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Novo Nordisk invests $200 M to develop first quantum computer for life sciences research

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Quantum computers have particularly revolutionary potential in the life sciences



The Novo Nordisk Foundation has awarded a grant of $200 million (DKK 1.5 billion) to establish the first full-scale quantum computer for the development of new medicines and provide new insights into climate change and the green transition, which is not possible with classical computers today.

The ambitious Novo Nordisk Foundation Quantum Computing Programme launched in collaboration with the University of Copenhagen includes world-leading researchers in quantum computing from Denmark, Canada, The Netherlands and the USA.

By applying next-generation quantum computing to the life sciences, the Novo Nordisk Foundation and its partners have the ambition to deliver revolutionary and applicable new insights which will transform the understanding of crucial scientific problems that pose a huge unmet medical and environmental need.

Quantum technologies will be key in the advent of personalised medicine by allowing the analysis of immense genomic data sets, as well as adding clarity to the complex interactions of the human microbiome, or by accelerating drug discovery and development of new medicines. The ambition is that a quantum computer will also be a fundamental tool in designing new sustainable materials, delivering new energy-saving solutions or assisting with new approaches to decarbonisation.

The Novo Nordisk Foundation Quantum Computing Programme is a collaboration between the Novo Nordisk Foundation and the Niels Bohr Institute at the University of Copenhagen, which will run for the next 12 years.