

Singapore to revolutionise therapeutics for cancer & infectious diseases

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Duke-NUS, Xylonix join forces to improve effectiveness of Xylonix cancer drugs

Scientists from Duke-NUS Medical School have partnered with Singapore biotechnology company Xylonix to optimise liposome drug formulations and develop companion diagnostics for Xylonix's novel cancer immunity drug, called 010DS-Zn.

Led by Assistant Professor Ann-Marie Chacko from Duke-NUS' Cancer and Stem Cell Biology Programme, the research team aims to enhance uptake of 010DS-Zn by tumours using a nanoscale drug delivery system, where specially-designed liposomes carry both the drug and radioisotopes to permit real-time detection in living systems.

A first-in-class tumoricidal compound with immune-initiating activities, 010DS-Zn has demonstrated potential for treating multiple cancer types and complications arising from COVID-19 infection by removing abnormally accumulating macrophages.

Associate Professor Christopher Laing, Vice-Dean for Innovation and Entrepreneurship at Duke-NUS, said, "This partnership offers great potential to improve treatment outcomes for cancer patients. But it also opens the door to revolutionise therapeutics for other areas including infectious diseases where we currently rely on a whole-body approach to treatment. If successful, this exciting project will enhance health and improve the lives of patients in Singapore and around the world."

This research collaboration is supported in part by Singapore's Health and Biomedical Sciences (HBMS) Industry Alignment Fund Pre-Positioning (IAF-PP) grant.