Absci Develops Groundbreaking Machine Learning Models for In-Silico Antibody Design, Powered by NVIDIA

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Absci to present in-silico drug discovery technology at NVIDIA GTC

Breakthrough ML achievements highlight the viability of the computational lead optimization pipeline

Absci collaborates with NVIDIA on research to accelerate and scale in-silico drug discovery platform

VANCOUVER, Wash., March 22, 2022 (GLOBE NEWSWIRE) -- Absci Corporation (Nasdaq: ABSI), a drug and target discovery company harnessing deep learning, AI and synthetic biology to expand the therapeutic potential of proteins, announced the development of machine learning models for designing and refining novel therapeutic antibodies. The new research demonstrates progress towards a fully *in-silico* machine learning pipeline for drug discovery.

Absci is pursuing a vision for fully *in-silico* biologic drug design, going from target to drug candidate sequence 'with the click of a button.' The ability to realize this vision is built on Absci's proprietary data generation technologies that can evaluate up to ten billion individual cells per week – each expressing a drug sequence variant – which provide relevant, high-quality substrate data for AI applications.

In today's session at NVIDIA GTC , a global AI conference, Absci Lead AI Scientist Joshua Meier will describe two of the company's drug discovery ML breakthroughs and present validation of Absci's *in-silico* lead optimization models. The validation, requiring wet-lab testing of model predictions, was enabled by Absci's proprietary and highly engineered synthetic biology platform and assays.

- The first breakthrough is a machine learning model for quantitative prediction of antibody target affinity, allowing computational predictions of binding strength. In one example, Absci demonstrated that this model could accurately predict affinity across four orders of magnitude for previously unseen trastuzumab variants, including accurately predicting variants that had better target affinities than wild-type trastuzumab.
- The second breakthrough is a machine learning model to score 'naturalness' of antibody variants; naturalness is a parameter that Absci shows is associated with multiple developability characteristics, and antibodies with better developability have a better likelihood of success as drug candidates through preclinical testing and clinical development.
- Further, Absci showed that generative ML techniques enabled simultaneous *in-silico* optimization for both affinity and naturalness, underscoring the viability of the computational lead optimization pipeline.

Absci is collaborating with NVIDIA to accelerate and scale Absci's *in-silico* ML pipeline, using NVIDIA expertise and optimized graph- and transformer kernels on NVIDIA A100 Tensor Core GPUs. In addition, Absci will continue to synthesize and test the predictions from the models in its proprietary ultra-throughput assays to further validate, iteratively train, and refine the AI performance.

Sean McClain, founder and CEO of Absci, said, "We are thrilled to be collaborating with NVIDIA to advance the field and enable the development of better medicines. Our AI breakthroughs stand on the shoulders of our tremendously differentiated synthetic biology platform and breakthrough assays – the data generation engine that fuels our ML training and validation. Based on this powerful Absci technology, along with NVIDIA's scientific and technical expertise and compute resources, we are looking forward to scaling the advancements of our *in-silico* lead optimization models to generalize across the wide breadth of target classes, therapeutic modalities, and developability parameters relevant for biopharmaceutical discovery."

"Our collaboration with Absci is aimed at enabling the most advanced AI paradigms and accelerating protein design," said Kimberly Powell, vice president of healthcare at NVIDIA. "Absci's powerful data generation and AI protein engineering platform is already helping the drug discovery industry, and NVIDIA technologies will help power and scale Absci's fully *in-silico* platform."

About Absci

Absci is the drug and target discovery company harnessing deep learning AI and synthetic biology to expand the therapeutic potential of proteins. We built our Integrated Drug Creation™ Platform to identify novel drug targets, discover optimal biotherapeutic candidates, and generate the cell lines to manufacture them in a single efficient process. Biotech and pharma innovators partner with us to create the next generation of protein-based drugs, including Bionic™ Proteins containing nonstandard amino acids, and other novel drug designs that may be impossible to make with other technologies. Our goal is to enable the development of better medicines by Translating Ideas into Drugs™. For more information visitwww.absci.com and follow us on social media: Twitter: @Abscibio, LinkedIn: @absci, and subscribe to our Absci YouTube channel.

Availability of Other Information about Absci

Investors and others should note that we routinely communicate with investors and the public using our website (www.absci.com) and our investor relations website (investors.absci.com), including without limitation, through the posting of investor presentations, SEC filings, press releases, public conference calls and webcasts on these websites. The information that we post on these websites could be deemed to be material information. As a result, investors, the media, and others interested in Absci are encouraged to review this information on a regular basis. The contents of our website, or any other website that may be accessed from our website, shall not be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended.

Absci Forward-Looking Statements

Certain statements relating to Absci in this press release that are not historical facts are considered forward-looking within the meaning of Section 27A

of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements containing the words “will,” “aim,” “may,” "pursues," “anticipates,” “plans,” “believes,” “forecast,” “estimates,” “expects,” and “intends,” or similar expressions. We intend these forward-looking statements, including statements regarding research collaboration and technology development efforts and advancements toward *in silico* drug design, to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act and Section 21E of the Securities Exchange Act, and we make this statement for purposes of complying with those safe harbor provisions. These forward-looking statements reflect our current views about our plans, intentions, expectations, strategies, and prospects, which are based on the information currently available to us and on assumptions we have made. We can give no assurance that the plans, intentions, expectations, or strategies will be attained or achieved, and, furthermore, actual results may differ materially from those described in the forward-looking statements and will be affected by a variety of risks and factors that are beyond our control, including, without limitation, risks and uncertainties relating to research collaboration efforts; along with those risks set forth in our most recent periodic report filed with the U.S. Securities and Exchange Commission, as well as discussions of potential risks, uncertainties, and other important factors in our subsequent filings with the U.S. Securities and Exchange Commission. Except as required by law, we assume no obligation to update publicly any forward-looking statements, whether as a result of new information, future events, or otherwise.

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