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At Moderna, OpenAI's GPTs Are Changing Almost Everything

'People literally talk about how AI is going to cure diseases someday, and I think this is a very meaningful first step,' says OpenAI CEO Sam Altman

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Biotechnology company Moderna plans to provide employees access to OpenAI's ChatGPT Enterprise as part of a partnership with the AI company. PHOTO: MODERNA

Moderna is expected to announce a partnership Wednesday with artificial-intelligence heavyweight OpenAI, a deal that aims to automate nearly every business process at the biotechnology company and boost the ChatGPT maker's reach into the enterprise.

As part of the transaction, some 3,000 Moderna employees will have access to ChatGPT Enterprise, built on OpenAI's most advanced language model, GPT-4,

by the end of this week. Further integration of AI into more of its processes could help Moderna outpace its plan to roll out 15 new products within the next five years, the Cambridge, Mass., company said.

Terms of the deal weren't disclosed.

"Eventually, AI will be able to do more and more science. But the best way to get there is to enhance the productivity of people and accelerate what they can do," said OpenAI Chief Executive Sam Altman about Moderna's AI push.



Moderna CEO Stéphane Bancel PHOTO: ARND WIEGMANN/REUTERS

Moderna is looking to move beyond Covid, using its messenger RNA platform on a variety of fronts, from preventing viral illnesses to treating cancer. CEO Stéphane Bancel called the OpenAI partnership, and its use of AI in general, key to helping the vaccine maker transform every business process: "How do we use it at scale to reinvent all of Moderna's business processes, in science, in

legal, in manufacturing—everywhere."

So far, Moderna employees have created over 750 unique, tailored versions of OpenAI's ChatGPT, also known as GPTs, that are designed to facilitate specific tasks or processes across the business. Some of these GPTs help select the optimal doses for clinical trials and help draft responses to questions from regulators.

The stakes are high for leveraging AI at Moderna, whose only commercial product currently is a Covid-19 vaccine. In February, it reported fourth-quarter revenue that slumped to \$2.8 billion from \$5.1 billion the year before as fewer people got its Covid-19 shot. AI could accelerate the delivery of much-needed new products and allow Moderna to move quickly as it aims to roll out 15 new products in the next five years, the company said.

Bancel said he's been obsessed with ChatGPT since Christmas of 2022, and it's one of four apps at the bottom of his iPhone, along with the apps for phone, text

and internet. His goal is for employees to use it no fewer than 20 times a day, and so far, they're keen, he said.

Of the 750 GPTs built until now, one uses years of previous research and medical knowledge to predict the optimal dose of a drug for clinical trials. Dose optimization is a huge challenge, and choosing the wrong dose can result in products being killed in the clinical-trial stage.

Another GPT combs through swaths of research to draft answers to questions from regulators—turning what used to be a weekslong process into something that can happen in minutes, Bancel said.

Another one, on the drug manufacturing side, is helping predict the structure of new enzymes that will enable manufacturing processes with better yield and reduced waste.

To be sure, the idea of using AI for drug discovery is a goal that has seen a lot of hype over the years, but there is less concrete proof that it will become a reality. Some pharmaceutical leaders have expressed skepticism that AI could ever discover new drugs any better than humans can.

OpenAI said its research and product teams provide dedicated support to Moderna; has weekly strategy calls with the Moderna team to discuss progress, align on goals, and plan future initiatives; and offers a shared Slack channel for quick problem-solving as well as other support.

The San Francisco-based AI company said it has a team of about 200 developers, researchers, and sales and support staff to help directly sell its AI technology to companies.

OpenAI called its relationship with Moderna unique in terms of the breadth, scale and maturity of the drugmaker's adoption of ChatGPT Enterprise. But in terms of what he wants to replicate from the Moderna partnership with new companies and customers, Altman said, "Basically everything."

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