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Agilent partners with National Heart Centre Singapore to advance metabolic heart failure research

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Research focuses on human cardiac organoids to uncover metabolic drivers of heart failure



Agilent Technologies Inc. has announced the signing of a five-year Memorandum of Understanding (MoU) with National Heart Centre Singapore (NHCS) to accelerate innovation in metabolic heart failure research, one of the most complex and underserved areas in cardiovascular medicine.

Heart failure remains a leading global cause of death and disability, with metabolic forms such as diabetic heart failure and heart failure with preserved ejection fraction (HFpEF) posing challenges due to limited treatment options.

Under this agreement, Agilent and NHCS will combine their expertise in human cardiac organoids using human-derived heart tissues with cutting-edge analytical technologies, including Agilent's latest Seahorse XF Flex Analyzer which expands real-time metabolic analysis into 3D tissues and organoid workflows to investigate metabolic drivers of heart failure.

NHCS has established itself as a leader in modelling monogenic cardiac diseases using patient-specific induced pluripotent stem cells (iPSCs), which led to novel therapeutic targets now undergoing clinical evaluation. Building on this foundation, the integration of Agilent's next-generation technology and NHCS's Preclinical Platform for Development of Therapeutics for Heart Failure (PREVENT-HF) positions the collaboration to provide hypotheses for clinical validation, offering new insights into disease progression, novel therapeutic development, and assessment of treatment safety and efficacy in clinically relevant models.