

# EVAXION

## Evaxion Develops Method to Enhance AI Drug Development with Deep Probabilistic Programming

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COPENHAGEN, Denmark, June 25, 2021 (GLOBE NEWSWIRE) -- Evaxion Biotech A/S (Nasdaq: EVAX), a clinical-stage biotechnology company specializing in the development of AI-driven immunotherapies to improve the lives of patients with cancer and infectious diseases, announced today the acceptance of a new scientific paper by the International Conference on Machine Learning ([ICML 2021](#)). A draft of the article is available on the open-access scientific server [bioRxiv.org](#).

The paper is entitled "Efficient Generative Modelling of Protein Structure Fragments using a Deep Markov Model", and was written and developed by Evaxion personnel in collaboration with Assoc. Prof. Thomas Hamelryck's probabilistic programming group at the University of Copenhagen. The paper describes BIFROST, a novel predictive system based on deep probabilistic programming that enables the rapid conversion of sequence data into structural information on protein fragments, which we believe may be useful for drug or vaccine design. Deep probabilistic programming is a new development in machine learning that combines the principled treatment of uncertainty provided by Bayesian statistics with the capabilities of deep learning. Compared to existing protein structure prediction approaches, BIFROST appears to be computationally more efficient, only requires sequence information and, importantly, incorporates an assessment of the reliability of its own predictions.

Lars Wegner, CEO of Evaxion, said: "This work is an exciting development by the collaborative team that we believe has the potential to make vaccine development more efficient. We intend to apply our expertise to further the development of Bayesian machine learning and to integrate these methods fully into Evaxion's AI platforms, including both our EDEN and RAVEN platforms for vaccine development."

Protein structure prediction methods such as BIFROST have the potential to facilitate AI-driven pharmaceutical design by indicating the likely conformation that components of immunotherapies or vaccines and their target might adopt. Existing methods for predicting the conformation of protein fragments do not explicitly evaluate the probability of conformations given the sequence which can make it difficult to dissect the reliability of subsequent calculations. By including estimates of uncertainty in predictions, BIFROST's Bayesian approach may be particularly useful in drug development datasets that, typically, are incomplete and relatively small.

Anders B. Sørensen, Evaxion Director, Research and Discovery, said: "We are excited to share this first-time application of Deep Markov Models within the field of protein structure prediction. This has significant potential to improve how we develop medicines and showcases the power harnessed when we combine academic research with industrial application."

### About Evaxion

Evaxion Biotech A/S is a clinical-stage AI-immunology™ platform company decoding the human immune system to discover and develop novel immunotherapies to treat cancer, and vaccines against bacterial diseases and viral infections. Based on its proprietary and scalable AI-immunology core technology, Evaxion is developing a broad pipeline of novel product candidates which currently includes three patient-specific cancer immunotherapies, two of which are in Phase 1/2a clinical development. In addition, Evaxion is advancing a portfolio of vaccines to prevent bacterial and viral infections currently in preclinical development.

### For more information

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Source: Evaxion Biotech

### Forward-looking statement

This announcement contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this announcement regarding the Company's future operations, plans and objectives are forward-looking statements. Although the Company believes its expectations are based on reasonable assumptions, all statements other than statements of historical fact included in this announcement about future events are subject to (i) change without notice and (ii) factors beyond the Company's control. These statements may include, without limitation, any statements preceded by, followed by, or including words such as "target," "believe," "expect," "hope," "aim," "intend," "may," "might," "anticipate," "contemplate," "continue," "estimate," "plan," "potential," "predict," "project," "will," "can have," "likely," "should," "would," "could", and other words and terms of similar meaning or the negative thereof. Actual results may differ materially from those indicated by such forward-looking statements as a result of various factors, including but not limited to: risks associated with the Company's financial condition and need for additional capital; risks associated with the Company's development work; cost and success of the Company's product development activities and preclinical and clinical trials; risks related to commercializing any approved pharmaceutical product developed using the Company's AI platform technology, including the rate and degree of market acceptance of the Company's product candidates; risks related to the Company's dependence on third parties including for conduct of clinical testing and product manufacture; risks associated with the Company's inability to enter into partnerships; risks related to government regulation; risks associated with protection of the Company's intellectual property rights; risks related to employee matters and managing growth; risks related to the Company's ADSs and ordinary shares, risks associated with the pandemic caused by the coronavirus known as COVID-19 and other risks and uncertainties affecting the Company's business operations and financial condition.

Forward-looking statements are subject to inherent risks and uncertainties beyond the Company's control that could cause the Company's actual results, performance, or achievements to be materially different from the expected results, performance, or achievements expressed or implied by such forward-looking statements. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the Company's business in general, see the risks described in the "Risk Factors" section included in the Company's Form 20-F for the year end December 31, 2020 and the Company's current and future reports filed with, or submitted to, the U.S. Securities and Exchange Commission (SEC). Any forward-looking statements contained in this announcement speak only as of the date hereof, and except as required by law, the Company assumes no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.



Source: Evaxion Biotech