BioSpectrum the business of Bio & Health Sciences ASIA EDITION

Singapore focuses on immunosuppressive drug-resistant anti-cancer T-cells

01 July 2021 | News

Duke-NUS Medical School and Lion TCR ink exclusive IP licensing agreement

Lion TCR, a Singapore biotechnology company, has signed an exclusive worldwide licensing agreement with Duke-NUS Medical School to develop an innovative method of using gene-edited T cells to treat recurring cancers in the donated organ.

Developed by Professor Antonio Bertoletti and his colleagues Anthony Tan and Morteza Hefezi from Duke-NUS' Emerging Infectious Diseases Programme, this novel method uses T cells that have been bioengineered to be shielded from the immunosuppressant drugs these patients are required to take to avoid organ rejection. Armoured like that, the T cells can destroy the cancer cells without being hindered.

By combining this novel gene-editing technology with the company's propriety library of T cell receptors (TCRs), Lion TCR aims to further enhance TCR therapy for liver cancer and other diseases. The modified T cells could also be used to treat other common conditions associated with immunosuppressant treatment, such as the reactivation of Epstein Barr Virus or cytomegalovirus in patients receiving immunosuppressants after stem cell or organ transplantation.

David Wang, Director of Centre for Technology and Development at Duke-NUS, added, "This collaboration between Duke-NUS and LionTCR will enable new T cell therapies to be used in patients who might otherwise not have access to this exciting new cancer treatment because of their concurrent need for immunosuppressive drugs."