Evogene Announces Completion of First-In-Class Foundation Model for Generative Molecule Design, Developed in Collaboration with Google Cloud

The new model addresses the challenge of identifying novel small molecules that meet multiple product criteria, an essential requirement for pharma and agriculture applications

Rehovot, Israel – June 10, 2025 – **Evogene Ltd.** (Nasdaq: EVGN, TASE: EVGN), a leading computational biology company focused on revolutionizing life-science product discovery and development, today announced the completion of its generative AI foundation model, version 1.0, for small molecule design, developed in collaboration with Google Cloud. The new model expands the existing capabilities of *ChemPass AI*, Evogene's tech-engine for small molecule discovery and optimization, by addressing one of the core challenges faced by both the pharmaceutical and agriculture industries: identifying novel small molecules that meet multiple complex product criteria.

In both pharma and agriculture, successful product development depends on identifying molecules that meet complex performance criteria while also being patentable. Traditional discovery methods typically address these challenges sequentially, a process that reduces success probability. In addition, they tend to steer towards well-explored or saturated areas of chemical space. This limits the potential for innovation, making it difficult to secure robust intellectual property and achieve meaningful product differentiation.

In contrast, generative AI models support companies in their small molecule discovery process by enabling the simultaneous consideration of multiple complex product requirements, all while creating truly novel molecular structures. This approach also facilitates the development of strong, defensible IP portfolios. Evogene's first-in-class foundation model is designed to do exactly that.

Developed in-house by Evogene's algorithm teams, this proprietary foundation model marks a dramatic advance over traditional generative AI. Internal computational analysis shows that it delivers approximately 90% precision in successful and precise, novel molecule designs (vs. approximately 29% in traditional GPT AI-model), ensuring that each compound simultaneously meets essential parameters. This breakthrough paves the way for creating highly potent, synthesizable, and patentable molecules across life-science products.

Built on a large dataset of approximately **38 billion** molecular structures, the model was trained and deployed using Google Cloud's advanced AI infrastructure, including high-performance GPUs and scalable storage. The result is a foundation model that not only powers *Evogene's ChemPass AI* today but will also provide a scalable base for future enhancements.

Ofer Haviv, President and CEO of Evogene, stated: "Completing our foundation model is a major milestone in our offering. It unlocks new frontiers for *ChemPass AI*, giving us the

power to generate wholly novel molecules – ones that not only perform but also create new IP space. This is key to overcoming long-standing challenges in life-science R&D: from reducing late-stage failure in pharma to developing ag-chemicals that are effective, sustainable, and proprietary."

Boaz Maoz, Managing Director, Google Cloud Israel, commented: "We're pleased to collaborate with Evogene's innovation in AI-powered molecule design. Their progress with *ChemPass AI* highlights the strength of pairing advanced AI infrastructure with deep scientific insight. We look forward to seeing the impact of this new model in drug discovery and agriculture."

Evogene also announces that development is already underway on version 2.0 of its generative AI foundation model, with a focus on enhanced flexibility for multi-parameter optimization. The updated version will incorporate predefined, customized parameters tailored to therapeutic contexts or specific agriculture requirements. It will enable *ChemPass AI* to better balance complex real-world constraints, such as efficacy, toxicity, and stability, significantly improving its ability to generate molecules optimized for clinical, commercial, and regulatory success.

Evogene welcomes continued engagement with partners across the pharmaceutical and agriculture industries interested in accessing or integrating *ChemPass AI* for next-generation product development.

About Evogene Ltd.

Evogene Ltd. (Nasdaq: EVGN, TASE: EVGN) is a computational biology company leveraging big data and artificial intelligence, 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*. 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 strategic partnerships and collaborations, and its four subsidiaries including:

- Biomica Ltd. (www.biomicamed.com) – developing and advancing novel microbiome-based therapeutics to treat human disorders powered by *MicroBoost AI*;
- Lavie Bio (www.lavie-bio.com) – developing and commercially advancing, microbiome based ag-biologicals powered by *MicroBoost AI;*
- AgPlenus Ltd. (www.agplenus.com) – developing next generation ag-chemicals for effective and sustainable crop protection powered by *ChemPass AI;* and

- Casterra Ag (www.casterra.co) – developing and marketing superior castor seed varieties producing high yield and high-grade oil content, on an industrial scale for the biofuel and other industries powered by *GeneRator AI*.

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 statements in this press release when it discusses the ability of the AI foundation model to identify novel small molecules that meet multiple complex product criteria while also being patentable, the ability of the AI foundation model to create highly potent, synthesizable, and patentable molecules across life-science products, the ability of the AI foundation model to reduce late-stage failure in pharma to and develop ag-chemicals that are effective, sustainable, and proprietary, and the development of version 2.0 of Evogene's generative AI foundation model, with a focus on enhanced flexibility for multi-parameter optimization. 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 border 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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