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

Form 6-K

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

For the month of: April 2025

Commission file number: 001-36578

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

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

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

Form 20-F ⊠ Form 40-F □

On April 23, 2025, Enlivex Therapeutics Ltd., a company organized under the laws of the State of Israel ("Enlivex"), issued a press release announcing that Enlivex will present two poster abstracts at the Osteoarthritis Research Society International 2025 World Congress on Osteoarthritis, taking place April 24-27, 2025, in Incheon (Seoul), South Korea. A copy of such press release is furnished as Exhibit 99.1 to this Report on Form 6-K and incorporated herein by reference.

Exhibit No.

99.1 Press Release issued by Enlivex Therapeutics Ltd. on April 23, 2025.

SIGNATURES

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

Enlivex Therapeutics Ltd.

(Registrant)

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

Date: April 23, 2025



Enlivex Therapeutics to Showcase Allocetra's Potential in Osteoarthritis at OARSI 2025 World Congress

Presentations to underscore AllocetraTM's novel mechanism targeting immune imbalance in joint disease

Ness-Ziona, Israel, April 23, 2025 (GLOBE NEWSWIRE) -- Enlivex Therapeutics Ltd. (Nasdaq: ENLV, the "Company"), a clinical-stage macrophage reprogramming immunotherapy company, today announced that it will present two poster abstracts at the Osteoarthritis Research Society International (OARSI) 2025 World Congress on Osteoarthritis, taking place April 24-27, 2025, in Incheon (Seoul), South Korea.

"These presentations at OARSI 2025 will highlight the growing body of evidence supporting Allocetra'sTM potential as a novel therapeutic approach for osteoarthritis," said Oren Hershkovitz, PhD, Chief Executive Officer of Enlivex. "We believe that restoring macrophage homeostasis may address the underlying drivers of chronic joint inflammation and cartilage degradation, potentially offering a promising new treatment pathway for millions of patients worldwide."

The presentations will feature data from both preclinical and clinical studies evaluating AllocetraTM, Enlivex's proprietary, off-the-shelf macrophage reprogramming cell therapy, in patients with osteoarthritis. AllocetraTM is designed to reprogram macrophages into a homeostatic state, thereby promoting immune balance and resolving chronic inflammation.

AllocetraTM has demonstrated favorable safety and promising efficacy signals in Phase I/II studies in moderate and end-stage osteoarthritis, including substantial and durable pain reduction, improved joint function, and avoidance of knee replacement surgery. Preclinical studies have further supported its unique mechanism of action in modulating macrophage-driven inflammation.

Accepted Presentations:

Flash Talk & Poster Presentation

- Title: Phase I/II Clinical Trial of Allocetra™ Cell Therapy for Knee Osteoarthritis: Initial Evidence of Response to Inflammation Modulation
- Abstract Publication Number: 092
- Flash Talk Session: Pain Mechanisms and Neuroinflammation in OA
- Date & Time: April 26, 2025 | 11:31 11:33 AM KST
- Poster Sessions:
 - o Friday, April 25 | 4:15 5:00 PM KST
 - o Saturday, April 26 | 4:15 5:00 PM KST
- Poster Number: 092

Poster Presentation

- Title: Biological Activity Characterization of Allocetra™, a Novel Macrophage Reprogramming Cell Therapy, in Osteoarthritis Preclinical Models
- Abstract Control ID: 4231304
- Poster Sessions:
 - o Friday, April 25 | 3:30 4:15 PM KST
 - o Saturday, April 26 | 3:30 4:15 PM KST
- Poster Number: 665

Dr. Oren Hershkovitz, CEO and Einat Galamidi, MD, CMO, will attend the conference and be available for meetings with stakeholders and members of the scientific community.

ABOUT ENLIVEX

Enlivex is a clinical stage macrophage reprogramming immunotherapy company developing AllocetraTM, a universal, off-the-shelf cell therapy designed to reprogram macrophages into their homeostatic state. Resetting non-homeostatic macrophages into their homeostatic state is critical for immune system rebalancing and resolution of life-threatening and life debilitating conditions. For more information, visit http://www.enlivex.com.

Safe Harbor Statement: This press release contains forward-looking statements, which may be identified by words such as "expects," "plans," "projects," "will," "may," "anticipates," "believes," "should," "would", "could," "intends," "estimates," "suggests," "has the potential to" and other words of similar meaning, including statements regarding expected cash balances, market opportunities for the results of current clinical studies and preclinical experiments, the effectiveness of, and market opportunities for, ALLOCETRATM programs. All such forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that forward-looking statements involve risks and uncertainties that may affect Enlivex's business and prospects, including the risks that Enlivex may not succeed in generating any revenues or developing any commercial products; that the products in development may fail, may not achieve the expected results or effectiveness and/or may not generate data that would support the approval or marketing of these products for the indications being studied or for other indications; that ongoing studies may not continue to show substantial or any activity; and other risks and uncertainties that may cause results to differ materially from those set forth in the forward-looking statements. The results of clinical trials in humans may produce results that differ significantly from the results of clinical and other trials in animals. The results of early-stage trials may differ significantly from the results of more developed, later-stage trials. The development of any products using the ALLOCETRATM product line could also be affected by a number of other factors, including unexpected safety, efficacy or manufacturing issues, additional time requirements for data analyses and decision making, the impact of pharmaceutical industry regulation, the impact of competitive products and pricing and the impact of patents and other proprietary rights held by competitors and other third parties. In addition to the risk factors described above, investors should consider the economic, competitive, governmental, technological and other factors discussed in Enlivex's filings with the Securities and Exchange Commission, including in the Company's most recent Annual Report on Form 20-F filed with the Securities and Exchange Commission. The forward-looking statements contained in this press release speak only as of the date the statements were made, and we do not undertake any obligation to update forward-looking statements, except as required under applicable law.

Contact:

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