u>/s/ Sean Ellis</u> Sean Ellis	Director	May 8, 2026
<u>/s/ Steven D. Rubin</u> Steven D. Rubin	Director	May 8, 2026
<u>/s/ Haya Taitel</u> Haya Taitel	Director	May 8, 2026



May 8, 2026

To:
Entera Bio Ltd.
Kiryat Hadassah, Minrav Building - Fifth Floor
Jerusalem
Israel

Re: **Registration Statement on Form S-3**

Ladies and Gentlemen:

We have acted as Israeli counsel for Entera Bio Ltd., an Israeli company (the "Company"), in connection with the registration statement on Form S-3 filed by the Company with the United States Securities and Exchange Commission (the "SEC") on the date hereof (the "Registration Statement"), pursuant to the United States Securities Act of 1933, as amended (the "Securities Act"), which registers the offer and sale by the selling shareholders named in the Registration Statement, from time to time, of an aggregate of 19,569,472 (the "Shares") ordinary shares, par value NIS 0.0000769 per share of the Company (the "Ordinary Shares"), including Ordinary Shares issuable upon exercise of certain warrants to purchase Ordinary Shares (respectively, the "Warrant Shares" and the "Warrants").

This opinion letter is furnished to you at your request to enable you to fulfill the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act, in connection with the filing of the Registration Statement.

In connection herewith, we have examined the originals, photocopies or copies, certified or otherwise identified to our satisfaction, of: (i) a copy of the Registration Statement signed by each member of the board of directors of the Company (the "Board"), to which this opinion letter is attached as an exhibit; (ii) a copy of the articles of association of the Company, as amended and restated and currently in effect (the "Articles"); (iii) the minutes of a meeting or written resolutions of the Board at which approve the filing of the Registration Statement and the actions to be taken in connection therewith, and (iv) such other documents, corporate records, agreements, certificates and other instruments, and have made inquiries with such officers and representatives of the Company, as we have deemed necessary or advisable for the purpose of rendering this opinion.

In such examination, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, confirmed as photostatic copies and the authenticity of the originals of such latter documents. We have also assumed the truth of all facts communicated to us by the Company and that all written resolutions and minutes of meetings of the Board that have been provided to us are true and accurate, and we have further relied upon certificates or comparable documents of officers and representatives of the Company.

We have assumed that the issuance of the Warrant Shares, when issued, will be compliant with the terms of the instruments of the Warrants pursuant to which they were granted. We have further assumed that, at the time of issuance of the Warrant Shares pursuant to the terms of the applicable Warrant to which they were granted, to the extent any such issuance would exceed the maximum authorized share capital of the Company currently authorized as described in the Registration Statement, the number of Ordinary Shares that the Company is authorized to issue shall have been increased in accordance with the Articles such that a sufficient number of Ordinary Shares are authorized and available for issuance under the Articles, as then in effect.

Based upon and subject to the foregoing, we are of the opinion that (i) the Ordinary Shares included in the Registration Statement, when sold as described in the Registration Statement, are duly authorized, validly issued, fully paid and non-assessable, and (ii) the Warrant Shares, when issued and sold by the Company and delivered by the Company against receipt of the exercise price therefor or otherwise in accordance with the terms of the applicable Warrants, in the manner described in the Registration Statement, will be duly authorized and validly issued, fully paid and non-assessable.

We consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm appearing under the caption "Legal Matters" and "Service of Process And Enforcement Of Judgments" in the prospectus forming part of the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act, the rules and regulations of the SEC promulgated thereunder or Item 509 of the SEC's Regulation S-K under the Securities Act.

The opinion expressed herein is limited to Israeli law, and we do not express any opinion as to the laws of any other jurisdiction. In addition, this opinion is limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated.

This opinion letter is rendered as of the date hereof and we disclaim any obligation to advise you of facts, circumstances, events or developments that may be brought to our attention after the date hereof that may alter, affect or modify the opinions expressed herein.

Yours faithfully,
/s/ Herzog Fox & Neeman Law Offices
Herzog Fox & Neeman Law Offices



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of Entera Bio Ltd. of our report dated March 27, 2026 relating to the financial statements, which appears in Entera Bio Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2025. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Kesselman & Kesselman
Certified Public Accountants (Isr.)
A member firm of PricewaterhouseCoopers International Limited
Tel-Aviv, Israel
May 8, 2026

CALCULATION OF FILING FEE TABLES

S-3

Entera Bio Ltd

Table 1: Newly Registered and Carry Forward Securities

Line Item Type	Security Type	Security Class Title	Notes	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
<i>Newly Registered Securities</i>									
Fees to be Paid	Equity	Ordinary shares, par value of NIS 0.0000769	(1)	Other	19,569,472	\$ 1.14	\$ 22,309,198.08	0.0001381	\$ 3,080.90
						Total Offering Amounts:	\$ 22,309,198.08		3,080.90
						Total Fees Previously Paid:			
						Total Fee Offsets:			0.00
						Net Fee Due:			<u>\$ 3,080.90</u>

Offering Note(s)

(1) (A) Pursuant to Rule 416(a) promulgated under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall also cover any additional ordinary shares, par value of NIS 0.0000769 ("ordinary shares"), of Entera Bio Ltd., that may be offered or become issuable by reason of any share dividend, share split, recapitalization or other similar transaction effected without the receipt of consideration which results in an increase in the number of outstanding ordinary shares.

(B) Estimated solely for purposes of calculating the registration fee in accordance with Rule 457(c) under the Securities Act and based upon the average of the high and low sales prices of an ordinary share as reported on the Nasdaq Capital Market on May 1, 2026.

(C) Representing 19,569,472 ordinary shares, including 17,144,472 ordinary shares issuable upon exercise of certain issued and outstanding warrants.