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MIT and Harvard announce new research alliance with Novo Nordisk for treatment of diabetes & CVDs

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Collaboration aims to identify disease-modifying interventions

The Broad Institute of MIT (Massachusetts Institute of Technology) and Harvard, in the US, have announced a new research alliance with Danish multinational pharmaceutical company Novo Nordisk aimed at addressing critical unmet clinical needs in diabetes and cardiometabolic diseases. The collaboration will focus on advancing three programmes over the next three years.

Two programmes aim to identify drug targets for clinically important subtypes of type 2 diabetes, which affects more than 37 million people in the United States alone, and one programme aims to unravel the genetic roots of cardiac fibrosis, or scarring of the heart, which occurs in many cardiovascular diseases (CVDs) that can lead to heart dysfunction and failure.

The two diabetes programmes will aim to identify therapeutic targets for both non-weight mediated insulin resistance and loss of beta cell function. For both patient populations, there are no safe and effective therapies for reversing disease. The alliance will utilise state-of-the-art genetics and genomics methods to interrogate subtypes of diabetes and, with Broad's Center for the Development of Therapeutics, probe the relationships between genes and pathways that could be therapeutic targets using large-scale cell screens.

The third programme, focused on cardiac fibrosis, will leverage genetics, genomics, and machine learning to investigate the role of cardiac fibrosis in heart disease. The team aims to identify and validate genes that could serve as therapeutic targets to inhibit or possibly reverse fibrosis — a condition that has few effective therapies.