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UK, Australia research institutes collaborate on T-cell stimulation technology

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The Cell and Gene Therapy Catapult (CGT) and the CRC for Cell Therapy Manufacturing (CTM CRC), the Australian centre for translation of cell therapy technologies, have announced a project to test at scale CTM CRC's patented scaffold technology.

The technology is designed for T-cell stimulation and expansion and the testing by CGT will provide independent supporting data for ultimate commercial scale up of this technology.

The consortium will then investigate opportunities to apply this technology to commercial scale cell expansion systems. If successful, this novel scaffold technology will provide a platform for generating large numbers of activated T-cells for cell-based immunotherapies. This platform technology could be applied to therapies for a range of clinical conditions such as cancer and autoimmune diseases.

Keith Thompson, CEO, the Cell and Gene Therapy Catapult said, "The issue of scale in cell and gene therapies is one of the toughest challenges the industry faces. We need to have the ability to grow cells reliably and cost effectively at scale in order to get these promising therapies to patients. This project is one of several where we are looking at adapting technologies to achieve that scale up. Collaborating with CTM CRC shows that it's an international effort that's needed to ensure we address the barriers in the industry."

Developed across three of CTM's participant organizations, The Women's and Children's Hospital, The University of South Australia and Queensland University of Technology, the technology is sais to be competitive with the current gold standard in T-cell stimulation and expansion at the laboratory scale. The consortium will use CGT's experience in, and access to scale up processes for cell expansion.

Sherry Kothari, CEO, the CRC for Cell Therapy Manufacturing said, "We have a strong focus on addressing the cost of manufacture through intervening with smart surfaces and materials. This project is an example of how simple and cost effective strategies are being applied to optimize and improve existing cell expansion processes. This collaboration with CGT provides the perfect vehicle for evaluating the translation and scale up of promising technologies. International collaborations such as these enable rapid adoption by, and value-add to a global industry, ultimately giving patients with currently untreatable medical conditions a better chance of access to life-saving therapies."

This project is being carried out under an extension of the Memorandum of Understanding signed between the two organizations in 2015 and will further develop the partnership between the two organizations.