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New $3.3 M lab in Australia to design and manufacture cancer vaccines

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For manufacturing and delivery of new mRNA cancer vaccines



A new facility at The University of Queensland (UQ) is set to provide Australian researchers with cancer vaccines tailored to individual patients. The lab at UQ's Australian Institute for Bioengineering and Nanotechnology (AIBN) will bring together the equipment and expertise to enable the design, manufacture and delivery of new mRNA cancer vaccines.

Backed by a $3.3 million grant from the Medical Research Future Fund's (MRFF) National Critical Research Infrastructure programme, the new hub will provide the local research community with vaccines that match the specific treatment needs of each patient.

Dr Seth Cheetham, Deputy Director of AIBN's BASE facility, said it could transform cancer treatment.

"Personalised mRNA cancer vaccines are now being used to train the body's immune system to recognise and eradicate cancer cells. Despite the huge potential, Australian researchers haven't had the necessary infrastructure to build these vaccines, leading to a critical gap in the local drug development pipeline. This lab changes that, with a leading team of investigators in a purpose-built space, working with local industry and academics to progress a range of high-quality mRNA cancer vaccine candidates from design through to preclinical evaluation, with the aim of enabling future clinical trials", said Dr Cheetham.

The mRNA cancer vaccine hub is expected to be operating in BASE by late 2024. BASE is already recognised as Australia's leading provider of mRNA for research and pilot studies, and since its launch in 2021 has provided academic and industry partners with more than 300 experimental grade vaccines.

The new lab was one of 4 UQ projects funded in the latest MRFF grant round, adding to the $6.6 million funding awarded to BASE in 2023 to boost clinical mRNA production capabilities.