BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Xcellbio announces new partnership in Australia to improve potency for rapid cell therapy manufacturing

March 26, 2025 | News

Partnership with Planet Innovation to develop and manufacture next generation instruments



Xcell Biosciences Australia Pty Ltd, an Australian affiliate of the San Francisco-based instrumentation company focused on cell and gene therapy applications, has entered into an agreement with the Royal Perth Hospital to use its AVATAR Foundry platform in a clinical trial focused on rapid manufacturing of more potent cancer-killing cell therapies.

Planet Innovation, an Australian headquartered medtech innovation company, is Xcellbio's contract development and manufacturing partner. The company has worked with Xcellbio during the past 2 years to develop the AVATAR Foundry instrument from its innovation headquarters in Melbourne. Planet Innovation will support Xcellbio with additional on-the-ground technical support for the platform during the trial.

Cell therapies have shown remarkable potential for treating cancer. Since the first bone marrow transplant in the 1950s, the concept of taking human immune cells and using their power to cure cancer has been a goal of modern medicine. The first solid tumor-targeting immune cell therapies generated from tumor-infiltrating lymphocytes (TILs) were approved for commercial use in 2024. However, the workflows associated with TIL therapies are largely manual and time intensive. TIL therapies also face challenges in retaining their cancer-killing potency within a solid tumor environment. The AVATAR Foundry was built to address these issues in the fight against cancer.

Solid tumours make up about 90% of all cancers; however, traditional cell therapies are not effective in targeting them due to the harsh nature of the tumor microenvironment (TME). The AVATAR Foundry provides a type of bootcamp for immune cells, enabling metabolic priming during the manufacturing process to achieve not only higher cancer-killing efficiency in TME

conditions, but also longer persistence inside the tumor.

Process development and clinical manufacturing at Royal Perth Hospital are due to commence in mid-2025 and run through the next few years, with instruments manufactured and shipped directly from Planet Innovation’s facilities.