



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 OF
THE SECURITIES EXCHANGE ACT OF 1934**

For the month of **November 2023**

Commission File Number: **001-36187**

EVOGENE LTD.

(Translation of Registrant's Name into English)

13 Gad Feinstein Street, Park Rehovot, Rehovot
P.O.B 4173, Ness Ziona, 7414002, Israel
(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 ☐

CONTENTS

On November 8, 2023, Evogene Ltd., or Evogene, announced that its subsidiary, Lavie Bio Ltd., reported advancement in its bio-fungicide program against downy mildew with 2023 field trial results. A copy of the press release is attached hereto as Exhibit 99.1.

SIGNATURE

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.

EVOGENE LTD.
(Registrant)

Date: November 8, 2023

By: /s/ Yaron Eldad

Yaron Eldad
Chief Financial Officer

EXHIBIT INDEX

EXHIBIT NO. DESCRIPTION

99.1 [Press Release: Lavie Bio Reports Advancement in Bio-Fungicide Program Against Downy Mildew with 2023 Field Trial Results.](#)



Lavie Bio Reports Advancement in Bio-Fungicide Program Against Downy Mildew with 2023 Field Trial Results

LAV321, discovered and optimized by Lavie Bio, delivered positive results in 2023 field trials across Europe and the US, protecting against downy mildew

REHOVOT, ISRAEL – November 8, 2023 – Lavie Bio Ltd., a subsidiary of **Evogene Ltd.** (Nasdaq: EVGN, TASE: EVGN), and a leading ag-biologicals company that develops microbiome-based, computational-driven bio-stimulant and bio-pesticide novel products, reports significant progress with its bio-fungicide LAV321, discovered and optimized using Lavie Bio's Biology Driven Design (BDD) platform powered by Evogene's *MicroBoost AI* tech-engine. In 2023 Lavie Bio achieved positive results in a series of field trials conducted across Europe and the United States, focusing on assessing LAV321's efficacy in safeguarding crops against downy mildew and late blight diseases.

Trials conducted across Europe achieved an impressive average efficacy rate of 60% against downy mildew in grapes. At Cornell University in NY, LAV321 demonstrated remarkable field trial results with a 97% efficacy rate against leaf disease and 53% against bunch disease. These findings establish LAV321 as a potent solution against fungal diseases, focusing on oomycetes class diseases, including downy mildew, late blight, and other blight diseases, all known for their destructive impact on crop yields.

The global fungicide market, valued at approximately \$21 billion in 2022, is projected to experience robust growth with a compound annual growth rate (CAGR) of 6.4% in the coming years¹. Downy mildew leads to a 75% loss of productivity and yield in humid grapevine-growing areas. Mounting concerns regarding resistance to chemical solutions and a growing public interest in eco-friendly farming practices drive a need for new solutions, and ag-biologicals such as LAV321 emerge as pivotal tools to address these challenges and shape the future of sustainable agriculture.

LAV321 is engineered to seamlessly integrate into farmers' existing Integrated Pest Management (IPM) practices, facilitating productivity and sustainability while mitigating the emergence of resistance to conventional solutions.

¹ <https://www.researchandmarkets.com/reports/5733851/fungicides-global-market-report>

Amit Noam, Lavie Bio's CEO, expressed his satisfaction with the program's progress: "We're delighted with the LAV321 bio-fungicide program advancement, offering effective solutions for critical fruit and vegetable diseases, and effortlessly integrating with existing IPM practices. I would like to share that next year, LAV321 will be tested in field trials by several multinational companies, for some of which it will be the second year of validation. The advancement we announced today is a further testament to the strength of our BDD technology platform, powered by Evogene's *MicroBoost AI* tech-engine. Our roadmap includes another year of optimization for over 70% efficacy, continued IPM experiments, broadening applications, and starting regulatory processes in 2024."

About Lavie Bio Ltd.

Lavie Bio, a subsidiary of Evogene Ltd., aims to improve food quality, sustainability, and agriculture productivity by introducing microbiome-based ag-biological products. Lavie Bio utilizes a proprietary computational predictive platform, the BDD platform, powered by Evogene's proprietary *MicroBoost AI* tech-engine, harnessing the power of big data, artificial intelligence, and advanced informatics for the discovery, optimization and development of bio-stimulant and bio-pesticide products.

For more information, please visit www.lavie-bio.com.

About Evogene Ltd.

Evogene (Nasdaq: EVGN, TASE: EVGN) is a computational biology company aiming to revolutionize the development of life-science-based products by utilizing cutting-edge technologies to increase the probability of success while reducing development time and cost. Evogene established three unique tech-engines – *MicroBoost AI*, *ChemPass AI* and *GeneRator AI* – leveraging Big Data and Artificial Intelligence and incorporating deep multidisciplinary understanding in life sciences. Each tech-engine is focused on the discovery and development of products based on one of the following core components: microbes (*MicroBoost AI*), small molecules (*ChemPass AI*), and genetic elements (*GeneRator AI*).

Evogene uses its tech-engines to develop products through subsidiaries and strategic partnerships. Evogene's subsidiaries currently utilize the tech-engines to develop human microbiome-based therapeutics by Biomica, ag-biologicals by Lavie Bio, ag-chemicals by AgPlenus, medical cannabis products by Canonic and castor varieties, for the biofuel and other industries, by Casterra.

For more information, please visit www.evogene.com.

Forward-Looking Statements

This press release contains "forward-looking statements" relating to future events. These statements may be identified by words such as "may", "could", "expects", "hopes" "intends", "anticipates", "plans", "believes", "scheduled", "estimates", "demonstrates" or words of similar meaning. For example, Evogene and its subsidiaries are using forward-looking statement in this press release when it discusses LAV321's efficacy in safeguarding crops against downy mildew and late blight diseases, LAV321 as a potent solution against fungal diseases, ag-biologicals such as LAV321, as pivotal tools to address resistance to chemical solutions challenges and shape the future of sustainable agriculture and Lavie Bio's plans to continue IPM experiments, broadening applications, and starting regulatory processes in 2024. Such statements are based on current expectations, estimates, projections and assumptions, describe opinions about future events, involve certain risks and uncertainties which are difficult to predict and are not guarantees of future performance. Therefore, actual future results, performance or achievements of Evogene and its subsidiaries may differ materially from what is expressed or implied by such forward-looking statements due to a variety of factors, many of which are beyond the control of Evogene and its subsidiaries, including, without limitation, the current war between Israel and Hamas and any worsening of the situation in Israel such as further mobilizations or escalation in the northern boarder of Israel, and those risk factors contained in Evogene's reports filed with the applicable securities authority. In addition, Evogene and its subsidiaries rely, and expect to continue to rely, on third parties to conduct certain activities, such as their field-trials and pre-clinical studies, and if these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, Evogene and its subsidiaries may experience significant delays in the conduct of their activities. Evogene and its subsidiaries disclaim any obligation or commitment to update these forward-looking statements to reflect future events or developments or changes in expectations, estimates, projections, and assumptions

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