
**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 **September 2018**

Commission File Number: **001-36187**

EVOGENE LTD.

(Translation of Registrant's Name into English)

**13 Gad Feinstein Street
Park Rehovot P.O.B 2100
Rehovot 7612002 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 ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ____

CONTENTS

Attached hereto and incorporated by reference herein is the following exhibit:

- 99.1 Press Release: Evogene Announces a Significant Milestone in its Next Generation Herbicide Pipeline.

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)

By: /s/ Alex Taskar

Alex Taskar
Chief Financial Officer

Date: September 5, 2018

EXHIBIT INDEX

<u>EXHIBIT NO.</u>	<u>DESCRIPTION</u>
<u>99.1</u>	Press Release: Evogene Announces a Significant Milestone in its Next Generation Herbicide Pipeline.



Evogene Announces a Significant Milestone in its Next Generation Herbicide Pipeline

Evogene has proved the binding of molecule families to two novel target proteins that represent a new Mode-of-Action

Rehovot, Israel – September 5, 2018 – Evogene Ltd. (NASDAQ, TASE: EVGN), a leading biotechnology company developing novel products for life science markets, announced today a significant milestone in its next generation herbicide pipeline. Evogene's Ag-Chemicals division demonstrated biological proof in lab assays that Evogene discovered molecule families bind to essential target proteins representing new MoA's (Mode-of-Action). These next generation herbicide candidates have the potential to overcome the industry's main hurdle – growing weed resistance, with improved efficacy while maintaining a high standard of safety since they have now been proven to address novel target proteins not present in humans.

Herbicides are weed killing chemicals, part of the general pesticide and crop protection market. The market size attributed to herbicides was estimated at more than \$20B in 2016¹. Herbicide protection plays an important role in global food security; for example, without herbicide protection it is estimated that approximately 20% of the global crop yield of wheat would be lost². Current herbicide products are based on known targets and MoA's introduced to market over 30 years ago, while weed resistance to these solutions is globally on the rise, creating a critical need for next generation herbicides based on new MoA's.

Evogene's Ag-Chemicals division herbicide pipeline has been established through the use of the Company's broadly applicable CPB (Computational Predictive Biology) platform. The CPB platform's discovery and optimization processes of chemical molecules take into account an array of product attributes, including different aspects of commercial viability and safety profile required according to new regulatory standards.

As reported in the past, these chemical families have already been evaluated in lab and greenhouse testing where herbicidal activity was demonstrated, and today, Evogene has announced that such chemical families were also proven to inhibit the predicted novel targets representing a new MoA. These chosen novel targets are not present in humans and therefore have a potential high safety profile.

¹ Phillips McDougall

² According to industry estimates

Further steps include optimization of the chemical compound 'families' to improve herbicidal efficacy in greenhouse testing, towards achieving commercial efficacy, which will then be validated in field trials.

Eran Kosover, EVP and GM, Ag-Chemicals stated: *"We are very excited by the important achievement announced today, as the industry has not seen a herbicide based on a new MoA for over 30 years. We are now moving forward rapidly on a development path designed to overcome one of the most pressing challenges in the market – increasing resistance to herbicides."*

Ofer Haviv, Evogene's President and CEO stated: *"While our Ag-Chemicals division was established only in 2014, we are happy by the continuous progress of this division and the milestone announced today, showing a new MoA with the binding of Evogene discovered chemicals to novel target proteins. This continuous progress was achieved with the use of our unique CPB platform. We believe that these unique capabilities are leading to the development of potent next generation herbicides with a high safety profile."*

About Evogene Ltd.:

Evogene (NASDAQ, TASE: EVGN) is a leading biotechnology company developing novel products for major life science markets through the use of a unique computational predictive biology (CPB) platform incorporating deep scientific understandings and advanced computational technologies. This platform is utilized by the Company to discover and develop innovative ag-chemical, ag-biological and ag-seed products (GM and non-GM), and by two subsidiaries; Evofuel, focused on castor seeds, and Biomica, focused on human microbiome therapeutics. Through its collaborations with world-leading agricultural companies such as BASF, Corteva, Bayer and ICL, Evogene has licensed genes, small molecules and microbes to partners under milestone and royalty bearing agreements. 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", "intends", "anticipates", "plans", "believes", "scheduled", "estimates" or words of similar meaning. 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 may differ materially from what is expressed or implied by such forward-looking statements due to a variety of factors, many of which beyond Evogene's control, including, without limitation, those risk factors contained in Evogene's reports filed with the appropriate securities authority. Evogene disclaims 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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